ACADEMIC PROGRAM REVIEW
DEPARTMENT OF PSYCHOLOGY SELF-STUDY REPORT
December 1, 2005

APPENDIXES

Appendix B1. Rationale for choices of peer programs.......................................................... 2
Appendix B2. Organization of unit governance and committee structure (an organization chart showing unit committees, key administrators, staff, etc.)................................. 3
Appendix B3. Department bylaws.......................................................................................... 4
Appendix B4. Current faculty roster that indicates names, hire date, entry rank, current rank, tenure status, and full or part-time status of faculty members............................ 12
Appendix B5a. Center for Research on Atypical Development and Learning (CRADL) 13
Appendix B5b. Language Research Center (LRC)............................................................... 41
Appendix B5c. Center for Brain Sciences and Health (CBSH)............................................. 90
Appendix C1. Unit’s strategic plan and goals as of the beginning of the self-study period ................................................................................................................................. 142
Appendix D1: Learning Outcome Statements and Assessment Plans............................... 146
Appendix D2: Current course syllabi for all approved Writing Intensive courses........... 180
Appendix D3: Degree Requirements.................................................................................... 215
Appendix D4. List of course offered by the department for the past here years.............. 248
Appendix D5: Summary Results of Surveys ......................................................................... 270
Appendix D6. Undergraduate and Graduate Advisement Procedures............................... 277
Appendix F1. Definition of graduate faculty and criteria for selecting graduate faculty .......................................................................................................................... 295
Appendix F2. List of graduate faculty.................................................................................... 296
Appendix F3: Faculty CVs ..................................................................................................... 297
Appendix F4. How the unit’s faculty members were involved in the process of developing and approving this self study ............................................................................. 298
Appendix G1. Summary Data on Student/Faculty Ratios and Credit Hour Generation from the Office of Institutional Research ................................................................. 299
Appendix G2. University Library Report............................................................................... 300
Appendix B1. Rationale for choices of peer programs.

Departments of psychology from four universities were selected for comparison purposes: the universities are:

1. University of Houston
2. University of Illinois, Chicago
3. University of Louisville

They were selected because these three universities appear on Georgia State’s list of peer institutions, and because these departments of psychology have approximately the same number of faculty members as we do and each of them includes a clinical program.
Appendix B2. Organization of unit governance and committee structure (an organization chart showing unit committees, key administrators, staff, etc.).

Administrators

Chair: Mary K. Morris
Associate Chair: Roger Bakeman
Director of Graduate Studies: Roger Bakeman
Director of Undergraduate Studies: Sarah Cook
Director, Psychology Clinic: Greg Jurkovic
Director, Clinical Training: Lisa Armistead
Associate Director, Clinical Training: Lisa Lilienfeld

Executive Committee

Chair, Department Chair: Mary K. Morris
Clinical representative: Lindsey Cohen
Community representative: Gabe Kuperminc
Developmental representative: Rose Sevcik
NBN representative: Aras Perulis
Social/cognitive representative: Eric Vanman
At large #1: Lisa Armistead
At large #2: Chris Henrich
Graduate student representative: Amanda Woods
Ex officio: Roger Bakeman

Committee on Diversity

Chair: Julia Perilla
Page Anderson
Stefan Schmertz
Tracie Stewart
Rod Watts

Graduate Program Committee

Chair, Director of Graduate Studies: Roger Bakeman
Chair, Clinical Program: Lisa Armistead
Chair, Community Program: Jim Emshoff
Chair, Developmental Psych. Program: Rose Sevcik
Chair, NBN Program: Marise B Parent
Chair, Social/Cognitive Program: David A Washburn
Associate Director of Clinical Training: Lisa Lilienfeld

Undergraduate Program Committee

Chair, Director of Undergraduate Studies: Sarah Cook
PURC Advisor: Kim Darnell
Psi Chi Advisor: Deborah Garfin
Learning Outcomes Coordinator: Chris Henrich
Practicum Coordinator: Leslie Jackson
Undergraduate Advisor: Tenagne Mulugeta
McNair Scholarship Liaison: Aras Petrulis
Honors Program: Tracie Stewart
These bylaws constitute the rules for the governance of the faculty of the Department of Psychology in the College of Arts and Sciences at Georgia State University. These bylaws are expressly subject to the Bylaws of the College of Arts and Sciences, the Statutes of Georgia State University, and the Policies of the Board of Regents of the University System of Georgia.

ARTICLE I
MEMBERSHIP

Section 1. In these bylaws, the words faculty member shall mean full-time faculty, with Board of Regents approved academic rank as defined in the GSU Faculty Handbook, whose workload is at least 50% assigned to the Department of Psychology. Only faculty according to this definition shall have voting privileges in Departmental meetings. Exceptions can be approved by a vote of two-thirds of the faculty.

Section 2. The hiring of faculty members and all appointments of joint faculty members, visiting faculty members, and adjunct faculty members shall follow the procedures specified in the Departmental Policies.

Section 3. Adjunct faculty members, persons holding visiting faculty appointments, part-time instructors, and emeritus faculty members may attend but shall not vote in Departmental meetings. Individuals having these faculty titles, as well as psychology graduate students and undergraduate psychology majors may serve on committees as specified in the Departmental policies.

Section 4. Only tenure-track faculty members may vote on matters pertaining to faculty recruitment, with one exception: Senior lecturers may vote on matters pertaining to recruitment of lecturers. Only faculty members holding the status sought or higher may vote on matters pertaining to promotion and tenure.

ARTICLE II
MEETINGS

Section 1. The faculty of the Department of Psychology shall meet at least once each semester during the two semesters of the academic year. Regular and special meetings shall be held on dates to be determined by the Chair of the Department. The Chair may call a special meeting on his or her own initiative. The Chair shall call a special meeting upon receipt of a petition stating the purpose of the proposed meeting and signed by at least 20 percent of the voting members of the faculty. At least 5 working days prior to any meeting of the faculty, except in emergencies, the Chair shall notify each member of the faculty of the time and place of such meeting and shall supply a working agenda listing all matters that the Chair expects to be presented or considered.

Section 2. The Chair of the Department shall be the presiding officer at meetings of the Departmental faculty. In the absence of the Chair, the Associate Chair shall preside.

Section 3. A majority of the voting members of the faculty shall constitute a quorum.

Section 4. Minutes shall be maintained of all meetings, and copies shall be transmitted formally to faculty.
ARTICLE III
CHAIR

Section 1. The position and duties of a department chair are as defined in the Statutes of Georgia State University, Article X, Section 2. The Chair of the Department of Psychology shall perform all duties designated there.

Section 2. The Chair of the Department of Psychology shall be responsible for these additional duties:

A. Represent the Departmental needs to the administration, and serve as a Departmental advocate to the administration.
B. Communicate regularly with the faculty about matters of concern to the Department and pertinent information from the College and University Administration.
C. After consulting with the elected members of the Executive Committee, recommend the appointment of the Associate Chair to the Dean and appoint the Director of Graduate Studies and Director of Undergraduate Studies.
D. Work with the Director of Graduate Studies and Director of Undergraduate Studies to ensure the quality of instruction, student research, and academic advisement.
E. Appoint all non-elected chairs of Department committees in consultation with the Executive Committee.
F. Consult with the Executive Committee as a whole to discuss matters affecting the faculty, including, but not limited to, the following:
   1. salary increases and merit raises;
   2. staff workload;
   3. evaluations of all faculty members' research, teaching, and service;
   4. the budget of the Department of Psychology; and
   5. the management and dispersal of endowed funds.
G. Annually evaluate each faculty member, as provided in the Policies of the Board of Regents, Section 803.07, furnishing a copy of this evaluation to the faculty member.
H. Appoint a faculty member to serve as his or her temporary deputy on those occasions when the Chair and Associate Chair are not available and notify the Dean of the College of this choice.
I. Appoint an ad hoc committee to consider any specific matter of concern to the Department when a matter outside the purview of the standing committees arises. Ad hoc committees shall report to the Chair, the Executive Committee, or the faculty, depending on their specific charge by the Chair.
J. Hire and delegate duties to the Departmental staff.
K. Nominate faculty members to serve on the Graduate Faculty of the College.
L. Consult with the Chairs of the Program Areas and the Executive Committee regarding course assignment and workload assignment.
M. Review all recommendations from the Departmental Promotion and Tenure Committee and prepare statements of recommendation along with the reasons for that recommendation.
N. Prepare evaluations of all faculty members undergoing pretenure review or post-tenure review.

ARTICLE IV
ASSOCIATE CHAIR

Section 1. The Associate Chair shall be appointed by the Dean after consultation with the Chair. Prior to making a recommendation to the Dean, the Chair shall consult with the members of the Executive Committee. The Associate Chair shall serve at the pleasure of the Dean and the Chair. No single term of service for an Associate Chair shall exceed three years; however, an Associate Chair may be reappointed for subsequent terms.

Section 2. The Associate Chair shall act for the Chair when the Chair is not available.
Section 3. The Associate Chair shall serve in an advisory role to the Chair and shall assist the Chair in the performance of his or her duties and also shall carry out any special assignments made by the Chair.

Section 4. The Associate Chair shall chair the Promotion and Tenure Committee.

Section 5. The Associate Chair shall be responsible for the following duties:

A. Conducting all Department-wide elections.
B. Documenting and monitoring faculty workload.
C. As needed, organizing and chairing an ad hoc Departmental committee to consider changes in the bylaws.
D. Coordinating faculty recruitment activities.
E. Managing and disbursing endowed funds including awards to students.

ARTICLE V
EXECUTIVE COMMITTEE

Section 1. The Executive Committee shall consist of one faculty member from each program area, two faculty members elected at-large, and a graduate student representative. The Associate Chair shall serve as a non-voting ex-officio member. The Executive Committee shall be chaired by the Chair of the Department.

Section 2. Each program area shall elect one representative to serve on the Executive Committee for a one-year term, with each program area entitled to one representative. Two additional faculty members of the Executive Committee shall be elected at large for one-year terms, following nominations from faculty in the Department. The election shall be from all those who are nominated and agree to stand for election. The graduate student representative shall be elected for a one-year term by a vote of all graduate students in the Department. Elections shall be held during the Spring Semester, and elected individuals shall commence serving their terms at the beginning of Summer Semester.

Section 3. The Executive Committee shall meet at least once a semester. Regular and special meetings shall be held on dates to be determined by the Chair of Department. The Chair may call a special meeting on his or her own initiative. The Chair shall call a special meeting upon receipt of a petition stating the purpose of the proposed meeting and signed by at least two voting members of the Executive Committee. At least 5 working days prior to any meeting of the Executive Committee, except in emergencies, the Chair shall notify each member of the Executive Committee of the time and place of such meeting and shall supply a working agenda listing all matters that the Chair expects to be presented or considered. All meetings are open to the entire faculty.

Section 4. The Chair of the Department shall be the presiding officer at meetings of the Executive Committee. In the absence of the Chair, the Associate Chair shall preside.

Section 5. A majority of the voting members of the Executive Committee shall constitute a quorum.

Section 6. Minutes shall be maintained of all meetings, and copies shall be distributed to all faculty members in the Department.

Section 7. In accord with Article VII, Section 4(d) of the bylaws of the College of Arts and Sciences, the duties of the Executive Committee shall be to advise and consult with the Chair in Departmental governance including, but not limited to, the following matters:

A. goals in instruction, research, and service;
B. policies and procedures;
C. work loads;
D. annual budget;
E. merit raises for faculty;
F. recruitment of faculty;
G. allocation of space and equipment; and
H. committee structure in the Department and procedures for selecting members of committees.

ARTICLE VI
DIRECTOR OF GRADUATE STUDIES

Section 1. The Director of Graduate Studies shall be appointed by the Chair for a three-year term after consulting with the Executive Committee and may be reappointed for subsequent terms.

Section 2. The Director of Graduate Studies shall chair the Graduate Program Committee. In addition, the Director shall be responsible for the following duties:

A. Foster the quality of graduate instruction;
B. Advise the Chair on matters relating to graduate education;
C. Maintain relevant records required by the Department;
D. Ensure that the rules and regulations governing graduate students are enforced;
E. Oversee the Office of Graduate Studies;
F. Coordinate for graduate courses the Regents-mandated learning assessment;
G. Coordinate with the Director of Undergraduate Studies on matters of joint concern; and
H. All other duties enumerated in the Departmental Policies.

ARTICLE VII
DIRECTOR OF UNDERGRADUATE STUDIES

Section 1. The Director of Undergraduate Studies shall be appointed by the Chair for a three-year term after consulting with the Executive Committee and may be reappointed for subsequent terms.

Section 2. The Director of Undergraduate Studies shall chair the Undergraduate Program Committee. In addition, the Director shall be responsible for the following duties:

A. Foster the quality of undergraduate instruction;
B. Advise the Chair on matters relating to undergraduate education;
C. Maintain relevant records required by the Department;
D. Ensure that the rules and regulations governing undergraduate students are enforced;
E. Oversee the Office of Undergraduate Studies;
F. Coordinate for undergraduate courses the Regents-mandated learning assessment;
G. Coordinate with the Director of Graduate Studies on matters of joint concern; and
H. All other duties enumerated in the Departmental Policies.

ARTICLE VIII
DIRECTOR OF CLINICAL TRAINING

Section 1. The Director of Clinical Training shall be appointed by the Chair for a three-year term after consulting with the Clinical Program faculty and the Executive Committee; the Director may be reappointed for subsequent terms.

Section 2. The Director of Clinical Training shall be responsible for ensuring that the clinical training program meets the criteria for accreditation of the American Psychological Association (APA). In addition, the Director shall be responsible for the following duties:

A. Submit a report to APA each year documenting Departmental compliance with the APA accreditation criteria;
B. Oversee the Departmental preparation for the APA site evaluation of the clinical training
program;
C. Seek assistance when needed from the Council of University Directors of Clinical Psychology;
D. Oversee the supervisory activities of clinical faculty;
E. Coordinate the activities of adjunct faculty who have clinical responsibilities;
F. Oversee practicum and predoctoral internship placements for students; and
G. Maintain communication with the Georgia Licensing Board.

Section 3. There shall also be an Associate Director of Clinical Training appointed by the Director of Clinical Training for a three-year term after consultation with the Chair, who shall assist the Director of Clinical Training in carrying out the activities of the clinical training program.

ARTICLE IX
STANDING COMMITTEES

Section 1. All meetings of standing committees shall be open to faculty observers except those of the Promotion and Tenure Committee. Observers may participate in discussion but shall not vote. Standing committees shall report to the faculty at Departmental faculty meetings and as needed during the year.

Section 2. The Department shall have four standing committees: Diversity, Graduate Program, Undergraduate Program, and Promotion and Tenure.

Section 3. Committee on Diversity.

A. The Committee on Diversity is responsible for issues related to maintaining diversity within the Department. This Committee is charged with helping to maintain a supportive climate for faculty, staff, and students and with helping faculty to incorporate material about diversity in their teaching and research.
B. The Committee on Diversity shall consist of at least three faculty members appointed by the Chair in consultation with the Executive Committee for terms of three years, one of whom is designated Chair of the Committee on Diversity, and two student representatives: a graduate student representative elected through the normal voting procedure for graduate students and an undergraduate student representative appointed by the Director of Undergraduate Studies, both for one-year terms.

Section 4. Graduate Program Committee.

A. The Graduate Program Committee is responsible for matters relating to graduate education in the Department. The Committee shall work with the Director of Graduate Studies to meet the responsibilities enumerated in Article VI, Section 2 and in the Departmental Policies.
B. Any proposed curriculum changes involving graduate courses shall be forwarded to the full faculty for their approval.
C. The Graduate Program Committee shall consist of the chairs of each of the program areas in the Department or their designees, the Associate Director of Clinical Training or his or her designee, and a graduate student representative, elected through the normal voting procedure for graduate students for a one-year term. The Graduate Program Committee shall be chaired by the Director of Graduate Studies.

Section 5. Undergraduate Program Committee.

A. The Undergraduate Program Committee is responsible for all matters relating to undergraduate education in the Department. The Committee shall work with the Director of Undergraduate Studies to meet the responsibilities enumerated in Article VII, Section 2 and in the Departmental Policies.
B. Any proposed curriculum changes involving undergraduate courses shall be forwarded to the full faculty for their approval.
C. The Committee shall consist of at least four members appointed by the Chair of the Department for three-year terms, and an undergraduate student representative appointed by the Director of Undergraduate Studies for a one-year term. The Undergraduate Program Committee shall be chaired by the Director of Undergraduate Studies.

Section 6. Promotion and Tenure Committee.

A. In accord with the College of Arts and Sciences promotion and tenure manual, this committee may consist of all senior lecturers and all tenured associate professors and professors in the Department. For candidates being considered for promotion to professor, the committee shall consist of all tenured professors in the Department. For candidates being considered for promotion to senior lecturer, the committee shall consist of all senior lecturers and all tenured professors in the Department.

B. The Promotion and Tenure Committee shall be chaired by the Associate Chair.

C. This committee shall consider candidates for promotion and/or tenure, in accord with due process and the guidelines for promotion and tenure adopted by the Department, the college, and the university.

D. This committee shall be responsible for pre-tenure reviews of nontenured faculty in the Department. In accord with College guidelines, these reviews may be conducted by an elected subcommittee.

ARTICLE X
PROGRAM AREAS

Section 1. Program areas consist of at least three faculty members. Programs have graduate students and a graduate training program, and they assume responsibility for teaching graduate courses and teaching and supervising undergraduate courses. To establish a program area, faculty members must provide evidence that they are actively involved in research and scholarship. New program areas must be approved by a majority of the faculty members in the Department. Program areas have primary responsibility for developing and carrying out a specialized course of study for their students. This responsibility includes the specification of area curriculum requirements, the selection of graduate students, and the evaluation of students with respect to area requirements. Program areas also advise about and consent to the selection of area faculty members.

Section 2. Every three years, program areas shall present a statement to the faculty about the program area's teaching, research mission, and resource requirements. This statement should include evidence of a coherent program plan, including information about current research grants, publications, Ph.D.'s awarded, undergraduate teaching responsibilities, and demand for such an area.

Section 3. Program areas are entitled to the following:

A. Recommend students for admission to the graduate program and to educate graduate students; and

B. Representation on the Departmental Executive Committee.

Section 4. Each program area shall be chaired by a faculty member elected by the faculty members of the program area committee for a term of three years. The chair of the program area shall be responsible for the following duties:

A. Consult with the Chair of the Department about the program area, including faculty evaluations, recommendations about salary, tenure, and promotions, the assignment of faculty to teach courses, and the hiring of new faculty;

B. Call meetings of the program area;

C. In consultation with the program area faculty, make recommendations regarding the expenditure of funds allocated to the program area;

D. Serve on the Graduate Program Committee as specified in Article IX, Section 4, or designate
someone to serve in his or her place;
E. Oversee the recruitment, selection, evaluation, and advisement of students; and
F. Coordinate with the Department the keeping of records of student progress, evaluations, and feedback.

ARTICLE XI
GRADUATE FACULTY

Section 1. The Graduate Faculty shall consist of the Chair and those members of the faculty who, on recommendation of the Promotion and Tenure committee and nomination by the Chair, are appointed by the dean.

Section 2. In accord with the bylaws of the College, the Department shall establish criteria for graduate faculty membership and a procedure for periodic review of those criteria. The proposed criteria and review procedure must be approved by the Dean.

ARTICLE XII
RESEARCH CENTERS

Section 1. Centers consist of at least three full-time tenure-track faculty members engaged in research on a specific topic. Research centers must be approved by the Board of Regents after review by the College of Arts and Sciences and the University.

Section 2. To establish a research center in the Department, interested faculty must present a statement to the faculty about the research mission of the proposed center. This statement should include information about current research grants, publications, demand for such a center, and proposed links with other Departments in the University.

Section 3. Research centers shall comply with Departmental Policies regarding indirect costs and purchase of faculty release time.

ARTICLE XIII
FACULTY GRIEVANCE PROCEDURES

Section 1. A faculty member who has a grievance regarding an alleged capricious, arbitrary, or discriminatory decision or action shall attempt to resolve the issue informally in a conference with the Chair of the Department or with the Associate Chair if the grievance involves the Chair.

Section 2. If the informal conference fails to resolve the issue, the faculty member may initiate a mediation process or a formal written appeal as described in the Faculty Appeals Policy and Procedures of the College of Arts and Sciences.

ARTICLE XIV
ELECTIONS

Section 1. All elections shall routinely be held during the spring semester. Should a vacancy occur at another time, the Chair may either call a special election (to be conducted by ballot or meeting) or appoint a temporary replacement. Policies regarding the appointment of temporary replacements and proxy votes in committees are described in the Departmental Policies.

Section 2. Nominations for all elections shall be solicited from all faculty. Elections shall be from among all those who are nominated, eligible, and agree to serve.
Section 3. For elections to the Department Executive Committee and the University Senate, all elections shall be conducted using a two-envelope secret ballot system. These elections shall be coordinated by the Associate Chair.

Section 4. Elections for other positions may but are not required to use the two-envelope system.

**ARTICLE XV**  
**PARLIAMENTARY AUTHORITY**

The rules contained in the latest edition of *Robert's Rules of Order Revised* shall govern this Department in all cases to which they are applicable and in which they are not inconsistent with these bylaws.

**ARTICLE XVI**  
**ADOPTION AND AMENDMENTS TO THE BYLAWS**

Section 1. These bylaws shall become effective upon approval of a majority vote of the faculty of the Department.

Section 2. These bylaws may be amended at any regular meeting of the Department by a two-thirds vote of those eligible to vote, provided that written notice of the proposed change is given the faculty ten days in advance of the meeting.

**ARTICLE XVII**  
**ENFORCEMENT OF THE BYLAWS**

If a member of the Department identifies an infraction of a section of the bylaws that cannot be resolved by consulting the parliamentary authority (see Article XV), the alleged infraction can be brought to the attention of a member of the Executive Committee. It is then the committee member's responsibility to raise the matter at the next meeting of the committee, keeping anonymous the person who raised the issue. If the committee determines that there has indeed been an infraction, the Chair shall discuss the matter within ten working days after the meeting with the faculty member responsible for implementing that section of the bylaws in order to correct the infraction. If the Chair is responsible for that section, he or she shall propose a resolution satisfactory to the committee. In either case, the committee contact person shall report to the faculty member who raised the issue within ten working days of the committee meeting.

December 1, 1995, final

Modified September 10, 2004

Modified April 15, 2005
### Appendix B4. Current faculty roster that indicates names, hire date, entry rank, current rank, tenure status, and full or part-time status of faculty members

<table>
<thead>
<tr>
<th>Name</th>
<th>Entry rank</th>
<th>Current rank</th>
<th>Tenure status</th>
<th>Hire date</th>
<th>Full-time</th>
<th>Primary area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adamson, Lauren B</td>
<td>Assistant</td>
<td>Professor</td>
<td>tenured</td>
<td>1980</td>
<td>Yes</td>
<td>DEV</td>
</tr>
<tr>
<td>Albers, Elliott</td>
<td>Assistant</td>
<td>Professor</td>
<td>tenured</td>
<td>1986</td>
<td>Yes</td>
<td>NBN</td>
</tr>
<tr>
<td>Bakeman, Roger</td>
<td>Assistant</td>
<td>Professor</td>
<td>tenured</td>
<td>1973</td>
<td>Yes</td>
<td>DEV</td>
</tr>
<tr>
<td>Floyd, Frank J</td>
<td>Associate</td>
<td>Professor</td>
<td>tenured</td>
<td>2000</td>
<td>Yes</td>
<td>CLG</td>
</tr>
<tr>
<td>Morris, Robin D</td>
<td>Assistant</td>
<td>Professor</td>
<td>tenured</td>
<td>1982</td>
<td>Yes</td>
<td>CLN</td>
</tr>
<tr>
<td>Peterson, John L</td>
<td>Associate</td>
<td>Professor</td>
<td>tenured</td>
<td>1994</td>
<td>Yes</td>
<td>COM</td>
</tr>
<tr>
<td>Washburn, David</td>
<td>Associate</td>
<td>Professor</td>
<td>tenured</td>
<td>2000</td>
<td>Yes</td>
<td>SCG</td>
</tr>
<tr>
<td>Wilczynski, Walter</td>
<td>Professor</td>
<td>Professor</td>
<td>tenured</td>
<td>2005</td>
<td>Yes</td>
<td>NBN</td>
</tr>
<tr>
<td>Armstead, Lisa</td>
<td>Assistant</td>
<td>Associate</td>
<td>tenured</td>
<td>1997</td>
<td>Yes</td>
<td>CLG</td>
</tr>
<tr>
<td>Clarkson, Marsha G.</td>
<td>Assistant</td>
<td>Associate</td>
<td>tenured</td>
<td>1989</td>
<td>Yes</td>
<td>DEV</td>
</tr>
<tr>
<td>Cook, Sarah</td>
<td>Assistant</td>
<td>Associate</td>
<td>tenured</td>
<td>1997</td>
<td>Yes</td>
<td>COM</td>
</tr>
<tr>
<td>Emshoff, Jim</td>
<td>Assistant</td>
<td>Associate</td>
<td>tenured</td>
<td>1982</td>
<td>Yes</td>
<td>COM</td>
</tr>
<tr>
<td>Huhman, Kim</td>
<td>Assistant</td>
<td>Associate</td>
<td>tenured</td>
<td>1997</td>
<td>Yes</td>
<td>NBN</td>
</tr>
<tr>
<td>Jurkovic, Gregory</td>
<td>Assistant</td>
<td>Associate</td>
<td>tenured</td>
<td>1978</td>
<td>Yes</td>
<td>CLG</td>
</tr>
<tr>
<td>Kuperminc, Gabriel</td>
<td>Assistant</td>
<td>Associate</td>
<td>tenured</td>
<td>1997</td>
<td>Yes</td>
<td>COM</td>
</tr>
<tr>
<td>Lilienfeld, Lisa</td>
<td>Assistant</td>
<td>Associate</td>
<td>tenured</td>
<td>1998</td>
<td>Yes</td>
<td>CLG</td>
</tr>
<tr>
<td>Norris, Mary K</td>
<td>Assistant</td>
<td>Associate</td>
<td>tenured</td>
<td>1992</td>
<td>Yes</td>
<td>CLN</td>
</tr>
<tr>
<td>Owen, Michael J</td>
<td>Associate</td>
<td>TT</td>
<td></td>
<td>2005</td>
<td>Yes</td>
<td>SCG</td>
</tr>
<tr>
<td>Parent, Marise B.</td>
<td>Assistant</td>
<td>Associate</td>
<td>tenured</td>
<td>2000</td>
<td>Yes</td>
<td>NBN</td>
</tr>
<tr>
<td>Perilla, Julia</td>
<td>Research asst.</td>
<td>Associate</td>
<td>TT</td>
<td>1995</td>
<td>Yes</td>
<td>COM</td>
</tr>
<tr>
<td>Sevcik, Rose</td>
<td>Associate</td>
<td>Associate</td>
<td>tenured</td>
<td>2000</td>
<td>Yes</td>
<td>DEV</td>
</tr>
<tr>
<td>Watts, Rodney J</td>
<td>Associate</td>
<td>Associate</td>
<td>tenured</td>
<td>2001</td>
<td>Yes</td>
<td>COM</td>
</tr>
<tr>
<td>Anderson, Page</td>
<td>Assistant</td>
<td>Associate</td>
<td>TT</td>
<td>2002</td>
<td>Yes</td>
<td>CLG</td>
</tr>
<tr>
<td>Cohen, Lindsey L</td>
<td>Assistant</td>
<td>Associate</td>
<td>TT</td>
<td>2004</td>
<td>Yes</td>
<td>CLG</td>
</tr>
<tr>
<td>Culley, Marci R</td>
<td>Assistant</td>
<td>Associate</td>
<td>TT</td>
<td>2004</td>
<td>Yes</td>
<td>COM</td>
</tr>
<tr>
<td>Henrich, Christopher</td>
<td>Assistant</td>
<td>Assistant</td>
<td>TT</td>
<td>2001</td>
<td>Yes</td>
<td>DEV</td>
</tr>
<tr>
<td>King, Tricia Z.</td>
<td>Assistant</td>
<td>Associate</td>
<td>TT</td>
<td>2002</td>
<td>Yes</td>
<td>CLN</td>
</tr>
<tr>
<td>Kleider, Heather M</td>
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<td>TT</td>
<td>2004</td>
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<tr>
<td>McClure, Erin B</td>
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<td>Parrott, Dominic J</td>
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<td>Riso, Lawrence</td>
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<td>Darnell, Kim</td>
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<td>Garfin, Deborah G</td>
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<td>Campos, Peter</td>
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*Note.* CLG = general clinical, CLN = clinical neuropsychology, CLC = clinical community, COR = community, DEV = developmental, NBN = behavioral neuroscience, SCG = social/cognitive.
Appendix B5a. Center for Research on Atypical Development and Learning (CRADL)

GSU Research Center Review Survey
Program Review

Submitted By:

Mary Ann Romski, Director
and
CRADL Executive Committee
Kathryn Heller, Educational Psychology & Special Education
Chris Henrich, Psychology
Rose A. Sevcik, Psychology

Endorsed by CRADL Faculty on 9/26/05
Name of the Center: Center for Research on Atypical Development and Learning  
Center Director: Mary Ann Romski, Ph.D. 

A. General Information 

1. When was the center created and to which department/college/office was it originally designated? If the designation has changed, in which department/college/office does the center currently reside? 

The Center for Research on Atypical Development and Learning (CRADL) is a virtual center. It was founded in 1998-1999 and is administered through the department of Psychology in the College of Arts and Sciences. 

2. To whom does the center’s director report? 

The center director, Dr. Mary Ann Romski, reports through Psychology to the Dean of the College of Arts and Sciences. 

3. If there is an advisory board to this center, describe its function and composition. 

CRADL does not have an external advisory board at this time. Its bylaws include an Executive Committee that consists of three CRADL members elected by the full CRADL faculty. The executive committee advises Dr. Romski on matters such as budget issues, by-law changes, the seminar series, and other center activities. 

4. If the center is considered interdisciplinary, describe the interdisciplinary focus. 

CRADL is an interdisciplinary center that focuses on scholarly efforts to gain a fuller understanding of atypical development and learning processes from birth through adolescence. It stimulates basic and applied research and facilitates educational and outreach efforts. The center consists of faculty members representing a broad span of academic orientations including developmental, clinical and educational psychology, law, neuropsychology, nursing, physical therapy, special education, and speech-language pathology. Please see the article Beyond Boundaries http://www2.gsu.edu/~wwwaty/GSUArticle.pdf for additional information about the center’s interdisciplinary focus. 

5. Describe in detail the amount of start-up support available. 

When CRADL was established, it was given a first year budget of $20,000 ($15,000 contributed from the College of Arts and Sciences and $5,000 from the College of Education).
B. Goals and Objectives

1. Please enumerate the initial goals and objectives and describe the current goals and objectives if they have changed.

The mission of the Center for Research on Atypical Development and Learning (CRADL) is to stimulate interdisciplinary basic and applied research and to facilitate educational and outreach efforts that focus on gaining a fuller understanding of how infants, children, and adolescents with disabilities develop and learn. Specifically, CRADL had five initial goals and objectives. They are to:

Goal 1) stimulate the integration and expansion of outstanding research programs at Georgia State University that primarily focus on atypical development and learning;

Goal 2) provide a unique educational environment for training of doctoral and post-doctoral basic and clinical/educational researchers interested in furthering an understanding of problems of development and learning;

Goal 3) establish a forum for the discussion of research and clinical issues related to atypical development and learning;

Goal 4) inform and evaluate treatment efforts to ameliorate problems in development and learning through research findings; and

Goal 5) address policy issues at the university, local, state, and national level related to atypical development and learning

The wording of our goals and objectives has been modified slightly but remain essentially the same.

2. What are the major institutional, administrative, and/or financial resources that facilitate achieving the center's goals and objectives?

The collaboration between the two main colleges associated with CRADL in the university and the financial resources they have provided are essential for the center’s continued success.

3. What are the major institutional, administrative, and/or financial constraints that interfere with achieving the center's goals and objectives?

In general, GSU is now just developing a culture for interdisciplinary interactions. Typically, faculty members have worked individually and in their own departments. Thus, CRADL has worked hard to facilitate interdisciplinary interactions across departments and colleges. CRADL faculty members value the interdisciplinary opportunities and have been committed to the center activities.
4. What is your assessment of your achievement of your goals?

CRADL has made substantial progress in achieving many of its long-term goals.

GOAL 1.

**CRADL Structure.** The center’s immediate goals were to establish a formal structure including by-laws, a faculty executive committee, a website, a logo and a GSU foundation account. We have achieved these basic goals. We also want to establish an external advisory board (composed of academic and community based professionals and families) to provide guidance about the center and its development.

**CRADL Members.** We have increased the number of CRADL faculty members from 12 at its onset to 18 in 2005. As part of the development of our by-laws, we also expanded our membership to include research staff and we now have 3 staff members. We have also expanded the number of colleges represented from two to four (Arts & Sciences, Education, Health & Human Services, and Law). A complete list of faculty and staff can be found in Appendix A.

GOAL 2.

**CRADL Student Opportunities.** With respect to graduate students, students from a range of programs attend our speaker series and we have developed graduate student luncheon interactions with our invited speakers. Students report that this opportunity for them to meet with the visitors and ask questions out of the context of the talk and without their advisors is helpful to their professional development.

We have had preliminary discussion about establishing a graduate group (a la the College of Arts & Sciences model) to provide more opportunities for interdisciplinary interaction between faculty and graduate students. We also want to obtain training grant monies from the National Institutes of Health and/or the Institute for Educational Sciences to have resources to attract strong students with these interdisciplinary interests. While we have had numerous discussions about the preparation of an interdisciplinary training grant to bring pre-doctoral and post-doctoral students to GSU and CRADL, we have not yet succeeded in submitting an application. Dr. Romski has just attended an invited conference at the Waisman Center on Mental Retardation/Developmental Disabilities at the University of Wisconsin, Madison on post-doctoral training grants. We plan to continue these discussions including the possibility of collaborating with the existing NIH T32 post-doctoral training grant at the Waisman Center. We also will pursue other federal resources that will build our record and make us more competitive for training funds. With respect to undergraduate students, we also hope to include undergraduate students with exceptional potential for careers in disciplines in atypical development and learning in CRADL activities and CRADL faculty research.

GOAL 3.
CRADL Interdisciplinary Visibility. CRADL has also initiated a speaker series that has brought a large number of national and international scholars on a range of topics related to atypical development and learning to Georgia State University. Many of the visitors report that they never realized GSU had so many strong scholars in this area so we are one-by-one raising CRADL and GSU’s scholarly visibility. We also have created an email distribution list to advertise these speakers and draw a wide-ranging audience including professionals and families from the larger Atlanta research and educational community. This speaker series has also contributed to the achievement of Goal 1.

GOAL 4.

Community Outreach. We have shared information about the Center’s research in a number of forums. We expect that the establishment of an advisory board will provide new opportunities for collaboration with the community. In addition, we have discussed the possibility of hosting a conference that presents CRADL research findings to a community audience.

GOAL 5.

This goal is one that individual faculty members in CRADL have contributed to but the center as a whole has yet to address this goal.

C. Research of the Center

1. What research is currently being conducted in the center? Describe the major areas/topics of research. How has the center increased productivity of the faculty?

Research conducted by CRADL faculty focuses on developmental, social, educational, and family issues that center around children, adolescents and young adults with a range of disabilities. A substantial amount of the research focuses on aspects of oral and written language and communication development by children, adolescents and young adults with autism, cerebral palsy, developmental disabilities, developmental reading disorders, Down syndrome, and learning disabilities. As can be seen in Appendices C and D, CRADL faculty members have maintained a solid record of publications and grants from many different national sources. CRADL faculty members also have initiated partnerships with several research universities abroad including in China, South Africa, and South Korea.

Since the center is not directly credited for faculty grants, it is difficult to specify exactly how CRADL has increased faculty productivity. Faculty members report that the center has been helpful to them in a number of ways. First, CRADL’s speaker series informs the center’s faculty, students, and the community about cutting edge research in the area of atypical development and learning beyond their own research focus and stimulates interdisciplinary discussions about these issues. It also provides a place for junior faculty to develop mentoring relationships. One junior faculty member expressed it well. “As a junior researcher, CRADL has helped me to network with researchers outside
of my own department, and has put me in touch with other researchers in the university with a similar interest. With the help of other CRADL members, I successfully secured university funding and submitted a grant for external funding. Many of the other CRADL members were extremely helpful in terms of identifying funding agencies, sharing design ideas, and providing consultation for preparing the grant. I could not have done this within my department, so the colleagues that I have met via CRADL have helped me with my research productivity.” Second, it also serves as an opportunity for their graduate students to meet experts in the field. It also provides a structure around which to facilitate interaction about ongoing research activities at the center. Third, faculty members have utilized CRADL’s resources to bring in consultants regarding the development of their grants and research programs.

2. **What are the major impediments for conducting research in the center?**

   There are no major impediments for conducting research in conjunction with the center with one important exception. No grants are housed in the center as faculty members are credited for grants through their departments and thus the center is a secondary home for all faculty members’ grants to date.

3. **What percentage of the center’s funding has been paid out of Fund Code 10? List amounts for the last five years.**

   All of the center’s funding has come from Fund Code 10. Each of the last five years the center has been allocated up to $20,000 ($15,000 from the College of Arts & Sciences and $5,000 from the College of Education). This amount has been used to support one graduate student assistantship, honoraria and travel for speakers and consultants, and additional expenses such as supplies for producing posters, mailings, brochures, and a website as needed. As we are including more colleges, we are considering asking the college to provide a modest amount of support to CRADL to show evidence of support from the college not just the faculty member.

4. **Attach a list of all research activities and other activities (e.g. workshops/programs/conferences/seminars/symposia/etc.) of the center.**

   CRADL also has:
   - sponsored consultants for center faculty’s research
   - created a place on the website for faculty to describe their research and indicate that they are recruiting possible research participants
   - advertised the center at disability community events to recruit possible research participants and highlight the ongoing research projects
   - developed a poster format that displays both the GSU and CRADL logos and
   - presented a Speaker Series every year (see Appendix B for a list of CRADL Speaker Series events).
   - facilitated collaborative work among center faculty
   - participated in the development of the proposal on Research on the Acquisition of Language and Literacy for the GSU Areas of Focus initiative
5. Attach separate bibliographies of refereed and non-refereed publications that have resulted from research activities of the center. List publications for the last three years only.

See Appendix C.

6. Attach a list of grants submitted in the last three academic years and list all sources of funding. For funded grants, give title, funding source, amount, type of grant (research or instruction), GSU project number, and period funded. Specify the amount of funds received from each category (research or instruction) for each of the last three years.

See Appendix D.

D. Center Personnel

List all personnel funded through the center for the prior fiscal year. Faculty who receive course releases or full or partial summer pay should be counted as center members.

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<thead>
<tr>
<th>Personnel</th>
<th>POSITION</th>
<th>College &amp; Department</th>
<th>Load Allocated to the Center</th>
<th>Amount of Funding-External (Grants, contracts, Other)</th>
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<td>GRA’s Consultants, Lama Farran</td>
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*List a grant only once, e.g., if grant has co-PI’s, list only under PI
**Research Program Enhancement
Appendices

Appendix A. CRADL Members

Faculty
Lauren Adamson, Psychology
Paul Alberto, Educational Psychology & Special Education
Roger Bakeman, Psychology
Marsha Clarkson, Psychology
Susan Easterbrooks, Educational Psychology & Special Education
Frank Floyd, Psychology
Peggy Gallager, Educational Psychology & Special Education
Kathryn Heller, Educational Psychology & Special Education
Chris Henrich, Psychology
Wendy Hensel, College of Law
Tricia (Zawacki) King, Psychology
Amy Lederberg, Educational Psychology & Special Education
Mary Morris, Psychology
Robin Morris, Psychology and Educational Psychology & Special Education
Diana Robins, Psychology
Mary Ann Romski, Communication, Psychology, and Educational Psychology & Special Education
Rose Sevcik, Psychology
Beth Tieman, Physical Therapy

Staff
Ms. Melissa Cheslock, Communication
Dr. Deborah Deckner, Psychology
Dr. Hye Pae, Psychology

Past Members
Dr. Paul Cirino, Psychology (left GSU)
Dr. Martha Foster, Psychology (retired)
Dr. Byron Robinson, Psychology (left GSU)
Appendix B. CRADL Speaker Series

April 6, 2005, 11:30 a.m.- 5:30 p.m.
Society for Research on Child Development
Pre-conference Symposium “The development of children with cochlear implants”
Organizers: Dr. Amy Lederberg, GSU, Dr. Carol Conner, Florida State University, Dr. Pat Spencer
Presenters: Alexandra Quittner, University of Miami; Bruce Tomblin & Linda Spencer, University of Iowa; Ann Geers, University of Texas Southwestern Medical School; Susanne Scott, Gallaudet University; Margaret Harris, Department of Psychology, Royal Holloway, University of London United Kingdom; Tova Most, Department of Communication Disorders, Tel Aviv University Israel; Janet Jamieson, Department of Educational and Counseling Psychology and Special Education, University of British Columbia Canada; Gisela Szagun, Department of Psychology, Oldenburg University Germany; Guido Lichtert, Department of Special Education, University of Leuven Belgium

March 21, 2005, 3:00-4:00 p.m.
Dr. Sudha Kaul
Indian Institute of Cerebral Palsy, Calcutta, India
“Augmenting language through communication: An Indian perspective”.

September 29, 2004, 12:00-1:00 p.m.
Dr. Beth Tieman
Georgia State University
“Usual mobility methods in children with cerebral palsy: A comparison across home, school, and outdoors/ community settings”.

June 17, 2004, 12:00-1:00 p.m.
Dr. Howard Goldstein
Florida State University
“Embedding communication intervention in book reading and other daily routines”.
October 6, 2003, 3:30 p.m.

June 9, 2004, 12-1:00 p.m.
Dr. George Halasz
Monarch Medical Center, Australia
“ADHD: A different population- a different perspective”.

April 27, 2004, 12:00-1:00 p.m.
Dr. Brenda Louw
University of Pretoria, South Africa
“Exploring early communication intervention (ECI) with the most vulnerable: Young children with pediatric HIV/AIDS in care centers in South Africa”.

April 21, 2004, 12:00 – 1:00
Dr. Wendy Hensel
Georgia State University
“The thin line between life and nonexistence: Rethinking the wrongful life from a therapeutic jurisprudence approach”.
May 10, 2004, 12:00-1:00
Dr. Leila Regina D’Oliveira De Paula Nunes
Universidade Do Estado do Rio De Janeiro
“Research on AAC in Brazil”.

September 11, 2003, 11:00-12:00 p.m.
Dr. Catherine Lord
University of Michigan
“Early diagnosis and trajectories of autistic spectrum disorders”.

August 4, 2003, 12:00-1:00 p.m.
Dr. Juan Bornman
University of Pretoria, South Africa
“Delivering early child intervention services in a rural community setting”.

January 30, 2003, 3:30-4:30 p.m.
Dr. Lena Green
University of Western Cape, South Africa
“Teachers as teachers of thinking: Challenges in the South African context”.

January 14, 2003, 3:00-4:00 p.m.
Dr. Erna Alant
University of Pretoria, South Africa
“Augmentative and alternative communication in South Africa”.

September 25, 2002, 12:00-1:30 p.m.
Dr. Monica Herk
Georgia State University
“The child policy initiative at Georgia State University”.

March 18, 2002, 12:00 – 1:00 p.m.
Dr. Mabel Rice
University of Kansas
“Children with specific language impairment: Progress toward a grammatical phenotype”.

January 16, 2002, 12-1pm
Dr. John Riski
Children’s Healthcare of Atlanta at Scottish Rite
“The association of speech, learning, and reading problems in children with craniofacial disorders”.

November 29, 2001, 12-1pm
Dr. Reid Lyons
National Institute of Child Health and Human Development
“A view from NICHD: Past and future reading research issues.”

October 26, 2001, 2:00 p.m.
Dr. Marsha Seltzer
University of Wisconsin at Madison
“An unanticipated life: Risk and resiliency in parents of individuals with developmental disabilities.”

February 21, 2001, 12:00-1:00 p.m.
Ms. Helene Prokesch
Lekotek of Georgia
“Lekotek: A community Resource.”

January 22, 2001, 12:00 p.m.
Dr. Julie A. Washington
University of Michigan
“The Michigan project on African American Language (MPAL): Examining the impact of dialectal variation on academic and clinical performance”.

November 29, 2000, 12:00-1:00 p.m.
Dr. Byron F. Robinson
Georgia State University
“The role of working memory in the learning and development of children with Williams Syndrome: Modularity revisited.”

October 20, 2000, 3:00-4:00 p.m.
Dr. Frank Floyd
Georgia State University
“Family problem-solving process and coping with children who have developmental disabilities.”

October 6, 2000, 3:00-4:30 p.m.
Dr. Connie Kasari
University of California at Los Angelos
“Joint attention and symbolic play interventions in autism.”

June 13, 2000, 12:00-1:00 p.m.
Dr. Patricia Spencer
Gallaudet University
“Language development of deaf children with cochlear implants.”

May 30, 2000, 12:00-1:00 p.m.
Dr. Beverly Wright
University of Wisconsin, Madison
“Auditory training and processing in children with reading and language problems.”

April 6, 2000, 12:00-1:00 p.m.
Dr. Lee Mclean
University of Connecticut
“Distal and contact gestural use by individuals with severe developmental delays”.

March 15, 2000, 12:00-1:00 p.m.
Dr. Philip S. Dale
University of Missouri, Columbia
“Exploring the boundary conditions for parent report.”

February 14, 2000, 10:00 – 11:30 a.m.
Dr. Esther Dromi  
Tel Aviv University, School of Education &  
University of Texas at Dallas, School of Human Development  
“Kesher: A theoretically motivated language intervention model for Israeli hearing-impaired children (HIC) and their families”.

May 26, 1999, 12:00-1:00pm  
Dr. Zeynep Biringen  
Colorado State University  
“A method to measure mother and child emotional availability during play: Standardized rating scales.”

March 31, 1999, 12:00-1:00pm  
Dr. Ann Kaiser  
Vanderbilt University  
“Teaching 3 year old children to talk to each other: Strategies for children at high risk for language and behavior problems.”

March 22, 1999, 5:00-6:30 p.m.  
Dr. Bill Mcllvane  
Shriver Center for Mental Retardation  
“Behavioral development psycholinguistics: Rationale and aspirations.”

February 24, 1999, 12:00-1:00 p.m.  
Dr. Laura Namy  
Emory University  
“The development of naming in 17 and 26-month-olds: Words, gestures, and other fun symbols.”

February 12, 1999, 12:00-1:00 p.m.  
Dr. Paul Yoder, Vanderbilt University and Dr. Peter Mundy, University of Miami  
“Prelinguistic development in children with developmental disabilities.”

September 9, 1998, 12:30-1:30 p.m.  
Dr. Heather Mohay  
Queensland University of Technology, Australia  
“Making language visually accessible to deaf children.”
Appendix C.
Faculty Publications -- 2002 to present

Books


Refereed Publications


Non-Refereed Publications


## Federal Grants

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<th>Date Funded</th>
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<td>Submitted 2005</td>
<td>Sevcik</td>
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<td>Bilingual Development: Beginning English-Korean Readers&quot;</td>
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<td>Sevcik</td>
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<td>Evaluating the effectiveness of Reading Interventions for Students with Mild Mental Retardation</td>
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<td>ELN77</td>
<td>Romski (for Dujuandra Taylor)</td>
<td>Sevcik Adamson Bakeman</td>
<td>Minority Supplement for “Augmented Language Intervention for Toddlers&quot;</td>
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<td>The Wisconsin Longitudinal Study</td>
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<td>Life Course Impacts of Non-normative Parenting</td>
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<td>2002</td>
<td>CLH70</td>
<td>Adamson</td>
<td>Bakeman</td>
<td>The Development of Shared Attention After Infancy</td>
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<tr>
<td>2002</td>
<td>CLH66</td>
<td>Romski (for Mia Ligon)</td>
<td>Sevcik Adamson Bakeman</td>
<td>Minority Supplement to “Augmented Language Intervention for Toddlers”</td>
<td>$575,000 Y1-Y5</td>
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<td>2001</td>
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<td>Morris, R. Sevcik</td>
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<td>Testing the Effectiveness, sustainability, and Scalability of an</td>
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<td>Treatment of Developmental Reading Disability</td>
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<td>BLA57</td>
<td>Floyd</td>
<td>Development of Fluent and Automatic Reading: Precursors to Learning</td>
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<tr>
<td>1999</td>
<td>AL406</td>
<td>(Fredrick) Morris, R. Sevcik</td>
<td>A Developmentally-Based Preventive Reading Intervention for Children at Risk for Reading Disabilities</td>
<td>$583,714</td>
<td>DOE</td>
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<td>1998</td>
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<td>Lederberg</td>
<td>Vocabulary Acquisition of Young Deaf and Hard of Hearing Children</td>
<td>$365,424</td>
<td>OSEP</td>
<td>1998-2002</td>
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<td>Date Funded</td>
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<td>Project Director</td>
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<td>Amount</td>
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<td>FLCD1</td>
<td>Heller</td>
<td>(Subcontract)</td>
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<td>&amp; Easterbrooks</td>
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<td>Center for Collaborative Education</td>
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<td>1986</td>
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<td></td>
<td>Bureau for Students with Multiple and Severe Disabilities</td>
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## Private Grants

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<td>Association of College Educators-D/HH</td>
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<td>Join Together</td>
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<td>2002</td>
<td>DLN19</td>
<td>Morris, M.</td>
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<td>Barriers to Accessing Information Technology in College Students with Learning Disabilities</td>
<td>$45,000</td>
<td>Southeast Disability and Business Technical Assistance Center</td>
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## University Grants

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<td>Heller</td>
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<td>Updating the Assistive Technology Lab</td>
<td>$47,976</td>
<td>GSU Technology Funds</td>
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<td>Proposal # 2.2.3</td>
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<td>Assistive Technology Lab</td>
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<td>Sevcik</td>
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<td>Greenberg, D.</td>
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<td>Fredrick, L.</td>
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<td>2005</td>
<td>Tieman</td>
<td>(formerly also Morris, R.)</td>
<td>Factors influencing mobility of children with cerebral palsy in school settings</td>
<td>$9,997</td>
<td>GSU Research Initiation Grant</td>
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<td>2004</td>
<td>King</td>
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<td>Adult outcomes of Childhood Brain Tumors Survivors</td>
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<td>GSU Research Initiation Grant</td>
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<td>2000</td>
<td>Adamson</td>
<td>Romski, Lederberg, Bakeman, Robinson</td>
<td>Research on Atypical communication During Childhood</td>
<td>$375,000</td>
<td>GSU Research Enhancement Fund</td>
<td>2000-2006</td>
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<td>2002</td>
<td>Morris, M. Morris, R.</td>
<td></td>
<td>Neuropsychological and Language Functioning and Comorbid Psychiatric Disorders in Adults with Developmental and Learning Disabilities</td>
<td></td>
<td>GSU Program Enhancement Grant</td>
<td>2002-2006</td>
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<td>2002</td>
<td>Adamson</td>
<td>Sevcik, Romski</td>
<td>Support of Social and Behavioral Science Collaborations in South Africa</td>
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<td>GSU International Strategies Initiatives Program</td>
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<td>2005</td>
<td>Robins (Morris, R. – Mentor)</td>
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<td>Perception of Emotional Cues from Facial Expression and Affective Prosody using fMRI</td>
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<td>GSU Faculty Mentoring Grant</td>
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<td>Cognitive Trajectories of Children with focal brain lesions</td>
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<td>GSU Faculty Mentoring Grant</td>
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<tr>
<td>2005</td>
<td>King</td>
<td></td>
<td>Cognitive Trajectories of Children Diagnosed with Brain Tumors</td>
<td></td>
<td>GSU Advancement of Women Faculty Mentoring Grant</td>
<td>2005</td>
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</tbody>
</table>
Appendix B5b. Language Research Center (LRC).

Name of Center: LANGUAGE RESEARCH CENTER

Center Director: DAVID A. WASHBURN

A. General Information

1. When was the center created and to which department/college/office was it originally designated? If the designation has changed, in which department/college/office does the center currently reside?

The Language Research Center (LRC) was founded in 1981, but its roots extend a decade earlier to the LANA (“Language ANAlogue”) Project at the Yerkes Regional Primate Research Center. Duane Rumbaugh, who joined the GSU psychology department as its chair in 1971, led a team of researchers who proposed to study language learning by a chimpanzee (*Pan troglodytes*), also named Lana. This multidisciplinary team of investigators developed a revolutionary computer-based medium for nonverbal communication. Eschewing the manual sign-language options that had been employed in other ape-language efforts, the computerized system allowed Lana and human caregivers to communicate by touching visuographic symbols called “lexigrams” on a computerized keyboard. On the strength of the scientific promise of this language system and its potential application for training children and adults with language disabilities, Rumbaugh and his collaborators obtained support from the National Institute of Child Health and Human Development (NICHD) for the research project. 1971 was the first of what is now 34 years of continuous funding from NICHD for the program of research that began with the LANA Project, funding that provides the majority of support for the scientific activities at the LRC.

In 1981 the project moved to its current home on Georgia State University’s Panthersville property, 14 miles southeast of the university’s main campus. GSU had received several hundred acres of Panthersville land from the federal government in the early 1970s. In 1979, the university solicited proposals for enhancing utilization of this property. The LRC was a response to this announcement. A 6,500-foot facility—including animal-housing, laboratory, and support space—was constructed with support from the GSU Foundation.

With Duane Rumbaugh as its founder and Director, the LRC was also built from an impressive, interdisciplinary team of researchers. Over the years, the LRC investigators included faculty members from the Departments of Psychology (Lauren Adamson, Josephine Brown, Michael Kane, Robin Morris, Marise Parent, James Pate, R. Thompson Putney, Kirk Richardson, Tracie Stewart, Eric Vanman), Biology (Sue Savage-Rumbaugh), Communication (Mary Ann Romski), and dozens of other universities around the world (see Appendix A1). Three LRC student researchers (Byron Robinson, Rose Sevcik, David Washburn) were later hired as GSU faculty members. Other student researchers would graduate to accept faculty positions in other universities around the country (see Appendix A2).

The LRC campus now features four laboratory buildings (about 12,000 square feet) that were constructed for the unique needs of comparative biobehavioral research with a variety of nonhuman primate species. The original building provides office space for core and visiting
faculty and for staff. Across the years, this facility also provided laboratory space for research with nonspeaking children with mental retardation, as well as primary housing and laboratory space for eight bonobos (*Pan paniscus*), including the language-trained apes Kanzi and Panbanisha, known around the world. The bonobos also occupied a second building which now serves as a laboratory and housing facility for a colony of 10 capuchin monkeys (*Cebus apella*). The Lanson laboratory serves as the housing and research facility for four adult common chimpanzees (*Pan troglodytes*), including the three well-known language-trained chimps: Lana, Sherman and Panzee. The fourth building, dedicated as the Sonny Carter Life Sciences Laboratory in 1992, supports computer-based research with nine rhesus monkeys (*Macaca mulatta*).

In April and May of 2005, the eight bonobos from the LRC colony completed their move to the Great Ape Trust of Iowa (http://www.iowagreatapes.org), a remarkable new facility build for them near Des Moines. The move marked the culmination of over 4 years of planning and countless hours of hard work both at GSU and in Iowa. It also marked the next step in the realization of a grand dream by Great Ape Trust founder Ted Townsend, a native Iowan, philanthropist, and longtime friend of the bonobo research at the LRC. Townsend’s vision is a revolutionary, state-of-the-art research and education facility that would ultimately house all four species of great apes (they now have orangutans and bonobos, with plans to add chimpanzees and gorillas) and that, critically, would ensure the care and community of this group of bonobos for the duration of their lives. Many of the researchers and staff members who worked with the bonobos were also relocated to Iowa to assume positions at the Great Ape Trust, including Professors Rumbaugh and Savage-Rumbaugh, although Duane Rumbaugh remains a Principal Investigator (PI) and active emeritus faculty member at the LRC. Neither the LRC nor the university was looking to move the bonobos or the project—it represents a considerable sacrifice in productivity, visibility, funding potential, and educational potential, particularly given the years of commitment and investment into the project that had been made particularly by the biology department, and the college; however, the new center in Iowa was clearly best long-term option for the apes and the research. The LRC continues to support the research effort with the bonobos, for example by using our research equipment in the ongoing studies there and by providing comparison data, where needed, from the LRC monkeys and chimpanzees.

The LRC was originally administratively organized within the psychology department. For much of that time, the NICHD program-project (P01) grants to the LRC were submitted through and administered by the Yerkes Regional Primate Research Center. In the late 1980s, the grant was moved to GSU and ownership of the apes was transferred to the GSURF. In 1989, Duane Rumbaugh resigned as the chair of the Chair of the Psychology Department. At that time, the LRC was reassigned as a center within the College of Arts and Sciences, where it remains administratively organized today.

Duane Rumbaugh retired as the Director of the Language Research Center in 2001, at which time Dean Ahmed Abdulal appointed David Washburn as the new Director.
2. To whom does the center's director report?

David Washburn was appointed Director of the LRC in 2001. The Director reports directly to the Associate Dean for Research and Graduate Studies in the College of Arts and Sciences. An administrative and organizational chart is depicted in Figure 1.

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**Figure 1. Organizational chart for the LRC**

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3. If there is an advisory board to this center, describe its function and composition.

An External Advisory Board (EAB) for the LRC was established, in part as a response to NIH recommendations from a 2004 program-project grant review. This advisory board provides consultation to the Director on matters of research priority, resource allocation, future plans, and other issues as necessary. Members of the EAB also review and comment on the annual progress reports and research proposals produced by LRC investigators. Funds permitting, the EAB is convened together at the LRC annually, although most interactions are conducted by phone or electronic mail. The three- to five-person board is comprised of established scholars with expertise in one or more areas relevant to the LRC research and educational mission, and
the Associate Dean for Research and Graduate Studies of the College of Arts and Sciences as an\textit{ ex officio} member.

Members of the EAB serve renewable, one-year terms from July to June of each year. Members can be nominated by any LRC researcher, and are invited to the EAB by the Director. Current members of the EAB, with areas of expertise, are listed in the table below.

**Table 1. Current LRC External Advisory Board**

<table>
<thead>
<tr>
<th>EAB member/affiliation</th>
<th>Expertise</th>
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</thead>
<tbody>
<tr>
<td>Terry Maple (Georgia Tech)</td>
<td>Primate behavior</td>
</tr>
<tr>
<td>Dennis Molfese (U. Louisville)</td>
<td>Cognitive neuroscience in adults and children</td>
</tr>
<tr>
<td>William Nelson (Georgia State U.)</td>
<td>\textit{Ex officio} (Assoc. Dean, College of Arts and Sciences)</td>
</tr>
<tr>
<td>Herb Roitblat (Dolphinsearch, Inc)</td>
<td>Comparative psychology, cognitive science</td>
</tr>
</tbody>
</table>

4. \textit{If the center is considered interdisciplinary, describe the interdisciplinary focus.}

The core of the LRC research focus is behavioral, featuring studies of cognitive and social competence as they are manifest across primate species (including humans) and as they are influenced by language acquisition and use. Thus, the central discipline for the LRC has always been psychology (comparative psychology, cognitive psychology, developmental psychology, social psychology, school psychology, neuropsychology). However, these studies also intersect richly with biology, and neuroscience more specifically. For more than 20 years, the LRC has supported noninvasive, biobehavioral research designed to examine the brain-behavior relations that underlie language learning and other cognitive competencies. The focus on animal—and particularly on primate—behavior also makes the LRC a resource for anthropology faculty and students. The focus on generalization and applications for human adults and children (both normally developing and atypical) provides connection with faculty and students in the Department of Communication and various departments within the College of Education (Educational Psychology, Special Education, Counseling and Psychological Services). Less frequently, researchers from still other departments (e.g., Computer Science, Philosophy, Nutrition) have also conducted research at the LRC. Although some of these departments have been less active in the research and funding of the LRC over the years, the center is intended to inspire and to support instructional and research collaborations across disciplines.
5. Describe in detail the amount of start-up support available.

When it was founded in 1981, the LRC was supported in part by the psychology department, by the College of Arts and Sciences, and by the Foundation in various ways. As noted above, the original laboratory facility was constructed with $130,000 of GSU Foundation funds. The interior was finished by Physical Plant personnel. The College of Arts and Sciences provided financial support for animal care and administrative staff.

B. GOALS AND OBJECTIVES

1. Please enumerate the initial goals and objectives and describe the current goals and objectives if they have changed. Units will indicate how their goals are consistent with the strategic plans of the university and their college, citing the relevant documents (the college and university strategic plans) as necessary.

The original programmatic goal of the LRC is articulated in its slogan: “…so that together we might learn of language.” More specific goals were listed in the 1994 Academic Program Review for the LRC:

a. To research the requisites to entry-level language skills;
b. To develop a comparative biobehavioral perspective of language;
c. To develop technology to facilitate research;
d. To relate findings to the benefit of children with language deficits;
e. To develop technology for studies germane to adaptation in weightlessness; and
f. To develop software appropriate to the assay of primates’ psychological/behavioral competence in weightlessness.

Over the past 10 years, these goals have developed in several key ways, primarily by broadening the topics of interest beyond language to other aspects of cognitive competence (e.g., attention, memory, spatial and numerical cognition, categorization). In the late 1990s, the focus of the research with rhesus monkeys turned from the study of space adaptation (although we continue to conduct research on the effects of altered gravitational states on behavior and performance), to become more broadly cognitive and comparative in nature.

The current goals of the LRC are:

a. To support interdisciplinary research on language acquisition and use, and on the ways that cognitive abilities and social behaviors are altered by language competence.
b. To promote comparative, biobehavioral, and evolutionary perspectives in the understanding of cognition and behavior as they are manifest across species.
c. To translate basic research findings into applications and interventions for children and adults, including those from atypical populations.
d. To develop technologies and paradigms for innovative research with human and nonhuman primates.
e. To provide unique opportunities for education and training in science.
The research goals expressed here are consistent with GSU’s mission to become one of the nation’s premiere research universities in focused areas of strength. Among the areas of strength identified in recent years, the programs in “brains and behavior” and in “acquisition of language and literacy” are clearly reflected in the LRC goals.

Goal (a) clearly reflects maturation of our earlier goal regarding language learning. Having established an affirmative answer to the empirical question, “Can apes learn a human-like language?” we have been attempting to answer the more interesting question, “What does language allow an organism to do that it could not do without language?” (or, “How is behavior and ability changed by linguistic systems for communication and the training that instates these systems?”). This goal is one part of GSU’s broad expertise in language and literacy, and accordingly is a component of the “Acquisition of Language and Literacy” program submitted to the Provost.

All five goals attest to the interdisciplinary nature of the LRC. Accordingly, the LRC is a participating unit in the “Brains and Behavior” program funded by the Provost.

Goal (e) supports the University’s strategic plan for instructional excellence. The LRC serves as an educational resource through publishing research and documentary media, by accommodating tours and class visits, by providing opportunities for research practica and internships, and particularly by contributing to the training of graduate students in a range of scientific disciplines.

A pivotal goal is to build bridges between the findings from basic research with the nonhuman animals and applications to improve the health, well-being, education, and performance of children and adults. In the 1994 self-study, this goal was primarily realized in the amazing results from efforts to provide augmentative language apparatus and training to nonspeaking children with mental retardation. In the present research, the links between children and nonhuman animals are being explored in the domains of attention, executive functioning, and numerical cognition.

Note that these are programmatic goals of the LRC. Specific objectives for the future will be discussed below, together with resource requirements and implementation to achieve these objectives.

2. What are the major institutional, administrative, and/or financial resources that facilitate achieving the center’s goals and objectives?

a. The LRC boasts a colony of nonhuman primates that represent a unique research resource, in many ways unlike any animals found elsewhere in the world or in history. Despite the grandeur of this statement, it is arguably accurate. The language comprehension and production skills demonstrated by the apes at the LRC are more carefully documented, more empirically supported, and more flexibly demonstrated than is true of any other ape-language project in history. Even after the bonobos were transferred to the Great Ape Trust of Iowa, a remarkable
A group of language-competent apes remain at the LRC. Panzee, for example, has demonstrated communicative competencies beyond those believed possible for common chimpanzees. With all of the attention that Kanzi and the bonobos received, Panzee’s remarkable abilities have been overshadowed; however, her picture on the covers of two recent books indicates the visibility that she can generate for GSU and the LRC (see Figure 2).

**Figure 2. Language-competent chimpanzee Panzee on the cover of two recent books.**

The apes and monkeys are also trained already to respond according to the demands of dozens of assessment tasks, reflecting both standard and novel tests from cognitive psychology, comparative psychology, and neuropsychology. The university (and particularly the College of Arts and Sciences), the NICHD, and a host of researchers have invested extensively in these nonhuman animals. As a result, the LRC is steward to a precious and invaluable resource to the scientific community.

b. The LRC enjoys tremendous support from the university community—particularly the Department of Psychology, the College of Arts and Sciences, the Research Office and the Research Foundation. This support is evidenced, for instance, by the current model of indirect-cost recovery, by the personnel provided for animal care (including excellent veterinary care) and research, by investments into renovation / maintenance of LRC facilities, by the willingness to expand the animal colony, by the extensive and sacrificial support by the university of the bonobos’ recent move to the Great Ape Trust of Iowa, and by the commitment to recruit a new faculty member to serve as a core LRC researcher beginning in the Fall, 2005 term.

c. In an era of reduced fiscal support for the national funding agencies, the LRC is privileged to retain grant support from the NICHD through a program-project (P01) grant that runs through 2009. When this grant is due for competitive renewal, NICHD will have provided almost 40 years of unbroken support for this research. This is a testament to the productivity of the LRC investigators, as well as to the importance and uniqueness of the LRC goals; however, it is also a reflection of the commitment that NICHD has to innovative research with animals that offers benefits to children.
d. The LRC includes an outstanding team of investigators, including researchers from GSU and other universities across the country (see Table 2). This team of investigators is smaller, less interdisciplinary, and more inter-institutional than was true in previous years. However, it is a highly productive group that values collaboration and that works well together.

Table 2. Current and recent investigators at the Language Research Center

1. Tenured / tenure-track faculty
   a. David Washburn, Professor, Psychology (Center Director, Project Director, PI)
   b. E. Sue Savage-Rumbaugh, Professor, Biology (Project Director & PI; on leave)
   c. Michael Owren, Associate Professor, Psychology (hired Fall, 2005)

2. Emeritus faculty
   a. Duane M. Rumbaugh, Regents Professor Emeritus, Psychology (PI)
   b. James L. Pate, Professor Emeritus, Psychology (Co-investigator)
   c. R. Thompson Putney, Associate Professor Emeritus, Psychology (Consultant)

3. Other full-time PhD researchers
   a. Charles Menzel, Research Associate (PI)
   b. Michael Beran, Research Scientist (PI)
   c. Emily Klein, Postdoctoral Associate (hired Fall, 2005)
   d. Brad Sheese, Postdoctoral Associate

4. Collaborating researchers
   a. Eric Vanman, Assistant Professor (RPE collaborator)
   b. Tracie Stewart, Assistant Professor (RPE collaborator)
   c. Yanqing Zhang, Associate Professor (B&B and RPE collaborator)
   d. Marise Parent, Associate Professor, Psychology (RPE collaborator)
   e. Scott Decker, Assistant Professor, CPS (RPE collaborator)
   f. Sarah Brosnan, Visiting Scientist, Emory University

5. Remote / Subcontract investigators
   a. Bill Hopkins, Berry College (PI)
   b. J. David Smith, University at Buffalo (PI)
   c. Mary Rothbart, University of Oregon (Co-PI)
   d. Michael Posner, University of Oregon (Co-PI)
   e. Kim Espy, Southern Illinois (Co-I)
   f. James King, University of Arizona (Co-I)
   g. Claudio Cantalupo, Clemson University (Co-I)
   h. Dorothy Fragaszy, University of Georgia (Co-I)
   i. Julie Pynn, Berry College (Co-I)
   j. Wendy Shields, University of Montana

6. Students
   a. Jonathan Gulledge, Psychology
   b. Jared Taglialatela, Biology
c. Emily Harris, Psychology
d. Tim Flemming, Psychology
e. Megan Hoffman, Psychology
f. Mary Beran, Anthropology
g. Takashi Yoshida, Biology
h. Natasha Barrett, Psychology
i. Jun Li, Computer Science
j. Katie Leighty, University of Georgia
k. Josh Redford, University at Buffalo
l. Sarah Poss, Emory University

6. Consultants
   a. Karen Brakke, Spelman College
   b. Michael Kane, UNC-Greensboro
   c. Bob Widner, U. Minnesota
   d. Julian Keenan, Montclair State University
   e. Charles Epstein, Emory University
   f. Leo Cohen, NIH
   g. Stanley Rapoport, NIH
   h. Jim Rilling, Emory University
   i. Todd Maddux, University of Texas
   j. Greg Ashby, University of California, Santa Barbara

e. The LRC enjoys international renown. This too is a resource of sorts, put in place by Duane
Rumbaugh, Sue Savage-Rumbaugh, and other senior researchers who worked so extensively and
effectively with Lana, Sherman and Austin, Kanzi, Panbanisha and Panzee. This reputation
greatly enhances the LRC’s educational potential. It generates dozens of requests each year for
permissions to reprint photos or data in textbooks or to conduct interviews for the popular media.
It generates a steady stream of requests by student groups (e.g., Animal Behavior classes, Psi Chi
or other honor societies) to visit the center. It also ensures that GSU receives applications each
year from outstanding prospective graduate students who are interested in comparative
psychology or related disciplines.

3. What are the major institutional, administrative, and/or financial constraints that interfere
   with achieving the center’s goals and objectives?

   a. Numerous factors, including recent retirements and the bonobos’ move to the Great Ape Trust
   in Iowa, have left the LRC seriously lacking GSU faculty researchers to pursue the goals
   outlined above, to generate grant support for such research and for the long-term and continuous
care of the animals, and to provide interdisciplinary and translational perspectives. Indeed, the
situation threatens the long-term viability of “language” as a research focus at the Language
Research Center. Constraints that limit the recruitment and retention of psychologists,
behavioral neuroscientists, anthropologists, or other researchers who would join the LRC as core faculty members interfere with achieving the LRC’s goals.

b. The Panthersville property provides the wooded acreage, the trails, the wildlife, geographic features (like rivers and hills), and the relative isolation necessary to raise generations of language-trained apes and to give them places to go and things to communicate about. However, this isolation from the GSU main campus also constrains the degree to which the programmatic goals of the LRC can be achieved. The distance and isolation, combined with the commercial and residential development of the Panthersville region, introduce security concerns that threaten the long-term survival of the LRC. The distance is one factor in a lack of technical support from the university (discussed below) and the current disconnect between the LRC animal-research program from the campus animal-research program. Practically speaking, the distance serves as one obstacle for students on campus to experience the research at the LRC, or for LRC researchers to go downtown for talks, meetings, and so forth. The laboratory facilities that were once state-of-the-art are now aging and increasingly only adequate (rather than being optimal) for the needs of the researchers and the animals.

c. From the computer-based language keyboard developed for apes to the game-like computerized test system used with rhesus monkeys, the LRC is known for its computerized apparatus almost as much as for its research findings. The LRC operates 24/7/365, in part because of the innovative integration of computers into research paradigms. This automated testing explains why investigators from Buffalo, Oregon, Montana, and California can conduct research every day with the animals at the LRC. However, the LRC receives little technical support from the university at this time, such that researchers and staff must maintain and troubleshoot all computer systems, write all computer software, and pay for internet connection or technical support through third-party providers. For the goals of the LRC to be fully realized, this impediment must be resolved.

d. The current administrative assignment of the LRC as a unit within the College of Arts and Sciences rather than as a component of an academic department impedes pursuit of these goals. Integration with the university’s instructional mission, as well as recruitment and retention of full-time research faculty, would be facilitated if the LRC were affiliated administratively with the psychology department.

e. A few years ago, the LRC was supported by two separate program-project (P01) grants plus a number of individual grants from NIMH, NASA, and several fellowships. Today, research at the LRC is primarily funded through a single program-project (P01) grant, and this award received a 50% across-the-board cut from NICHD relative to the budget that was proposed and approved. Finances are tight, and the national climate for extramural support of basic behavioral research is increasingly hostile. Clearly, financial constraints limit pursuit of these goals already, and the situation will be worse in the future unless additional sources of support are identified.

4. What is your assessment of your achievement of your goals?
AS IS SUGGESTED BY THE PUBLICATION LIST IN THIS DOCUMENT, THE LRC CONTINUES TO BE VERY SUCCESSFUL IN ACHIEVING GOALS (A), (B) AND (D). THAT IS, WE CONTINUE TO CONDUCT INNOVATIVE, INTERDISCIPLINARY RESEARCH AND TO PUBLISH RESULTS OF STUDIES WITH MONKEYS, APES AND HUMANS ON LANGUAGE, LEARNING, AND COGNITION. RECENT AWARDS AND RECOGNITIONS OF OUR RESEARCHERS REVEAL THAT THIS PRODUCTIVITY STILL ENHANCES THE VISIBILITY AND REPUTATION OF GSU AS A RESEARCH UNIVERSITY.

Our achievement of educational goals (e) is mixed. We have succeeded in recruiting excellent graduate students who apply to GSU in hopes of training at the LRC. Table 3 summarizes the progress of some of these students through their graduate programs and in professional development.

Table 3. Graduate student training at the LRC (last three years only).

<table>
<thead>
<tr>
<th>STUDENT</th>
<th>DEGREE</th>
<th>YEAR</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Beran</td>
<td>PhD</td>
<td>2002</td>
<td>Numerical Reasoning by Chimpanzees: Analogues of Addition, Subtraction, and Multiplication</td>
</tr>
<tr>
<td>Jared Taglialatela</td>
<td>PhD</td>
<td>2004</td>
<td>Functional asymmetries for bonobo vocalization</td>
</tr>
<tr>
<td>Takashi Yoshida</td>
<td>MA</td>
<td>2004</td>
<td>Effects of Enculturation on a Bobobo’s Writing and Drawing Activities</td>
</tr>
<tr>
<td>Sarah Poss</td>
<td>PhD</td>
<td>2004</td>
<td>Symbol mediated perceptual processing in children (Homo sapiens) and chimpanzees (Pan troglodytes)</td>
</tr>
<tr>
<td>Emily Harris</td>
<td>MA</td>
<td>2005</td>
<td>Numerical Labeling of Sequentially Completed Maze Trials by Rhesus Monkeys (Macaca mulatta)</td>
</tr>
<tr>
<td>Katie Leighty</td>
<td>PhD</td>
<td>2005</td>
<td>Cross-dimensional object recognition in chimpanzees (Pan troglodytes) and young children</td>
</tr>
<tr>
<td>Mary Beran</td>
<td>MA</td>
<td>2005</td>
<td>Comparative Post-Cranial Anatomy of Rhesus (Macaca mulatta), Potto (Perodicticus potto) and Human (Homo sapiens)</td>
</tr>
<tr>
<td>Jun Li</td>
<td>MS</td>
<td>2005</td>
<td>Genetic Granular Cognitive Fuzzy Neural Networks and Human Brains for Pattern Recognition</td>
</tr>
<tr>
<td>Josh Redford</td>
<td>MA</td>
<td></td>
<td>Categorization and Uncertainty</td>
</tr>
<tr>
<td>Tim Flemming</td>
<td>MA</td>
<td></td>
<td>What Meaning Means for Same and Different: A Comparative Study</td>
</tr>
</tbody>
</table>
However, the LRC has little impact on undergraduate instruction, particularly at GSU. More undergraduate groups visit the LRC from universities other than GSU than from our own student body. The vast majority of applications for summer internships or practica are submitted by students from other institutions. When GSU students do benefit from the educational resources of the LRC, those students are seldom from departments other than psychology.

Achievements in goal (c), translating the findings from our animal research into benefits for children, are clearly lacking at this time. In the 1980s, the LRC forged this connection with noteworthy success, with parallel research projects on language acquisition by apes and language intervention with children. As each of these projects became more intensive and more independent, the LRC lost the connectedness between comparative and developmental work. Re-establishing these linkages has been a primary goal in recent years.

In our assessment, the following ten objectives (listed thematically, loosely, rather than in terms of priority) will improve achievement of the LRC goals, and should be accomplished during the next five years:

**Objective 1.** Increase the number of GSU faculty conducting research at the LRC.

**Rationale:** Historically, the LRC research team has included at least three tenured or tenure-track faculty members whose long-term research program included nonhuman primates. Although Duane Rumbaugh remains an active LRC investigator and Emeritus Professor for the university, his new position at the Great Ape Trust of Iowa, and Sue Savage-Rumbaugh’s new laboratory there, will create questions in the field about whether the LRC can and will continue. We have an opportunity to build for future growth through the recruitment of at least one more tenure-track faculty member with an established research program with nonhuman primates. Ideally, this recruitment effort would yield researchers who could lead the language work in the future, but any scholar who brought a complementary perspective to the existing research programs would be welcome.

**Resources:** Funds for hiring new faculty might be found in recruitment initiatives of the Center for Behavioral Neuroscience, the Brains and Behaviors Program, the Acquisition of Language and Literacy Program, and normal departmental hires. The available animal space at the LRC can be used as an incentive to attract a psychologist, biologist, anthropologist, or language researcher with an established program of investigations with nonhuman primates, whether or not this researcher has her/his own colony of animals.

**Implementation:** A four-tiered strategy should be pursued: (a) Increase the number of current GSU faculty, across departments, who conduct research with and generate grant-support for the animals at the LRC. (b) Recruit additional faculty members to GSU for whom the LRC would be their primary research laboratory. New faculty could be hired into the psychology department (e.g., behavioral neuroscientists, developmental or social psychologists who conduct research with nonhuman primates), biology department, anthropology department, or could be a language researcher hired in any one of several departments. (c) Investigate mechanisms for funding one or two rotating “visiting
scientist” lines for which outside investigators could apply. These positions would allow scientists to conduct research for two years or so, during which time they could apply for independent support if they wished to remain at the center. (d) Retain current investigators, particularly full-time research faculty supported on grant funds. Opportunities to diversity their salary base (e.g., through teaching) and for professional development should be explored.

Objective 2. Increase the number of language-trained animals available at the LRC.

Rationale: Although the cognitive research across species is a strength of the LRC, it is best known for its innovative ape-language research. The availability of language-competent apes makes it possible to ask questions for which GSU is uniquely positioned to answer. However, we have just three language-competent apes now, and although they should be productive in research for many years, they will not live forever. Efforts to determine whether monkeys can learn meaningful communicative skills are underway, but are unlikely to succeed. Baby chimpanzees could be raised to comprehend and use the keyboard-based language systems, and simultaneously trained to perform the cognitive tasks, to participate in neuroimaging studies, and generally to serve as the faces of the LRC for the next generation of researchers.

Resources: Acquiring new apes requires a lifetime commitment by the LRC researchers, by the department and college, and by the Research Foundation. Ideally, NICHD would also endorse the commitment, as they have in previous decades. Although there are researchers at the LRC who are interested in raising baby chimpanzees to be language competent, a lead researcher would need to step forward or to join the LRC, and the university would need to make the long-term commitment that would allow such a researcher to plan both the language-acquisition studies with young apes and also the language-use studies of the adult apes.

Implementation: The LRC Director and researchers will begin discussions with relevant administrators and the veterinarian about possibilities and a timetable for adding two baby chimpanzees to the current colony. Possibly these chimpanzees can be obtained from another source, although it seems most practical to determine whether Lana and Panzee could be bred.

Objective 3. Develop the capuchin laboratory into a funded and productive research facility.

Rationale: The LRC has benefited from having at least three nonhuman primate species to test in comparative studies. With the bonobos’ departure, we were fortunate to obtain a colony of capuchin monkeys. The LRC, the Department of Psychology, and the GSU Research Foundation invested into obtaining these animals and renovating the space for them. It is now incumbent on us to leverage this investment into grant support and scientific progress.

Resources: Given the resources invested in this objective to date, time and effort are the most important resources required in the next few years. However, the capuchin laboratory
itself might be one of the attractive resources that helps in the recruitment of additional LRC faculty.

Implementation: Research and training has begun with these animals. After a few months, we will reassess our status and plans.

Objective 4. Expand connections between comparative research with nonhuman primates and applications / investigations with human children and adults.

Rationale: Future funding and the reputation of the LRC depend on developing mental health translations, clinical-population interventions, and educational applications of the principles derived from basic comparative research with the nonhuman primates.

Resources: The recruiting objective discussed above may yield researchers who can help to build in this area. Additional funding is needed, even to sustain current efforts.

Implementation: This objective has been a priority of the current Director. We have made progress in this arena in recent years, adding co-investigators like Posner, Rothbart, Espy, Pynn, and Decker to complement the ongoing comparative research. Some of the ape-to-child applications have begun to appear in print, but more must follow. The charge is to continue what we are doing, and to do it better.

Objective 5. Double the amount of grant support to the LRC in the next five years, and diversify the sources of this external support.

Rationale: The university has set the goal of bringing overall external funding over the $100 million mark within five years. This requires an increase of about 12% annually in grant support. Figure 3 shows fluctuations in total grant and contract support (direct + indirect) over a 20-year span, including projections from current support through 2009. The amount of grant support fluctuated largely as a function of the number of LRC researchers who were writing grants. Irrespective of the total amount, the vast majority of money reflected in this figure was provided by NICHD through one or more program-project (P01) awards.
Figure 3. Total external grant support to the LRC, 1999 - 2009

<table>
<thead>
<tr>
<th>Year Range</th>
<th>Total External Support (in millions of dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989-1994</td>
<td>6</td>
</tr>
<tr>
<td>1994-1999</td>
<td>3</td>
</tr>
<tr>
<td>1999-2004</td>
<td>5</td>
</tr>
<tr>
<td>2004-2009</td>
<td>2</td>
</tr>
</tbody>
</table>

Resources: Additional grants per current investigator requires both the commitment and the time to write grants, particularly as the national funding environment dictates perseverance and creativity in grant applications. Resource needs might include ways to support grant-writing retreats, incentives for grant writing, and staff support for producing and monitoring grant applications. Additional investigators (objective 1) and additional animals (objective 2) will provide opportunities for new grants, particularly if the investigators bring expertise in areas that complement the current research programs.

Implementation: The Director will meet with investigators to set reasonable goals and timelines for new grant proposals. Although we intend for NICHD to continue as our primary funding agency, efforts to diversity this funding base must be pursued. The program-project (P01) mechanism has served us well in the past, but we must also be ready to capitalize on other opportunities (R01, R03, training grants, foundation grants).

Objective 6. Continue to increase number and quality of publications, particularly those that reflect interdisciplinary themes that are currently underrepresented at the LRC (neuroscience, human development, language).

Rationale: With all of the recent personnel and resource changes at LRC, there is an impetus to show that the center remains active and viable. Publishing existing data will increase the visibility of GSU and will strengthen our proposals to funding agencies for additional investments of grant dollars.

Resources: It is difficult to increase publications simultaneously with increasing grant support, as both types of writing are intensive and time consuming. Incentives for meeting submission goals and adequate staffing to ease workload demands will help, as will the additional investigators discussed in Objective 1.

Implementation: The LRC investigators will meet on a quarterly basis to set goals for publication submissions. Our experience in doing this exercise over the last few summers is that the specific goals and increased accountability are critical in increasing productivity.
Objective 7. Return administratively under the umbrella of the psychology department.

Rationale: Other centers at GSU are administered through departments. Affiliating with the psychology department will ease potential growth tensions (what’s good for the LRC will be good for psychology), and will help the LRC to become more integrated into the educational mission of the university.

Resources: At one level, this reorganization requires no resources other than agreement between the Director, the department, and the Dean. As with any research center, however, the department does assume some resource-related risks in this re-integration, perhaps including security risks, demands on staff and other support, and commitment to the future success of the center. Conversely, of course, the LRC brings resources to the department, including grant support, opportunities for research and instruction, and space for growth.

Implementation: The recent hiring of a comparative psychologist illustrates the department’s commitment to building this area of strength for GSU. Initial discussions regarding the reorganization of LRC administration (include issues such as indirect costs, space management, staffing and technical support) have taken place, and will continue in the coming months.

Objective 8. Enhance LRC role in graduate and undergraduate education.

Rationale: One of the things that make GSU unique from every other university in the world is the LRC. It offers tremendous educational opportunities for learning about nonhuman primates, about the process of scientific inquiry, and about the results of this scientific inquiry. A wide range of possibilities exist for maximizing the educational value of the LRC, including (a) creating videos that can be used in courses that discuss animal behavior and cognition, (b) “Project L-R-See” in which password-protected webcams are used for live look-ins on animals and researchers, (c) traditional visits and tours by classes or other groups, (d) LRC-based Honors and graduate courses co-taught by LRC researchers, (e) regular classes or guest lectures taught by LRC researchers; (f) internship and practicum opportunities, and (g) increased advertisement of the animals’ availability to student researchers for thesis and dissertation projects.

Resources: To make full use of the educational potential at the LRC, an “education coordinator” should be hired or identified from the current team of investigators. Some opportunities (e.g., commercially produced videos, Project L-R-See) require funding for technology and tech support.

Implementation: Once the LRC is moved administratively back into psychology, systematic discussions of these options can proceed.

Objective 9. Obtain a passenger van assigned to the LRC for shuttle and conference travel.
Rationale: The distance between the LRC and the main campus discourages students and researchers from commuting between the two. LRC faculty and student researchers are unlikely to visit campus for colloquium talks, research meetings, or educational opportunities if that requires caravans of individual vehicles to transit the 14 miles, after which they must individually find parking and eventually return to the LRC. It is difficult to coordinate LRC visits by guest speakers or student groups without a passenger vehicle that can be used to shuttle between Atlanta and Panthersville. Additionally, a passenger van would allow LRC researchers to travel together to psychological meetings in the region, like the Southeastern Psychological Association, the Southern Society for Philosophy and Psychology, and the Comparative Cognition Conference meetings.

Resources: A 7- to 13-passenger university vehicle needs to be located and dedicated to the LRC.

Implementation: The Director will contact relevant university officials to explore this possibility.

Objective 10. Upgrade the facilities and apparatus at the LRC.

Rationale: The laboratory facilities of the LRC were once thought to be state-of-the-art. Now, they are clearly only adequate to the well-being needs of the nonhuman primates who live there, and are aging toward inevitable repair or replacement. Renovations will also be required to support growth (e.g., new species, new investigators, new research questions). Security of the LRC is a significant concern, both because of the increasing encroachment of development in the once-remote Panthersville region and also because of the more nefarious threat of anti-vivisectionist terrorism. Although computers for the apes and monkeys are easy to find, computers for the researchers and other kinds of apparatus must be replaced almost annually if the center is to remain productive.

Resources: To address these issues, continued financial and manpower support are required from the university community, including the college, the Research Foundation, Facilities Management, the GSU Police, and IS&T or local technical support.

Implementation: The Director, Chair of Psychology, Dean, and VP for Research will discuss needs and make plans for the scheduled repair or upgrade of LRC facilities. Support will be solicited from NICHD, National Center for Research Resources (NCRR), and other sources to pay for security, enrichment, and research-related upgrades.
C. Research of the Center

1. What research is currently being conducted in the center? Describe the major areas/topics of research. How has the center increased productivity of the faculty?

Table 4 summarizes the research that is currently ongoing at the LRC. The first eight rows are individual projects (plus the administrative core) from the NICHD program-project grant, “Brain, Behavior and the Emergence of Cognitive Competence” (HD-38051; D. Washburn, Program Director).

### Table 4. Current research at the LRC.

<table>
<thead>
<tr>
<th>PI</th>
<th>Title – Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith</td>
<td>Comparative Studies of Category Learning by Humans and Nonhuman Primates – Investigations with rhesus monkeys and human participants on the nature of concept learning. Formal computational models and systematic manipulations of category structures are used to determine the degree to which concepts are acquired through prototype-comparisons versus exemplar memorization.</td>
</tr>
<tr>
<td>Rumbaugh</td>
<td>Learning: The Roles of Salience and Temporal Sequences in Learning Associations and Symbols – A series of studies with monkeys and chimpanzees exploring the predictions of a new perspective on learning. Does symbol learning reflect associations stamped-in by reinforcement, or the recognition of the rule-like relations inherent in salient patterns of events?</td>
</tr>
<tr>
<td>King</td>
<td></td>
</tr>
<tr>
<td>Pate</td>
<td></td>
</tr>
<tr>
<td>Beran</td>
<td>Comparative Studies of Numerical Cognition in Children and Nonhuman Primates – Apes, monkeys and preschool children are asked to make judgments based on the quantity or numerosness of stimuli. The studies are designed both to distinguish between theories of numerical cognition and also to suggest implications for mathematics education.</td>
</tr>
<tr>
<td>Pynn</td>
<td></td>
</tr>
<tr>
<td>Menzel</td>
<td>Comparative Studies of Primate Spatial Cognition and Memory – Studies with chimpanzees, rhesus monkeys, and capuchin monkeys on various aspects of spatial cognition (e.g., object manipulation, maze performance, spatial problem-solving). Chimpanzees communicate the identity and indicate the location of items that were previously hidden in the environment.</td>
</tr>
<tr>
<td>Fragaszy</td>
<td></td>
</tr>
<tr>
<td>Hopkins</td>
<td>The Evolution of Primate Hemispheric Specialization – Magnetic resonance imaging of chimpanzees and monkeys is used to examine left/right hemisphere asymmetries in brain structure. These differences are related to performance measures such as hand preference and manual skill in manipulation or computerized tasks.</td>
</tr>
<tr>
<td>Cantalupo</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Washburn Espy</td>
<td>The Emergence of Cognitive Control – Attention and executive functioning are studied in monkeys, apes, human adults, and preschool children. Computerized tasks are administered that create various levels of performance competition between environmental cues, experiential cues, and executive cues.</td>
</tr>
<tr>
<td>Rothbart Posner</td>
<td>Measuring Executive Attention in Infancy and Adulthood – Longitudinal studies with infants and toddlers on the development of controlled or executive attention. Complementary research examines the effects of an attention-training program, inspired by the tasks developed for the rhesus monkeys, on executive-attention development.</td>
</tr>
<tr>
<td>Zhang Washburn</td>
<td>Granular Cognitive Neural Network Models of Relational Learning – Funded in 2004-2005 by the Brains and Behavior Program, the project involves the application of new hybrid connectionist models to data from rhesus monkey research. The basic question is, “How does rule-like relational learning emerge from simple associative connections?”</td>
</tr>
<tr>
<td>Washburn Parent Decker Zhang</td>
<td>A Multidisciplinary Investigation of Learning – Rhesus monkeys are tested to determine how glucose affects learning and memory. The school psychologist collaborates on the development of assessment tasks and the implications of these findings for school settings. The computer scientist provides computational simulations of the results.</td>
</tr>
<tr>
<td>Owren Vanman Washburn</td>
<td>Psychophysiogical measures with monkeys – A Brains and Behavior seed grant funds this study to determine whether psychophysiogical measures such as skin resistance and electromyography can be obtained from rhesus monkeys, and if so, how these measures vary when the monkeys are exposed to emotion-inducing stimuli.</td>
</tr>
<tr>
<td>Beran Brosnan</td>
<td>The Social Cognition of Exchange – Chimpanzees and monkeys are tested to determine the parameters that govern food exchanges (e.g., trading relatively unpreferred foods for a prized food item)</td>
</tr>
<tr>
<td>Beran Washburn</td>
<td>Adaptation to a Hypergravitational Environment – A project based at the Chronic Acceleration Research Unit at U. California, Davis (C. Fuller, PI) and funded by NASA. LRC investigators provide computerized tasks and analyze data from rhesus monkeys in baseline or centrifuge conditions.</td>
</tr>
</tbody>
</table>
2. What are the major opportunities/impediments for conducting research in the center?

Opportunities for conducting research in the center include:

a. Three of the few language-competent chimpanzees that exist on earth are available at the LRC.

b. A computer-task testing paradigm that provides automated data collection without direct interaction with the animals while simultaneously providing an unsurpassed method for supporting and assessing the psychological well-being of the nonhuman primates.

c. Apparatus is available for transcranial magnetic stimulation, eye-tracking, and transcranial doppler sonography studies with human and nonhuman primates.

d. There is animal-housing, laboratory, and office space in which to grow with more researchers, more animals, and more primate species.

e. There is a new capuchin monkey social group that (unlike the chimpanzees and rhesus monkeys) is not extensively involved already in numerous programs of research.

f. Compared to other research facilities in the world where nonhuman primates are available, it is relatively easy and affordable for new researchers or new research programs to become active at the LRC.

Impediments to conducting research at the LRC include:

a. Funds are extremely limited for providing start-up or seed-support for new projects or investigators.

b. The regulatory and paperwork demands on researchers who study nonhuman animals, and particularly primates, are considerable, consuming time, energies, and financial resources.

c. The distance from campus to LRC hinders faculty and student researchers, particularly those conducting less automated / more labor-intensive studies. One cannot be in the proximity of both places at once.

d. Technical, shop, and research staffing is fully utilized for current needs, limiting future growth.
3. What percentage of the center’s funding has been paid out of Fund Code 10? List amounts for the last five years.

Across the last five years, the amount of Fund Code 10 (FC10) has remained stable, although the proportion of the total budget it represents has fluctuated (see Figure 4 and Table 5).

Figure 4. Total budget and Fund-code 10 budget in dollars and percentage

![Figure 4. Total budget and Fund-code 10 budget in dollars and percentage](image)
Table 5. Center funding from FUND CODE 10

**AWARD LIST FOR 2000-2001  7/1/00-6/30/01**

<table>
<thead>
<tr>
<th>Speedtype</th>
<th>Award Number</th>
<th>Dept.</th>
<th>Budget Period Begin</th>
<th>Budget Period End</th>
<th>Period Direct</th>
<th>F&amp;A</th>
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<th>$ for FY2001</th>
<th>P/I</th>
<th>Title</th>
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<tr>
<td>ALA14-17</td>
<td>HD6016</td>
<td>Biology</td>
<td>5/1/2001</td>
<td>4/30/2002</td>
<td>533,741</td>
<td>159,290</td>
<td>693,031</td>
<td>115,505</td>
<td>SSR</td>
<td>Language, Culture, Tools</td>
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<tr>
<td>ALW92</td>
<td>HD38051</td>
<td>LRC</td>
<td>9/1/2000</td>
<td>8/31/2001</td>
<td>357,230</td>
<td>138,269</td>
<td>495,499</td>
<td>412,916</td>
<td>DMR</td>
<td>Brain Behavior</td>
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<td>53,000</td>
<td>26,500</td>
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**TOTAL**  1,290,596  FC10 - 24.4%  315,466

**AWARD LIST FOR 2001-2002  7/1/01-6/30/02**

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<th>Budget Period End</th>
<th>Period Direct Cost</th>
<th>F &amp; A</th>
<th>Sponsored Total</th>
<th>$ for FY2002</th>
<th>P/I</th>
<th>Title</th>
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<td>Biology</td>
<td>5/1/2002</td>
<td>4/30/2003</td>
<td>529,666</td>
<td>159,290</td>
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<td>Language, Culture, Tools</td>
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<td>CLH21</td>
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<td>12/1/2001</td>
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<td>67,157</td>
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**TOTAL**  1,762,287  FC10 - 14.5%  255,723
## AWARD LIST FOR 2002-2003  
7/1/02 - 6/30/03

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<th>F&amp;A</th>
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<td>CRF 5068</td>
<td>LRC</td>
<td>12/1/2001</td>
<td>11/30/2002</td>
<td>67,157</td>
<td>3,993</td>
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**TOTAL** 1,512,335  
FC10 - 16.4%  
229,306

## AWARD LIST 2003-2004  
7/1/03 - 6/30/04

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<th>$ for FY2004</th>
<th>P/I</th>
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<th>Comments</th>
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**TOTAL** 668,084  
FC10 - 34.3%  
229,306
# Award List 2004-2005

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<td>HD38051</td>
<td>LRC</td>
<td>9/1/2003</td>
<td>8/31/2004</td>
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<td>8/31/2005</td>
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<td>157,989</td>
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<tr>
<td>CLH21</td>
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<td>LRC</td>
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<td>SSR</td>
<td>Forgiveness Grant</td>
<td>Trans to GATI</td>
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</table>

**TOTAL** 1,082,753

| FC 10 - 19.7% | 212,833 |

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**Notes:**
- FC10 indicates a 19.7% reduction in funding from the previous year.
4. Attach a list of research activities and other activities (e.g. workshops, programs, conferences, seminars, symposia/etc.) of the center.

The LRC has been very energetic in support of research (see current research) and other activities. An illustrative list is produced below.

- “Common Territories”: A symposium organized for the Southern Society for Philosophy and Psychology, and subsequently published as a special issue of the *International Journal of Primatology*

- “The Life and Legacy of Harry F. Harlow”: A symposium organized for the Southern Society for Philosophy and Psychology, featuring presentations by LRC researchers and scholars from other universities, including former Harlow students and Harlow’s former secretary.

- “Hebb at 100”: A symposium at the meeting of the American Psychological Association, organized to celebrate the 100th anniversary of D. O. Hebb’s birth and featuring LRC speakers as well as former students from other universities.

- Hosting 4 – 6 visits / tours a year from selected Psi Chi groups (e.g., from GSU, Covenant College) or “Animal Behavior” classes (e.g., from Augusta State University), and countless visit / tours for smaller groups of visiting scientists and students.

- “Meet while we eat”: A monthly colloquium series hosted at the LRC, featuring a rotating slate of speakers who give informal research presentations.

- “Living Links Workshop on Computerized Testing”: Organized and hosted by the Living Links center at Yerkes National Primate Research Center, LRC researchers were featured in this workshop designed to educate students and other researchers how to use the computer-test system we developed (now in use at over three-dozen laboratories worldwide).

- LRC researchers have over 200 professional presentations in the last three years.

- “Individual differences in cognition”: Symposium featuring LRC and outside speakers at the 2002 Southern Society for Philosophy and Psychology meeting.

- “Emergents and Rational Behaviorism: A Festschrift in Honor of Duane M. Rumbaugh”: The LRC organized and hosted a major two-day conference at GSU, with a one-day follow-up session at the meeting of the Southern Society for Philosophy and Psychology. Co-sponsored by the department of psychology, the College, and the American Psychological Association, the festschrift featured a multidisciplinary slate of speakers, including distinguished scholars from around the world (see the program schedule on the following pages).
Emergents and Rational Behaviorism: A Festschrift in Honor of Duane M. Rumbaugh

Friday, October 11, 2002 — Court Salon, Student Center, Georgia State University

1:00 - 1:05 pm  Introductory Remarks
    David A. Washburn, Georgia State University

1:05 - 1:35 pm  Some Observations on Ape Personality and its Generalizability
    James King, University of Arizona

1:35 - 2:00 pm  Video Tasks and Social Behavior
    Leonard A. Rosenblum, SUNY Health Sciences Center at Brooklyn

2:00 - 2:10 pm  Discussion/Break

2:10 - 2:35 pm  Duane Rumbaugh's Contributions to Comparative Psychology, a Cornerstone in the Development of Zoo Biology
    Terry L. Maple, ZooAtlanta and Georgia Institute of Technology

2:35 - 3:00 pm  Why President George Walker Bush Is Not an Ape, and What This Means for the Apes
    Russell Tuttle, University of Chicago

3:00 - 3:10 pm  Discussion/Break

3:10 - 3:35 pm  Species of Parsimony in Comparative Studies of Cognition
    J. David Smith, University at Buffalo

3:35 - 3:55 pm  The Significance of the Concept of Emergence for Comparative Psychology
    Gary Greenberg & Elizabeth Ablah, Wichita State University and Ty Partridge, Wayne State University

3:55 - 4:05 pm  Discussion/Break

4:05 - 4:25 pm  Embryo Transfer: A New Technology for the Experimental Study of Primate Behavior Genetics
    Gene P. Sackett, University of Washington

4:25 - 4:50 pm  Plasticity and Potential of Behavioral Development: An Evolutionary Perspective
    William A. Mason, University of California, Davis
4:50 - 5:00 pm  Discussion/Break

5:00 - 6:00 pm  A Great Debate in the Age of the Apes
Duane M. Rumbaugh, Georgia State University

6:00 - 7:00 pm  Graduate Student Poster Session & Reception

Saturday, October 12, 2002--Urban Life Auditorium, Urban Life Building, Georgia State University

9:00 - 9:30 am  Present and future studies in Great Ape Research Institute, Hayashibara
Gen’ichi Idani, Great Ape Research Institute and Hayashibara Museum of Natural Sciences

9:30 - 9:55 am  Reasoning, Representation, and ‘Rithmetic
David A. Washburn, Michael J. Beran, & Jonathan P. Guldledge, Georgia State University

9:55 - 10:20 am  Comparative Perspective on Primate and Nonprimate Cognition
Heidi Lyn, University of California, Los Angeles and Georgia State University

10:20 - 10:30 am  Discussion/Break

10:30 - 10:55 am  Rethinking Language Evolution: The Comparative Psychology of Hemispheric Specialization in Primates
William D. Hopkins, Berry College and Yerkes National Primate Research Center

10:55 - 11:30 am  Epigenesis, Mental Construction, and the Emergence of Language in Apes and Humans
Kathleen R. Gibson, University of Texas, Houston

11:30 - 11:50 am  The Past, Present, and Possible Future of Animal Language Research
William A. Hillix, San Diego State University

11:50 am - 12:20 pm  Where the Objective and Subjective Meet
E. Sue Savage-Rumbaugh, Georgia State University

12:20 - 1:30 pm  Lunch Break (Lunch will be provided for all festschrift speakers)
1:30 - 1:55 pm  
**Future Directions in Cyberspace**  
Dorothy M. Fragaszy & Katie Leighty, *University of Georgia*

1:55 - 2:20 pm  
**Knowledge Base of Chimpanzee Communication**  
Charles R. Menzel, *Georgia State University*, & Emil Menzel, *SUNY Stony Brook*

2:20 - 2:50 pm  
**The Transfer Index as a Precursor of Language Research and Emergents**  
James L. Pate, *Georgia State University*

3:50 - 3:15 pm  
**Mother-infant relationships and social organization in rhesus and capuchin monkeys**  
Stephen Suomi, *Laboratory for Comparative Ethology, NICHD*

3:15 - 3:30 pm  
**Discussion/Break**

3:30 - 4:05 pm  
**Willful Apes Revisited: The Nature of Prospective Control**  
R. Thompson Putney, *Georgia State University*

4:05 - 4:40 pm  
**The Emergence of Emergence—One Behaviorist's View**  
M. Jackson Marr, *Georgia Institute of Technology*

4:40 - 5:15 pm  
**Language Behavior Observed: Understanding is Harder than it Looks**  
Herbert L. Roitblat, *DolphinSearch, Inc.*

5:15 - 6:00 pm  
**AI Learned from LANA: Chimpanzee Intelligence in Field and Laboratory**  
Tetsuro Matsuzawa, *Kyoto University*

6:00 pm  
**Concluding Remarks**
Emergents and Rational Behaviorism:  
A Festschrift Symposium in Honor of Duane M. Rumbaugh
95th Annual Meeting of the Southern Society for Philosophy and Psychology
Hyatt Regency Hotel, Atlanta, Georgia
Thursday, April 17, 2003

Chair: David A. Washburn, Georgia State University

4:00  Lyn Miles, Chantek Foundation & ApeNet Inc and University of Tennessee, Chattanooga
      Great Apes and Material Culture

4:20  Emil W. Menzel, SUNY Stony Brook
      Are Simple Unweg Performances Really Simple

4:40  F. Robert Treichler, Kent State University
      Serial List Linking: A Rumbaugh-type Emergent

5:00  Mel Konner, Emory University
      The Mind Makes No Sense Except in the Light of Evolution

Sponsored by the Language Research Center, the College of Arts and Sciences, the Social/Cognitive Program and the NBN Program of Georgia State University, and by the American Psychological Association.
5. Attach separate bibliographies of refereed and nonrefereed publications which have resulted from research activities of the center. List publications for the last three years only.

**BOOKS:**


**REFEREED JOURNAL PUBLICATIONS:**


Smith, J. D. (2002). Exemplar theory's predicted typicality gradient can be tested and disconfirmed. Psychological Science, 13, 437-442.


NONREFEREED PUBLICATIONS (ABSTRACTS, BOOK REVIEWS, BOOK CHAPTERS):


Pate, J. L. (in press). The Transfer Index as a precursor to research on language and emergents. In D. A. Washburn (Ed.), Emergents and rational behaviorism: A festschrift in honor of Duane M. Rumbaugh.


6. Use the attached format to compile a list of grants submitted in the last three academic years and list all sources of funding. For funded grants, give title, funding source, amount, type of grant (research or instruction), GSU project number, and period funded.

See Table 6.
Table 6. Summary of Grants Submitted and Funded

<table>
<thead>
<tr>
<th>Date Submitted</th>
<th>Date Funded</th>
<th>Project Number</th>
<th>Project Director</th>
<th>Title</th>
<th>Amount Funded</th>
<th>Funding Source</th>
<th>Type of Grant</th>
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<td>October 1, 2003</td>
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<td>FLAF3</td>
<td>Washburn</td>
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<td>Date 2</td>
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<td>Amount</td>
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Table 6. Summary of Grants Submitted and Funded (continued)

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<td>Menzel</td>
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<td>February 1, 2005</td>
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<td>November 1, 2004</td>
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D. Center Personnel

List all personnel funded through the center for the prior fiscal year, using the attached format. Faculty who receive course releases or full or partial summer pay should be counted as center members.

See Table 7.
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<th>Name of Personnel</th>
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Appendix B5c. Center for Brain Sciences and Health (CBSH).

Name of Center: Center for Brain Sciences and Health/ Center for Behavioral Neuroscience

Center Director: H. Elliott Albers

A. General Information

1. When was the center created and to which department/college/office was it originally designated? The Center for Brain Science and Health (CBSH) was founded in 1992 by faculty in the Departments of Biology and Psychology in the College of Arts and Sciences. This Center became the administrative home of the Center for Behavioral Neuroscience (CBN) when it was funded in 1999. Its director, Elliott Albers, is a Regents professor of Biology and Psychology.

If the designation has changed, in which department/college/office does the center currently reside? The center resides under the Dean’s Office

2. To whom does the center’s director report? The center’s director reports to the Dean of the College of Arts and Sciences

3. If there is an advisory board to this center, describe its function and composition. The External Advisory Board of the Center for Behavioral Neuroscience is composed of a Chair and 12 additional members chosen by the director of the Center. The Board is composed on internationally recognized experts in behavioral neuroscience and science education from academia, government, and industry; selected to provide guidance and advice to the Center.

4. If the center is considered interdisciplinary, describe the interdisciplinary focus. The vision for the Center for Behavioral Neuroscience is that it become an internationally recognized center for research elucidating the brain mechanisms of social behavior, that it educate new generations of research scientists and students in innovative, interdisciplinary ways of investigating these mechanisms, and that it transmit the excitement of behavioral neuroscience to the general public. In doing so, the CBN will become a national resource for the field of behavioral neuroscience, contributing new knowledge, training a diverse student population, and bringing an appreciation of science to the public at large. The CBN involves collaborations across the disciplines of biology, psychology, anthropology, neurology, psychiatry, computational neuroscience, and biomedical engineering.

5. Describe in detail the amount of start-up support available. The CBN receives four million dollars per year (1999 – 2009) to run the center. In addition, the Georgia Research Alliance has provided 1.5 million plus per year for the first five years of the CBN and 1.7 millions for years 6-10 to be used for research infrastructure including start-up for new faculty. This money is used for new faculty
recruits at all eight partner institutions (GSU, Emory, Ga. Tech, Clark-Atlanta University, Morehouse School of Medicine, Morehouse College, Spelman College, Morris Brown College). Start-up packages paid from the GRA money vary from institution to institution and from faculty to faculty depending upon their needs.

B. Goals and Objectives
1. Please enumerate the initial goals and objectives and describe the current goals and objectives if they have changed.

Our initial and continuing goals involve bringing together the unique resources from a consortium of Atlanta colleges and universities, backed by considerable state and federal support, to build a nationally recognized program that will (a) define the interaction of brain processes and complex behaviors, (b) create a cadre of interdisciplinary investigators focused on behavioral neuroscience, and (c) transfer relevant discoveries from the laboratory to the public. We have more recently developed more specific objectives towards these overarching goals.

The new objectives include:

Objective #1: Initiate a Center wide discussion of new research themes and approaches to using a combination of collaboratory meetings and meetings centered around new research themes.

Objective #2: Establish new approaches to facilitate collaborations between faculty who study non-traditional animal model systems and the technology cores.

Objective #3: Establish a forum for evaluation of the role of bioinformatics in the CBN; Explore partnerships with bioinformatics initiatives within the partner institutions and at NSF.

Objective #4: Have AUC faculty identify new ways to enhance their research programs by interacting with CBN.

Objective #5: Enhance the national exposure of the Center in behavioral neuroscience in scientific circles.

Objective #6: Increase overall student interest in studying behavioral neuroscience by providing experiential education opportunities for students at all levels, provide science curriculum enhancement at the pre-college and undergraduate levels, and conduct proactive recruitment activities at the high school, and undergraduate levels. We will continue with current educational initiatives and recruitment for these initiatives at the pre-college, undergraduate, graduate, and post-doctoral levels; continue teacher training and implementation of neuroscience in the pre-college curriculum.

Objective #7: Promote an awareness of alternative careers in or related to behavioral neuroscience beyond that of the professoriate by providing information to students at all levels about careers in or related to behavioral neuroscience such as science policy, journalism, biotechnology, pre-college teaching, and industry positions. We will provide career counseling and development as requested; aid students with guided career decision-making processes as requested; provide opportunities for extensive career exploration with an emphasis on experiential and action learning through seminars, workshops, information sessions and interviews, and panel discussions.

Objective #8: Promote behavioral neuroscience in K-12 curriculum in the local school systems by providing a number of programs and activities that target K-12 students and
teachers to educate them in behavioral neuroscience; develop and implement a plan for effective and efficient dissemination of curricular information. We will provide CBN sponsored K-12 teacher-training and workshops utilizing behavioral neuroscience material generated by CBN institutions and other sources; develop and provide behavioral neuroscience curricular materials that can be employed by Atlanta schools and other school systems nationwide; continue to work with the Georgia Internship for Teachers (GIFT); promote the Center’s Lending Library of Learning Resources among K-12 science teachers in the local school systems; continue to provide hands-on science activities to K-12 students through Center activities and programs such as the Neuroscience Exposition, Brain Camps and the ION program.

Objective #9: Broaden student exposure to and interest in behavioral neuroscience by providing exciting and informative experiences in behavioral neuroscience with information and activities in K-12 education for students and their families. We will continue development and facilitation of middle-school Brain Camps, BrainsRule and other Brain Awareness Month activities, the Atlanta Brain Bee, and the Institute of Neuroscience (ION) that targets high school students; continue development of exhibits and events at partner non-profit organizations, such as Zoo Atlanta and the Fernbank Museum of Natural History; continue professional development for K-12 teachers and utilization of behavioral neuroscience curriculum in the classroom.

Objective #10: Increase the percentage of female and minority faculty members, postdocs, graduate students and undergraduate students in the Center closer to the overall goals of 50% female and 20-30% minority.

Objective #11: Promote information about Center members and their research in public venues.

Objective #12: Increase the visibility of the CBN in the local community and nationally.

2. What are the major institutional, administrative, and/or financial resources that facilitate achieving the center’s goals and objectives?
The CBN has successfully leveraged institutional support from all eight of the partner institutions to promote the success of the center. Without support from the leadership, faculty and students at all of these institutions, the CBN would not have been able to accomplish many of the things it has over the six years of its existence. The funding for the center comes primarily from the National Science Foundation and from the Georgia Research Alliance. These funds pay for administrative staff and supplies, support for students and postdocs, support for the center’s many educational programs, start-up for faculty recruits, support for some of the center’s innovative research and most of the other needs of the CBN.

3. What are the major institutional, administrative, and/or financial constraints that interfere with achieving the center's goals and objectives?
The different missions of the partner institutions have occasionally produced challenges for the advancement of CBN objectives, but by making relationship building among the institutions a major focus of the CBN, these challenges have aided the development of stronger relationships among the CBN faculty and institutional leaders that will better serve the center and the participating institutions in the future.
4. What is your assessment of your achievement of your goals?
This assessment may be best adapted from the recent site evaluation report of the CBN written by a team of NSF and scientists from other institutions. The CBN is to be commended for many things. First and foremost, research, education and knowledge transfer have become extremely well-integrated. The CBN is an evolving model for real interactions among different labs across campuses that would not have collaborated in the past. The CBN has provided the structural network that typically does not exist and continues to focus on the needs of collaborations and to motivate the collaborations. Without the structural network that has been developed, it is expected that this community type of science would not have happened. The experience of the CBN can be used as a model/prototype of science that will hopefully extend to other institutions and to other levels of analysis, including biomedical and behavioral/ecological science. Finally, they have successfully extended science into other community institutions. The result of many of these positive features is that their national visibility continues to increase.

The CBN has continued to make progress in fulfilling their original mission. The members of CBN continue to become increasingly collaborative in their research. The many cross-laboratory and cross-institutional collaborations are an obvious strength of the Center. The CBN has extensive commitment to K-12 education through a wide and varied collection of programs. The CBN is committed to diversity as evident in its maintenance of the membership and communities served. The current population of graduate fellows (22% minorities and 74% females) is close to and above the national average and remains particularly impressive. The CBN has a very impressive level of commitment to, and implementation of, a variety of mechanisms for presenting concepts in behavioral neuroscience to the lay community. Partnering the basic science of the CBN with associations focused on applied aspects of neuroscience is good to help the public see the value of basic research.

C. Research of the Center
1. What research is currently being conducted in the center? Describe the major areas/topics of research. How has the center increased productivity of the faculty?
The CBN provides funding for a limited number of research projects through its venture grant program that is designed to promote innovative research in the field of behavioral neuroscience of social behaviors. In addition, the CBN promotes research related to certain social behaviors by sponsoring graduate scholars, postdoctoral fellows, undergraduate research opportunities, seminars, retreats, and workshops.

What follows is a brief discussion of selected research projects from each of the four traditional collaboratories. It was our goal to give an overview of the variety of the research that has grown out of the CBN. Many, if not most, of these collaborations would not have happened had it not been for the CBN.

Affiliation Collaboratory
The Affiliation Collaboratory has made significant scientific progress in the past year on a wide variety of projects. There are a large number projects and collaborations
within the collaboratory involving faculty at Georgia State University, Emory and Spelman. The following highlight only some of the projects:

**Project 1: Social Recognition:** In 2004, Isadora Bielsky (CBN Scholar) and Larry Young demonstrated that vasopressin V1a receptor (V1aR) knockout mice displayed social amnesia, meaning that they had an inability to recognize conspecific mice to which they had previously been exposed. This paper, published in *Neuropsychopharmacology*, also demonstrated that this cognitive deficit was specific for social learning and memory since these same mice recognized nonsocial odors and performed normally in nonsocial memory tasks, such as the Morris Water Maze. In a follow-up study, Isadora Bielsky used a combination of pharmacology and viral vector gene replacement approaches to identify the lateral septum as the population of V1aR mediating social recognition. V1aR antagonist infused into the lateral septum of wildtype mice blocked social recognition, while re-expressing the V1aR in the lateral septum of knockout mice completely restored social recognition abilities. These data are published in the August issue of *Neuron*.

We had previously shown that oxytocin knockout mice also displayed social amnesia. In a study now in press at the Proceedings of the National Academy of Sciences, we confirm the role of the oxytocin system in social recognition by demonstrating that oxytocin receptor (OTR) knockout mice also display social amnesia. More interestingly, these mice also show defects in maternal nurturing. Both post-partum and virgin OTR knockout mice display severe deficits in maternal behavior. Additionally, male mutants display elevated levels of aggression. Finally, OTR knockout pups display fewer ultrasonic vocalizations in response to social isolation. Together, this study, which is an international collaboration between Katsuhiko Nishimori (Japan), Heather Ross (CBN Scholar), Isadora Bielsky (CBN Scholar) and Larry Young, demonstrates that disruption of the oxytocin receptor system results in pervasive social deficits.

**Project 2: Social Attachment:** In 2004, several papers published in *Journal of Comparative Neurology*, *Neuroscience*, and *Nature* as part of the thesis work of Miranda Lim (CBN Scholar, PhD 2004), greatly enhanced our understanding of the neurobiological mechanisms underlying pair bonding in male prairie voles. This year, Jose Morales (a CBN post-doc) completed a microdialysis study examining the release of vasopressin in the ventral pallidum of male prairie voles during pair bond formation. His results, which were presented at the 2004 Soc. for Neuroscience meeting, demonstrate that vasopressin is released in the male prairie vole ventral pallidum with ejaculation. More recently, Dr. Morales has demonstrated using microdialysis that extracellular glutamate increases concomitantly with vasopressin and that infusion of a vasopressin receptor antagonist, which blocks pair bonding, also blocks this increase in glutamate. This study suggests that an interaction of vasopressin and glutamate in the ventral pallidum may result in pair bond formation. This data is currently being written up and will be submitted J. Neuroscience. Based on this paradigm, Charlene Cole (minority CBN Scholar) has begun similar experiments examining the interactions of oxytocin and glutamate in the nucleus accumbens in the female prairie vole.

**Project 3: Individual Variation in Social Behavior.** An exciting new direction in the Affiliation Collaboratory is the investigation of the neurobiological mechanisms
underlying individual variation in social behavior. In a 2004 paper published in *Molecular Biol. Evolution*, Elizabeth Hammock (CBN Scholar, PhD 2005) demonstrated that a polymorphic microsatellite DNA sequence in the promoter of the vole vasopressin receptor (V1aR) regulates gene expression in a cell-type specific manner and suggested that species differences in this microsatellite might be responsible for species differences in social behavior between the monogamous prairie vole and the non-monogamous meadow vole. Dr. Hammock then hypothesized that natural variation in the length of this microsatellite might be responsible for individual variation in receptor expression in the brain and social behavior within the prairie vole species. To test this hypothesis, Dr. Hammock used a breeding paradigm to create lines of voles with either longer than average microsatellites, or shorter than average microsatellites. She found that male prairie voles with longer microsatellites displayed higher levels of paternal care, were more interested in social olfactory stimuli, and were more likely to form pair bonds than males with shorter microsatellites. The strains also displayed different levels of V1aR binding in the brain. This study, published in *Science*, demonstrates that instability of microsatellite sequences in the promoters of genes that regulate behavior create diversity in social behavioral phenotypes, which can be acted upon by natural selection. A collaborative venture grant between Larry Young and *Zoo Atlanta* was recently awarded to compare microsatellite structure in the V1aR of several primate species that differ in their social structure.

A second project examines individual differences in the need for social buffering in rats. This project represents a collaboration between the Affiliation Collaboratory (Larry Young) and the Fear Collaboratory (Mike Davis) and was conducted by a CBN post-doctoral fellow (Hemanth Nair). In this study, recently accepted for publication in the *Journal of Neuroscience*, Dr. Nair used a “discovery-based” approach to identify neuropeptide receptor distribution patterns that predict individual differences in social isolation-induced potentiation of startle (IPS) in rats. This approach, based in multivariate statistics, provided predictions as to the brain regions where oxytocin (OTR), vasopressin (V1aR), or corticotropin releasing factor (CRF1 and CRF2) receptor binding contribute to IPS. Dr. Nair then directly tested one of the predictions – that CRF1 receptors in the Nucleus Accumbens are in part mediating IPS – by directly infusing CRF into the region. As predicted, CRF facilitated the IPS effect. Hence, the collaboratory successfully developed a novel, discovery-based approach to identify neuropeptide receptor binding patterns that predict a complex, affiliative behavior and then successfully tested the prediction using conventional pharmacology. This study provides both insight into the neuropeptide basis of socially-related psychiatric disorders and a novel approach to study their neurophysiological basis.

**Project 4: Imaging the Social Brain:**

Two brain-imaging studies were funded in the last year through the venture grant mechanism. Both projects are designed to develop technologies to better image human and primate brains. Dr. Lisa Parr’s project is designed to ultimately image brain activation in chimpanzees and monkeys while they perform face-processing tasks. Chimpanzee brain scanning using PET was started in earnest in 2004 using 18F-FDG. Dr. Parr has currently completed scanning with three chimps under 2 conditions: a face matching task and an object (clip art) matching task. These scans have now been
coregistered to an individual, anatomical MRI from each subject (performed at the new Yerkes Neuroscience Facility, opened spring 2005) for localization of brain regions. Analyses are currently underway. Monkey imaging has been awaiting training of subjects on face matching tasks. This past year, 5 monkeys have reached criterion on an object matching to sample task and additionally, one of these subjects has reached criterion on a face-matching task. Monkey scanning is pending the completion of the Yerkes Neuroimaging Facility. This venture grant helped to develop techniques for functional neuroimaging that led to Dr. Parr receiving an R01 entitled “Neuropsychology of primate social cognition” from NIMH in 2004. It also aided in the development of a large Program Project Grant with other investigators from Yerkes, Emory University, and Georgia Tech entitled “Aging and dementia in female primates.” This grant has been scored and is currently under its first review.

A second project led by Drs. James Rilling and Todd Preuss is designed to develop Diffusion Tensor Imaging (DTI) techniques that could be used to compare monkey, chimpanzee and human fiber tracts between brain regions involved in social processes. To date, the human scans are of high quality, however chimpanzee scans suffer from considerable distortion that may be due to subject movement under anesthesia. The CBN Imaging Core staff has developed a segmented DTI sequence designed to solve this problem, but the resulting images have been noisy. The Imaging personnel are currently trouble-shooting the sequence. Nevertheless, the images are of sufficient quality to conduct some preliminary analyses that were presented at both the Physical Anthropology meetings in April and the Organization for Human Brain Mapping meetings in June. At these meetings, Drs. Rilling and Preuss received several suggestions for data acquisition and analyses that they are currently pursuing.

Simultaneous with their in vivo scanning, Rilling and Preuss have resumed scanning of post-mortem brains with the new imaging center at Yerkes. The Yerkes imaging physicists have produced a protocol that generates high quality DTI images from post-mortem brains. Rilling and Preuss have been using tractography programs to dissect the fiber tract connecting Wernicke’s and Broca’s language areas (the arcuate fasciculus) and compare it in chimpanzees and humans. If there are specializations of the human brain beyond its overall size, they expect to find them in circuits like these that support human social cognitive specializations. The data resulting from this venture grant have been included in two grant applications to NIH, one of which is pending and a second that was declined on its first submission.

Project 5: (Venture Grant) Measuring attachment security in rhesus monkeys

The main goal of this project, which is a collaboration between Mar Sanchez (Affiliation) and Kim Wallen (Reproduction), is to develop a methodology that bridges the research on mother-infant relationships in humans and non-human primates. Specifically, they aim to adapt a widely used method of assessing attachment security in human children, the Attachment Q-Sort, for use with captive rhesus monkey mother-infant pairs. Attachment security measures the balance between exploration and comfort-seeking behavior in infants/children and is associated with developmental outcomes. A second aim is to determine whether measures of attachment security from the non-human primate version of the Attachment Q-Sort (AQS) are associated with behavioral, socio-emotional and neurobiological development. The human Attachment Q-sort (AQS) has
been previously adapted for use with Japanese macaques (Kondo-Ikemura and Waters 1995), and the authors reviewed the appropriateness of this instrument for measuring attachment security in infants of that species, supporting the instrument’s content validity. The main goal of this study was to assess its discriminant and predictive validity in rhesus macaque infants at the Yerkes National Primate Research Center, through funding received from a CBN venture grant.

Dr. Sanchez, working with Dr. Warfield, has generated a “Yerkes infant attachment Q-set”, consisting of 95 items, and its corresponding criterion sort. The primate coders (blind to attachment theory) have finished training with Dr. Warfield, reached reliability, and are currently coding the experimental tapes. Their current Q-security scores correlations with Dr. Warfield’s range from 0.7-0.88. Throughout the process of achieving reliability, they have already selected several “training tapes” that will be provided together with this instrument to the primatology community for use to standardize this type of training (one of the aims within this venture grant). The long-term aim is to analyze whether infant abuse or maternal separation (current models of early adverse care in rhesus monkeys) affect attachment scores in infant rhesus monkeys and whether attachment security early in life is associated with the infants’ socioemotional development and functioning of the stress-emotion system. Preliminary results from studies funded by this CBN venture grant and based on a random sample of tapes scored by Dr. Warfield in the 0-6 months age block show that abused infants had lower attachment security scores (0.19) than controls (0.39) towards their mothers. This work has led to a new collaboration between Dr. Sanchez and Dr. Kathy Stansbury (CBN faculty at Morehouse College) to compare the results found in monkeys with a human cohort.

Aggression Collaboratory

The research of the Aggression Collaboratory is focused on the neural and behavioral mechanisms that underlie the perception and formation of dominance hierarchies and the subsequent effects of social status on the structure and function of the central nervous system. The research is strongly comparative, using six disparate animal models: monkeys, Syrian hamsters, rats, cichlid fish, crayfish and termites. All six species use aggression to garner resources during initial interactions with conspecifics, and all form dominance hierarchies based on the outcome of initial agonistic interactions. These similar patterns of behavior occur despite extensive differences in the animals’ brains, behavior, and ecological niches. This led us to ask whether these behaviors are subserved by a common set of physiological mechanisms. We are using these models to address the following: (a) what are the key behaviors associated with dominance hierarchy formation and maintenance?; (b) what are the brain areas and circuits that are involved?; (c) what are the neurochemical signals that are released or that gate these behaviors?; (d) what triggers their release, what is the pattern of release, and how does that pattern change?; (e) what changes occur in the effect of these chemicals on their targets in response to a change in social status?; (f) how do changes in the receptors or their pattern of expression account for the change in a neurochemical effect or in social behavior?; and (g) how do social species learn about dominance hierarchies? It is important to note that we have focused on both the dominant and the submissive behaviors emitted by organisms in social conflict situations; thus, we are investigating a
wide range of agonistic behaviors. Significant progress has been made in these areas in the past year.

**Project 1. Monkeys:** These projects are new initiatives that are part of our cross-collaboratory emphasis. Two venture grants have been funded (PIs: Bachevalier; Hampton) that involve both the Aggression and Reproduction Collaboratories.

The Bachevalier project will examine, among other things, agonistic behavior of monkeys receiving early amygdala lesions. Early medial temporal dysfunction is associated with many developmental mental disorders (schizophrenia, autism, Williams syndrome) that have significant impact on the normal cognitive development of a young individual that spans the entire life. Because little is known about the long-term behavioral and cognitive consequences of early damage to specific structures within this brain region, specifically when the animals are raised in a naturalistic environment, the specific aims of this venture grant are to prepare 10-12 day old male monkeys with bilateral neurotoxic amygdala lesions, place them together with their mothers in a large semi-naturalistic social group at the Yerkes field station, and follow in great detail the emergence of species-specific behaviors during the first year of life relating to affiliation, social status and fearfulness, the appearance of sexually dimorphic behaviors, and the maturation of cognitive function.

The Hampton project will develop a novel, ethologically-grounded test of nonhuman primate social cognition. Monkeys will be trained to select the dominant individual from a pair of monkeys displayed in video clips on a touch screen. Monkeys will then be tested for the ability to deduce a linear dominance hierarchy based on several such pairs. Mark Wilson (Reproduction Collaboratory) will collaborate by arranging social interactions for filming. Andrew Fischer (Behavioral Technology Core) will provide programming and engineering expertise for production of automated computerized testing equipment. This project is designed to generate pilot data to support a grant proposal to study the neural basis of social cognition using imaging, lesion, and single unit recording techniques.

**Project 2. Hamsters:**

Dominance relationships among hamsters are formed as the result of social conflict and are maintained, at least in part, by communication. This project will continue to define the circuitry for aggression and flank marking. Collaborative experiments between Dr. Albers, Dr. Moore and Dr. Huhman will determine the precise roles of glutamate, AVP, OT and 5-HT and their receptors as they affect these behaviors. Several publications examining AVP and OT receptors in dominant and subordinate hamsters have been submitted this year. These projects have involved undergraduate students, CBN scholars and CBN postdoctoral fellows. These projects will also offer an opportunity to increase student involvement in behavioral neuroscience at CAU.

The Huhman lab, in collaboration with several other CBN labs (Davis, Young, Albers), continues to explore the neurobiology of submission in hamsters, an aspect of agonistic behavior that has been largely overlooked. We have demonstrated that the long term increase in submissive behavior that is observed in hamsters following social defeat (i.e., conditioned defeat) is mediated by glutamatergic neurotransmission, and inhibited by GABA neurotransmission, in the amygdala. New data indicate that the plasticity underlying this change in behavior is mediated by NMDA receptors in the basolateral
amygdala that contain the NR2B subunit. We have also shown that overexpression of CREB or blockade of neurotrophin receptors in the basolateral amygdala augments or reduces conditioned defeat, respectively. We have recently obtained data that suggest that conditioned defeat is not dependent on the hippocampus. Finally, we have continued to examine sex differences in behavioral responses to social defeat. Females are less likely than are males to respond to social defeat with a long-lasting change in aggression. We have demonstrated that the behavioral response to defeat differs in females across the estrous cycle and we are currently examining the role of gonadal hormones in the formation of conditioned defeat in male and female hamsters.

Project 2. Rats:

The project on rat dominance and aggression arose from discussions within the collaboratory as to whether the neural mechanisms of aggression and dominance signaling in rats are similar to those in hamsters. Rats are highly social and respond aggressively to conspecifics much less reliably than do hamsters. The initial challenge was to identify conditions in which rats reliably establish persistent dominance relationships. The laboratory at Morris Brown College has worked to establish a variation of the Visible Burrow System wherein they can observe the formation of dominant:subordinate relationships in rats competing for food. They have been able to establish this model, but have found that it was extremely labor-intensive to review videotapes and score which animals were accessing the food port. With the help of the Behavioral Core technician and Rob Poh, the CBN information technology director, Morris Brown has been able to automate their system with a MiniRraKer microchip ID system from AVID Inc. in order to determine dominance. This group also has one paper in press examining V1a receptor binding in rats following food competition, as well as other papers submitted or in preparation. A number of undergraduate students from Spelman College, Morehouse College and Clark Atlanta University have been involved in this project, as was one CBN postdoctoral fellow, Dr. Alicia Askew (MB, PD) who this year moved on to a tenure-track faculty position at Presbyterian College (S.C.).

Project 3. Fish:

This research theme focuses on changes in behavior, physiology, and neuroendocrine systems in response to social stressors, particularly dominance and subordination, in fishes (convict cichlids: *Arachocentrus nigrofasciatum*; swordtails: *Xiphophorus helleri*; gobies: *Lythrypnus dalli*). A CBN Venture Grant awarded to Drs. Lawrence Blumer (Morehouse College) and Matthew Grober (Georgia State University) in 2002 facilitated the first aim of this project – to identify robust physiological markers of social stress. In last year’s annual report, we described gallbladder hypertrophy in response to chronic subordination in convict cichlids, the first study to identify social stress as a diagnostic criterion for gallbladder dysfunction in any vertebrate. We have been pleased to see that this work on fishes has been recognized, and has been the subject of editorials, in international medical journals (e.g., *Medicina*). In addition to the gallbladder work, Dr. Grober and Dr. Ryan Earley (CBN postdoctoral fellow) have explored differences between dominant and subordinate animals at multiple levels within the hypothalamic-pituitary-interrenal (adrenal) axis. After a considerable period of cohabitation, dominant and subordinate animals showed no difference in cortisol
concentrations or magnocellular/parvocellular corticotropin-releasing-factor (CRF)-ir cell number or density. In collaboration with Dr. Kim Huhman and Alicia Faruzzi (CBN scholar), however, we have identified qualitative status differences in CRF receptor 1 and receptor 2 densities in the forebrain preoptic area of these fishes; quantification of autoradiographic films and emulsion-dipped slides is now under way. We also have examined the acute cortisol response following fighting experience in winners and losers of two species of fish (*A. nigrofasciatum* and *X. helleri*). Results indicate that variation in the cortisol response of cichlids immediately following an aggressive encounter was predicted more by contest intensity than by outcome, but the opposite held true for swordtails. We are now pursuing potential causes for interspecific differences in the peripheral neuroendocrine response to fighting experience (e.g., social environment, interaction frequency). This research on the convict cichlids was the foundation for Dr. Earley’s NIH National Research Service Award application, which was funded in June 2004.

Dr. Earley’s research under the NRSA has focused primarily on the role of the neuroendocrine stress axis in mediating reproductive allocation in a bi-directional sex changing goby. The first wave of experiments has unveiled status and sex differences in basal cortisol levels, with males showing low cortisol concentrations relative to dominant and subordinate females. We are now in the process of analyzing brain tissue to ascertain differences in CRF immunoreactivity, CRF receptor 1 and 2 binding, and CRF mRNA expression patterns between the sexes, and plan to conduct manipulative studies (using metyrapone and cortisol) to investigate whether the HPA axis affects the “decision” to change sex. In the spirit of the cichlid studies, we also have extracted a myriad of tissues that might respond to social stress, including the gallbladder, spleen, gills, liver, muscle, and gonad in attempts to understand the manifold physiological effects (e.g., osmotic competence, liver glycogen content, muscle lactate) of occupying dominant or subordinate social statuses.

A second research theme is to examine whether central components of the stress axis (i.e. CRF cell size/density and mRNA expression) respond in the same way to domination by conspecifics versus heterospecifics. This project involved a CBN venture grant collaboration between Dr. Grober and Drs. Gary Grossmann (University of Georgia) and Michael Wagner (Michigan State University) who have studied two species of fish (yellowfin shiner: *Notropis lutipinnis*; rosyside dace: *Clinostomus funduloides*) that cohabitate and exhibit overlapping microhabitat preferences in the Little Tennessee River of western North Carolina. Yellowfin shiners are an introduced species and are significantly more aggressive than the native (and threatened) rosyside dace. Thus, this project also has implications for conservation biology: assessing the physiological effects of social stressors imposed by aggressive yellowfin shiners on the rosyside dace and subsequent consequences for the livelihood of the dace. In the 2004 annual report, this project was still in its infancy. The investigators developed a successful protocol for immunohistochemical localization of CRF-ir cells in the forebrain preoptic area of both species, and are in the process of obtaining all tissues from the experimental fish from Dr. Wagner. In the past year, an undergraduate student has sectioned approximately 120 brains (of the 218 total). In addition, an oligoprobe was developed to detect species differences in CRF mRNA expression patterns. The laboratory was prepared for *in situ* hybridization protocols. Given the large volume of brain tissue that still needs to be sectioned, we are
unable to report on the results at this time. Once the sectioning is completed (within six months), the project will proceed with immunohistochemical and in situ hybridization for quantification of differences in forebrain preoptic CRF-ir cell size/density and CRF mRNA expression. We anticipate that the results of this study will underscore the importance of integrating behavioral ecology, conservation biology, and neuroendocrinology.

Project 4. Arthropods - Crayfish:

Although the brain structures of crayfish differ considerably from those of rodents, the behaviors observed during the formation of dominance hierarchies, as well as some of the neurochemicals involved, are similar. Moreover, the prominence of identified neurons and well-studied circuits in producing relevant behavior patterns facilitates analysis of the neural mechanisms that mediate changes in aggression and dominance. One aim of this project is to identify crustacean 5-HT receptors and to determine how patterns of receptor expression change with social status. Drs. Don Edwards and Charles Derby and postdocs and students from their laboratories have identified two putative crustacean 5-HT receptors, characterized them pharmacologically in heterologous expression systems, and measured changes in the levels of expression of one of them from the whole crayfish CNS following changes in social status. Levels of expression in dominant animals were greater than and significantly more variable than levels in subordinates (Spitzer et al., 2005). In addition, as in rodents, the effects of dominance status on neurogenesis and olfactory learning are being studied in crustaceans. Social interactions reduced proliferation of olfactory projection interneurons in crayfish, and increased the survival of olfactory local interneurons in social dominants and decreased it in social subordinates (Song et al., 2005).

Social status affects a variety of behavior patterns in crayfish, including burrowing (Herberholz et al., 2003), predator/prey interactions (Herberholz and Edwards, unpublished), and sexual behavior (Issa and Edwards). Social subordinates avoid burrowing near dominants and avoid approaching a crayfish prey taken by a dragonfly nymph predator. In contrast, dominant crayfish display no reluctance to burrow and will actively attack and try to eat a crayfish prey seized by a dragonfly nymph. Some subordinate male crayfish also display female sexual behavior in interactions with dominant males, which display male copulatory behaviour. Seen in about half of male dominant/subordinate pairs, this behavior correlates with significantly reduced levels of aggressive interaction compared to pairs that do not display pseudo copulation. Moreover, subordinate members of pairs that display pseudocopulation survive indefinitely as members of the pair, whereas subordinates that do not display the behavior are killed within 24hr by their dominant partners.

Octopamine has opposing effects on the aggressive behaviors of insects and crustaceans. Furthermore, the effects of octopamine vary with social experience. Edwards and colleagues have recently hypothesized that state- and species-specific effects may be due to differences in the distribution of highly conserved octopamine receptors. To begin to test this hypothesis they are generating antibodies that recognize a known arthropod octopamine receptor in all arthropod species currently used by the members of the aggression collaboratory (termite, crayfish, lobster, prawn). The antibodies will be used to define receptor distribution in dominants and subordinates across species. To date, Dr. Deb Baro has isolated RNA and produced cDNA from...
crustaceans (lobster an crayfish) and is currently using this cDNA in degenerate PCR experiments to clone a fragment of the octopamine gene.

One venture grant was funded to use manganese-enhanced magnetic resonance imaging (MEMRI) to identify patterns of status-related neural activity in the brains of crayfish. This project was very successful in adapting MEMRI, a technique previously used only in vertebrates, for imaging of an aquatic invertebrate. Results from this project were published our results in the December 2004 issue of the *Journal of Experimental Biology*. Efforts to image neural activity in the brain of live animals were hampered by the maximum spatial resolution obtainable with the equipment available. The relative low field strength provided by the scanner proved to be insufficient for fast acquisition of high-resolution images. Thus, the Biology Department at GSU decided to upgrade the current NMR with a micro-imaging supplement that allows imaging at much higher temporal and spatial resolution. Initial results are promising in the tests with the new equipment. To date, the project has produced one peer-reviewed publication and several conference contributions. A collaborative grant proposal to the NSF or NIH by Herberholz (University of Maryland) and Edwards (GSU) is planned for the near future.

**Project 5. Termites:**

Termites are eusocial insects and one of the few species that engage in organized warfare. Despite this, aggressive behavior is poorly understood in termites and nothing is known of its neural bases. The Aggression collaboratory has provided a unique opportunity to correlate behavioral changes with neurochemical and neuroanatomical changes produced by the social interaction of competing termite populations, work that would never have been pursued without the influence of the CBN (Jackson- Morehouse College; Edwards – GSU).

The work this year has focused on the importance of group size vs. fighting abilities as they effect dominance between groups of termites. This work has indicated that group size is the best predictor of dominance when groups of termites are paired. Dr. Jackson, with the help of several undergraduate students from Morehouse College, has also observed that groups of termites that live close to one another are less likely to exhibit high levels of aggression towards one another than are groups that live further apart geographically. They hypothesized that these termites might be more closely related to one another genetically and that a form of kin recognition might play a role. Further tests of this hypothesis have failed to support this hypothesis.

Numerous students at Morehouse College have been trained by GSU faculty and postdoctoral associates to remove termite brains and prepare them for serotonin immunohistochemistry. In the future, the plan is to pair small groups of termites drawn from different colonies in three-chambered arenas where the middle arena contains food and the other two chambers house the two groups. Fighting should lead to one of the two groups claiming and controlling the central chamber. HPLC and immunohistochemistry would then be used to measure levels of CNS monoamines and their distribution in the winning and losing animals immediately after the deciding contest and at intervals thereafter over weeks. Controls would consist of paired groups of animals drawn from the same population.

**Fear Collaboratory**
A large number of projects have been completed or are ongoing in the Fear Collaboratory. This collaboratory continues to be supported by a large number of venture grants that support collaborations among CBN faculty and labs.

**Project 1:** Neural Mechanisms of Extinction of Conditioned Fear. PIs: Michael Davis, Kerry Ressler, David Walker

**a. Rescue of inhibitory deficits in GAD 65 knockout mice.** Recent postmortem studies in humans suggest that defects in GABAergic neurotransmission might contribute to the neuropathology associated with schizophrenia. We recently reported that mice that lack the GABA synthesizing enzyme glutamic acid decarboxylase 65 (GAD 65) knockout (KO) mice showed robust deficits in prepulse inhibition (PPI) which were reversed by the atypical antipsychotic agent clozapine. Furthermore, these mutant mice show deficits in the expression of conditioned fear. These results lend support to the view that abnormalities in GABAergic systems might contribute to the basic pathophysiological mechanisms in schizophrenia and disorders related to fear and anxiety. Currently, we are examining whether PPI deficits displayed by GAD65 KO can be alleviated by microinjection of a GAD65-expressing lentivirus into various brain regions that we have identified as lacking normal levels of GAD65. *In vitro* anti-GAD65 antibody analyses indicate that our lentivirus vector express the desired GAD65 protein. We will soon be examining whether our lentivirus successfully expresses GAD65 in vivo and examine the relationship among GAD65 rescue, PPI, and fear expression in mutant mice. In addition we are currently examining the development patterns of PPI and fear deficits in GAD65 KO mice. Initial results indicate that in addition to KO mice, heterozygous mice also show a deficit in PPI during the first few weeks of birth. However by 2 months of age, heterozygous animals no longer show abnormal levels of PPI. Along with recent evidence indicating younger, but not older, heterozygous mice express low levels of GAD65, these data further support a role of GAD65 in the PPI deficits seen in null mutants.

**b. Expression mRNAs encoding various GABA-related genes.** There are converging lines of evidence suggesting that changes in GABAergic transmission may also be involved in the control of aversive memories as highlighted by the fact that patients suffering from anxiety disorders are commonly treated by the administration of benzodiazepines which mediate their actions via GABA(A) receptors. We hypothesize that the acquisition, retrieval, and extinction of fear are associated with dynamic changes in GABAergic function that are required for the normal molecular processes involved in the production and reduction of fear. To test this hypothesis we are currently involved in a number of studies. First, we are identifying and quantifying the expression pattern of mRNAs encoding various GABA-related genes within limbic structures that have been previously established to be involved in acquisition and production of fear and anxiety. Currently, ten in situ hybridization probes have been cloned and successfully used to label and map the distribution of various GABA receptor subtypes and associated proteins. Also, these probes are currently being used to examine training-induced changes in the expression of GABA-related genes and examining changes in GABA(A) binding patterns in the amygdala and hippocampus after the acquisition, retrieval, and extinction of Pavlovian fear. As of this date, we have found significant changes in a1-GABA(A) receptors, and gephrny, GAD65, GABA transporter, and GABA RAP expression levels associated with the acquisition or extinction of fear. We are also examining the function...
of amygdala a1-GABA(A) receptors in the acquisition, retrieval, and extinction of conditioned fear in a1-GABA(A) inducible knockout mice using the Cre-loxP system. In these mice we have successfully demonstrated a knockdown of a1-GABA(A) receptor expression after microinjections of a CRE lentivirus. Initial behavioral studies indicate that after knockdown of a1-GABA(A) receptors, mice show a significant increase in anxiety as measured in the elevated plus maze and an increase in motor activity as measured in the open field exploratory test.

c. Differential mechanisms of extinction of conditioned fear dependent on length of time since acquisition. Fear extinction is defined as a decline in conditioned fear responses (CRs) following nonreinforced exposure to the feared conditioned stimulus (CS). Behavioral evidence indicates that extinction is an inhibitory learning process: extinguished fear CRs reappear with the passage of time (spontaneous recovery), a shift of context (renewal), and unsignaled presentations of the unconditioned stimulus (reinstatement). However, there also is evidence to suggest that extinction is "unlearning." Certain studies have documented a recruitment of phosphatases and suppression of fear-related gene expression in animals exposed to nonreinforced CS presentations when extinction is carried out soon after fear conditioning. Perhaps the mechanism of extinction varies with the interval at which extinction training is initiated, such that extinction initiated relatively soon after acquisition disrupts consolidation of the fear memory trace whereas extinction initiated at longer intervals engages secondary plasticity. We examined this issue by comparing groups of rats extinguished 10 min, 1 hr, 24 hrs, or 72 hrs following acquisition on their susceptibility to reinstatement, renewal, and spontaneous recovery of conditioned fear. Additional experiments examined the involvement of the protein phosphatase calcineurin in short and long interval extinction. Rats extinguished 72 hrs after acquisition exhibited reinstatement, renewal, and spontaneous recovery reliably while rats extinguished 10 min after acquisition exhibited none of them. Rats extinguished at 1 hr and 24 hr were intermediate. These findings suggest that extinction initiated shortly following acquisition may result from an erasure of fear whereas extinction initiated at longer intervals may be mediated by a parallel inhibitory memory trace. Calcineurin protein (measured via Western blot) increased in the BLA following short interval but not long interval extinction. Calcineurin mRNA (measured via in situ hybridization) in the BLA did not differ among short and long interval extinction groups and comparison acquisition-only groups. This suggests a specific upregulation of calcineurin activity in the amygdala following short interval extinction, mediated through a translational but not a transcriptional mechanism, and may be consistent with the hypothesis that short interval extinction occurs via an erasure mechanism. Several small pilot experiments examined the effect of administering calcineurin inhibitors (cypermethrin, FK-506, and cyclosporin A) prior to short interval extinction. Thus far problems with toxicity (targeted administration) and dosing (systemic administration, i.p. and s.c.) have prevented any conclusions from being drawn. Currently in progress is a pilot experiment examining the feasibility of i.v. administration of cyclosporin A prior to short interval extinction. The prediction is that short interval extinction but not long interval extinction will be impaired by pre-extinction training inhibition of calcineurin.

d. Role of neuropeptide Y (NPY) in extinction and expression of conditioned fear. Previous studies have shown that NPY inhibits both baseline startle and the expression of
fear-potentiated startle (FPS). More recent work has evaluated the role of NPY in the extinction of conditioned fear. We see an increased rate of within-session extinction of FPS in animals that have received i.c.v. NPY one hour prior to the test session. This effect was corroborated by another experiment in which animals were given extinction training (30 light-alone presentations followed by a test including 15 light-tone and 15 tone-alone trials). During the test immediately following extinction with drug onboard, a similar pattern of enhanced within-session extinction was observed for the NPY group as in the previous experiment. In addition to this within-session effect, we have observed an enhanced retention of extinction of contextual fear conditioning with administration of NPY. This effect was observed as a reduction in startle amplitude during tone-alone trials 48 hours after administration of either NPY or vehicle during an extinction training session. Further studies will seek to disentangle the contextual and cued components of fear conditioning to better understand how NPY is involved in extinction.

e. The role of brain derived neurotrophic factor in the extinction of conditioned fear. Brain-derived neurotrophic factor (BDNF) and its receptor, TrkB, have been implicated as molecular mediators of synaptic plasticity underlying learning and memory. Previously, we reported that BDNF plays a role in amygdala dependent learning and memory, specifically in the acquisition of conditioned fear. Here we sought to address whether BDNF was involved in another form of amygdala dependent plasticity known as extinction. Although much is known about the neural basis of excitatory fear conditioning, we are just beginning to explore the molecular mechanisms underlying extinction, and it is not yet known whether BDNF is involved in this form of plasticity. In this study we examined the expression of BDNF mRNA in the basolateral amygdala (BLA) at various times following extinction using in situ hybridization. We found BDNF mRNA levels rise in the BLA 2 hrs following extinction training (90 lights presented in the absence of shock). In order to examine the specific role of BDNF signaling during extinction, we used a lentiviral vector that expressed TrkB.T1, a dominant negative TrkB receptor, to impair BDNF signaling in the amygdala. Rats were fear conditioned using light-shock pairings to establish an aversive memory to the light. 72 hrs later rats received bilateral intra-amygdala infusions of the TrkB.T1 or the GFP lenti-virus. Animals are currently being given 7 days to recover and allow for optimal infection of the virus. We will then extinction train the animals and test for the presence of fear-potentiated startle. If BDNF signaling is indeed required for the plasticity underlying extinction than rats receiving the TrkB.T1 virus should show impaired extinction and retain high levels of fear potentiated startle in response to the light. This experiment will allow us to definitively establish a role for BDNF in extinction of conditioned fear, and may have implications for the treatment of psychiatric disorders, such as PTSD, which involve an inability to extinguish fear memories.

Project 2: Measurement and Evaluation Of Pharmacological Agents To Reduce Fear. PIs: Michael Davis, Erica Duncan, David Walker

a. Determine the contribution of NR2A- versus NR2B-subunit containing NMDA receptors in the amygdala to fear conditioning and fear expression. Initial experiments conducted with our standard fear-conditioning procedures (2 days of 10 light-shock pairings each) indicated that the blockade of NR2A-containing receptors (using NVP-AAM077) disrupts fear conditioning (pre-training infusion) and also fear
expression (infusion prior to fear-potentiated startle testing) in a dose-dependent manner, and that conditioning and potentiated startle are equally sensitive to this treatment. Blockade of NR2B-subunit containing NMDA receptors (using CP101,606 or ifenprodil) has had no effect on expression at the doses tested and has had inconsistent effects on fear conditioning. More recent experiments suggest that the NR2B antagonist may disrupt acquisition when weaker training procedures are used (1 day of 10 light-shock pairings). Using these procedures, we are currently testing the effects on expression.

b. **Evaluate the effects of compounds that act on the strychnine-insensitive glycine binding site (i.e., on the NMDA receptor) on fear-conditioning.** We previously found that the partial agonist D-cycloserine facilitates fear extinction. In recent experiments, we have evaluated the effect of D-cycloserine (DCS), D-serine (DS; which may be the endogenous and a possibly more effective ligand). At the doses and times tested, neither DCS nor DS have reliably influenced fear conditioning when injected systemically prior to light-shock pairings with weak training.

c. **Evaluation of a non-peptide CRF1 antagonist on fear and anxiety.** Systemic administration of this compound disrupted increases in startle produced by i.c.v.-infusions of CRH in a dose-dependent manner. At similar doses, the compound also appears to disrupt light-enhanced startle, but not fear-potentiated startle.

d. **Pharmacological characterization of m-opioid receptor agonist effect on the expression of fear potentiated startle.** There is a dearth of research geared toward the understanding of the role of opiates in anxiety-related behaviors. However, an understanding of the mechanisms of action of opiate effect on anxiety is important, in light of the vital need for novel and alternative treatments for anxiety disorders. Buprenorphine, a safe and efficacious partial m-opioid receptor agonist known to be 25-40 times more potent than morphine as an analgesic, has therapeutic potential for the treatment of anxiety-related disorders. In order to compare the potency of morphine to buprenorphine on the expression of fear-potentiated startle and the ability of the competitive, nonselective opioid antagonist, naloxone to block these effects, we established dose-response curves for the anxiolytic effects of buprenorphine and morphine in the presence of saline or a fixed dose of naloxone (2 mg/kg). We found that pretest administration of morphine and buprenorphine blocked fear-potentiated startle in a parallel, dose-dependent manner, without affecting baseline startle, suggesting a selective anxiolytic profile. Buprenorphine was 40 times more potent than morphine. Surprisingly, naloxone only partially blocked the anxiolytic effects of both morphine and buprenorphine at high doses, and had no effect at low doses. These results suggest that at least some of the anxiolytic effects of morphine and buprenorphine may involve non-opioid (naloxone insensitive) mechanisms. We are currently investigating possible non-opioid actions of opiates. Together, these findings may shed light on novel targets for the development of treatments for anxiety disorders.

e. **Studies of fear inhibition in humans.** We used an acoustic startle procedure in a modified conditioned inhibition experiment (AX+/BX-) to test the hypothesis that PTSD patients have decreased inhibition of fear-potentiated startle. We tested 41 healthy male and female volunteers in the AX+/BX- paradigm using airblast as the unconditioned stimulus. Participants were presented with one set of colored lights paired with aversive air blasts to the throat (AX+ trials), and a different series of lights presented without air blasts (BX- trials). We then presented A and B together (AB trials) to see whether
would inhibit fear potentiation to A. We found significant potentiation to the danger cue, AX and significant inhibition to AB. More importantly startle amplitude was lower on the AB test trials compared to the AX test trials, indicating that the inhibition that had developed to B transferred to a novel test compound. The paradigm was also tested in 28 PTSD patients (14 with low current symptoms, 14 with high current symptoms). We found that PTSD patients had baseline startle amplitudes comparable to the control subjects. Both PTSD groups showed significant fear potentiation and discrimination between AX+ and BX-. However, the high symptom PTSD group did not show inhibition of fear on the AB trials, whereas both the controls and the low symptom PTSD patients potentiated more to AX+ than AB trials. These results suggest that PTSD patients with both low and high current symptoms show increased fear potentiation, but only patients with high symptom severity have impaired fear inhibition.

f. Examining the interaction of stress, environment, and genetics on the development of PTSD within the inner city in downtown Atlanta population. A number of ongoing studies are examining the prevalence and comorbidity of PTSD within the inner city in downtown Atlanta. These studies will provide a stepping off point for larger research programs. We also hope that as research in this clinic matures, we will be able examine some of the translational approaches, e.g. D-cycloserine, to study enhancement of extinction for treatment of PTSD using exposure therapy.

g. Hormonal influences on fear and anxiety models. The disparity in the occurrence of psychopathologies between males and females occurs in women after puberty. Thus far, we have found no effect of hormones on light-enhanced startle, a putative measure of anxiety in rats in female rats. Current literature postulates that it is in times of hormonal flux that females are particularly vulnerable to stress. The following series of studies looked at estrogen administered at various time points before testing to see if the rise and decrease of estrogen levels affected the response of ovariectomized rats to light-enhanced startle. In each experiment rats were pre-tested for light-enhanced startle and matched according to their response and then retested after treatment. 250 µg E2 s.c given 72, 48, 24, and 1 hr before retesting did not significantly change light-enhanced startle in females. We postulated that the lack of effect of E2 flux on light-enhanced startle may be due to the fact that it activates both estrogen alpha and beta receptor subtypes and therefore the activity of one may be off-setting the activity of another. This may be of particular importance in light of recent studies showing that the anti-anxiety effects of estrogen are due to the beta receptor activation, whereas anxiogenic effects may be mediated by alpha receptor activation. Following the same paradigm we tested the effects of 10 µg doses of a highly specific alpha and beta receptor agonist 48 hrs before testing on whereas in ovariectomized rats. Again we found no effect of treatment with either agonist on light-enhanced startle.

Project 3: Structural Changes In The Brain That May Mediate Long Term Memory Storage. PIs: Michael Davis, Kerry Ressler

a. Role of b-catenin in fear conditioning. A large body of evidence suggests that structural changes account for long-term memory storage. Among the most studied structural changes has been the elaboration of new synaptic architecture following a learning event. This process, known as dendritic morphogenesis, has been postulated by many investigators to be a physiologically relevant means of synaptic potentiation. The
processes governing dendritic morphogenesis are many and varied, but recent work has focused on the role of b-catenin in the remodeling of synapses in an activity-dependent way. Therefore, examining b-catenin function may provide an important link between neural activity and long-lasting synaptic change. Knockouts of b-catenin are embryonic lethal; thus, there have been no studies of the role of this protein in standard learning and memory behavioral tasks. By combining region specific viral infection with Cre-mediated recombination in animals carrying a floxed version of the b-catenin allele, we have devised a method for deleting the b-catenin gene in mature animals. Deletion of this gene either before the acquisition or the expression of conditioned fear, will allow us to determine when and if b-catenin function is required to elicit the fear response. Additionally, the ability of this method to be region specific will determine whether the presence of b-catenin in the amygdala is required to instantiate the fear response and will provide important information as to the site of the plastic changes underlying fear learning. We have found that b-catenin is highly expressed in the adult mouse brain, especially within the hippocampus and amygdala. There is a significant increase in b-catenin activation (decrease in phosphorylation) following the acquisition of fear. These results are consistent with an enhancement in activated, stable b-catenin, that would in turn enhance stabilization of cadherin junctions. We have successfully shown that injection with the LV-Cre virus results in a region-specific deletion of the b-catenin allele. Amygdala-specific b-catenin deletions do not affect baseline anxiety, activity measures, or novel object recognition. Amygdala-specific b-catenin deletions do not affect acquisition of conditioned fear because freezing is normal in these mice shortly after fear conditioning. Amygdala-specific b-catenin deletions appear to prevent consolidation of conditioned fear because there is little freezing either 1 or 24 hrs after conditioning under these conditions.

b. Fear potentiated startle in transgenic mice using olfactory cues. Because many complex social behaviors in animals use odor cues for communication and detection of prey, we wanted to use the advantages of the fear potentiated startle test to develop a way to measure fear-potentiated startle using odor cues. In addition, because of the unique sensory arrangement of the olfactory system we wanted to be able to use olfactory stimuli to understand gene expression and morphological changes following fear conditioning. In past years, we created a transgenic mouse line (M71-WGA:RFP-eGFP) that expresses fluorescent reporters within the correct zone of the epithelium and targets axons to the M71-specific glomerulus of the olfactory bulb. In our initial litters, a small number of juvenile animals had periglomerular cells apparently labeled with DsRed. In adult mice, no neurons past the glomerulus were visible with either DsRed or WGA antibodies. Endogenously expressed WGA may be toxic to these neurons or the DsRed conjugation may impair WGA transport. In addition, recent research by Thomas Bozza implies that M71 may not be activated by acetophenone in vivo. However, because the GFP-labeling of the glomerulus is reliably seen in adult olfactory bulbs, these animals may still be useful for the targeted injections of tracers (see below). To investigate possible morphological changes in axon ramifications with olfactory fear learning, we injected the anterograde tracer BDA-3K into olfactory bulb of trained and untrained mice. Axons were visible in piriform cortex and there were some labeled cells in olfactory tubercle. Pilot data indicates a difference in labeled olfactory tubercle cells between trained and untrained mice. We may be able to combine this technique with iontophoretic injections
targeted to the GFP-labeled cells of our putative labeled-line mice to overcome the limitations of the WGA-DsRed. In conjunction with the potential learning-induced morphological changes in the olfactory system, we are also investigating molecular changes with olfactory fear learning. Some preliminary evidence from rats suggests that BDNF mRNA increases in the piriform cortex following olfactory fear conditioning, but not with a presentation of odor alone or shock alone. We are presently engaged in investigating changes in BDNF mRNA and other molecular changes in the olfactory system with fear learning.

c. Development of a stress procedure that results in increased startle and evaluation of the involvement of the BNST in these effects. Rats that receive 14 shocks on each of 3 days in context A show an elevation in ‘baseline’ startle even when tested in a different context. These increases persist for many days but do decay eventually. In a recent experiment, we found that the increases were not influenced by context extinction procedures. Thus, they appear reflect a non-associative effect of stress. Intra-BNST infusions of the AMPA/kainate receptor antagonist NBQX prior to testing eliminated these increases whereas infusions into the amygdala attenuate but do not block them. Results from a single experiment suggest that pre-shock infusions into the BNST are also effective. The results point to an important role for the BNST in stress-induced anxiety.

Project 4: Analysis Of Limbic Circuitry In The Rhesus Monkey. PIs: Jocelyne Bachevalier, Kim Wallen, Stuart Zola, Mar Sanchez

a. Behavioral effects of neonatal amygdala lesions in monkeys living in a semi-naturalistic environment. Previous research has demonstrated the involvement of the amygdala in social cognition. However, little is known about its role in the early development and the long-term maintenance of these cognitive processes. This study proposes to investigate the effects of neonatal damage to the amygdala in the emergence and maturation of behavioral and cognitive processes in non-human primates living in a stable social group (Yerkes Field Station). Specifically, to assess the role of the amygdala in the development of 1) status achievement (independence from mother and acquisition of social rank in the group), 2) fearfulness (toward novel objects and peers) and affiliation (mother-infant attachment and establishment and maintenance of relationships with peers) and 3) maturation of cognitive processes related to social skills (perception and use of social signals) and control of goal-directed behaviors. Our hypothesis is that bilateral neonatal lesion of the amygdala will affect the emergence and/or maturation of species-typical behavior and that this may be due to more basic deficits in the development of cognitive functions. This pilot study proposes to use males, but a long-term goal will be to add females to assess sex differences in the effect of neonatal lesion of the amygdala on the development of these species-specific behavioral and cognitive processes with the hypothesis that male infants could be more vulnerable than females. So far, four 31-35 days old infant male rhesus macaques and their mothers were separated from their social group and transported at the Yerkes Main station for a maximum of 12 days. After 1-2 days of habituation to the environment, the infants were temporarily separated from their mother to receive MRI-guided neurotoxic injections of the ibotenic acid bilaterally within the amygdala (AMY Group, N=2) or no injections (SHAM Group, N=2). All surgical procedures went without major complications. After a 24-hr recovery in the primate nursery, the infants were reintroduced to their mothers who
accepted them eagerly, except one of the female who did not attend to her offspring the first day. In this case, the infant (from the SHAM Group) was removed and brought back in the nursery. The following morning the pair was returned to the field station to increase chances of reunion in a familiar environment. Intensive behavioral surveillance showed that at the end of the first day back at the field station, the mother was nursing, carrying and protecting him. The two infants from the AMY Group received a second MRI one week after the surgery to verify the location and assess the extent of their lesion. To control for this second separation from the mother, the second SHAM subject was also separated a second time for 4 hours from his mother. After the second MRI or separation, the infants were reunited with their mother, who accepted them again easily, and rapidly each pair was then returned to the field station. Each reintroduction in the social group was closely monitored and all were entirely successful. We have started regular behavioral observations of each pair in the social group, which will continue for the next few months. The last mother-infant pair has just arrived at the main station and the infant will receive a lesion of the amygdala within the next weeks. Two additional animals in each group will be added in the Spring 2006.

b. Development of a reversible deactivation, via cooling, technique to study higher cognitive function in monkeys. The ability to perceive, decode and use social signals (reinforcers with variable valence) from conspecifics as well as to regulate one’s own behavior adaptively upon changing external (social environment) and internal (motivational state) contingencies are critical for successful social interactions. Growing evidence indicates that the amygdala (AMY) and orbital prefrontal cortex (ORB) are part of a neural network critical for social cognition. However, determining the precise contributions of each structure has proved to be challenging. The goal of the present study is to refine and implement a neural reversible deactivation technique by cooling probes to assess in rhesus monkeys the respective role of the AMY and ORB in the ability to flexibly alter behavioral responses upon changes in the incentive value of a previously learned conditioned reinforcer or in the current motivational states. We hypothesize that the AMY participates in the elaboration of the representation of learned reinforcing stimuli as well as in the inhibition of impulsive behavioral responses whereas the ORB regulates learned behavioral responses with respect to changes in the valence of the reinforcing stimuli or current motivational states. So far, we have acquired all the technical material necessary for the preparation of the miniatures cooling probes for rhesus macaques. The delicate preparation of these probes has been started by Dr. Goursaud who has been successfully trained by an expert (Dr. Clarke, San Diego) to build them. The two subjects that will be implanted with 4 cooling probes (1 in each AMY and 1 in each ORB, bilaterally) have just come out of a quarantine period and will start their training on the devaluation task within the next weeks. As soon as the training will be acquired, all subjects will receive the MRI-guided implantation of the probes. This should be performed by the end of October 2005 when the cooling experiment will start.

c. Distribution of CRH-like peptides in the rhesus monkey brain: Focus in amygdala. Based on the important role of CRFergic pathways originating in central amygdaloid nucleus (CeA) and BNST in anxiety and fear in rodents we are studying these pathways in the primate brain. We have previously reported undetectable levels of CRF expression in the rhesus monkey CeA and restricted expression in the BNST
Thus, we have now analyzed whether other CRF-like peptides (UCN I, UCN II or UCN III) are, expressed in these primate brain regions, instead, and still able to act on CRF receptors. The answer is no. We used mRNA in situ hybridization histochemistry to map the location of the urocrortins (I, II, III), not only in amygdala and BNST, but across all rhesus macaque brain. In particular, during last year we performed a more exhaustive mapping study of UCN III mRNA and peptide distribution in the macaque brain. We found particularly high levels of UCN III mRNA in the lateral geniculate of the thalamus, the dentate gyrus of the hippocampus, the paraventricular nucleus of the hypothalamus, and the cerebellar cortex. In addition, low to moderate levels of hybridization were detected throughout the neocortex. In summary, UCN III mRNA in this non-human primate is expressed in areas associated with cognitive and emotional processes, learning and memory, visual processing, and stress regulation, as well as control of movement and posture. Interestingly, UCN III mRNA distribution in macaque brain seems far more “corticalized” than in rat or mouse brain.

d. Effects of infant abuse on fear responses in juvenile rhesus monkeys (cross-collaboratory project with Fear and Affiliation collaboratories). We have previously reported that infant abuse in rhesus monkeys provokes high basal cortisol and behavioral distress at early ages (when abuse rates are high) followed by a compensatory downregulation of HPA function at later ages. We are now analyzing long-term alterations on emotional and HPA axis reactivity as the animals go through adolescence. Ten maltreated and ten matched control macaques were exposed to novel stimuli of varying threatening intensities: 1) Human Intruder paradigm, 2) neutral or rewarding objects and 3) fear-evoking objects. Juveniles with histories of infant abuse, particularly males, exhibited shorter latencies than controls to retrieve a treat adjacent to a fear-evoking object (e.g. snake), or to touch the object, demonstrating inappropriate fear responses in the maltreated group (Grand et al. and Sanchez, 2005). Fear-evoking objects provoked higher ACTH responses than neutral stimuli in all animals. Although no group or sex differences were detected in HPA reactivity to each task, ACTH and cortisol responses were positively correlated with latencies. Analysis of CSF levels of monoamine metabolites will provide information on associations between the high impulsivity detected in maltreated juveniles and possible alterations in monoamine neurotransmission.

Project 5: Electrophysiology In The Bed Nucleus Of The Stria Terminalis (BNST) With Functional Tests In Vivo. PIs: Michael Davis, Don Rainnie

a. Analysis of the network properties of neurons in the BNST and how these neurons are modulated by neurotransmitters and peptides. We have had an ongoing interest in the basic physiological properties of these neurons, and based on these properties have separated them into three cell types that differ in the expression of several active conductances. In the past year, we have further characterized each of these conductances in isolation. We are currently nearing completion of a manuscript reporting these data. Based on our current understanding of these data, we can now determine if neurotransmitters and peptides might modulate these conductances individually. We also have an ongoing interest in determining the direct effects of serotonin (5-HT) on BNST neurons. We have characterized several responses in the past, including a 5-HT2A receptor-mediated depolarization and a 5-HT1A mediated receptor hyperpolarization. In
the past year, we discovered that a small population of BNST neurons express a 5-HT7 receptor-mediated depolarization, which is an extremely novel and important finding. Because these neurons are a much smaller percentage of the total population of BNST neurons, 5-HT7 activation may target a very interesting and specific population of BNST neurons. We have also been using immunohistochemical techniques to investigate 5-HT receptor expression with subregions of the BNST, in order to help determine how different populations of neurons are modulated by 5-HT. In addition to investigating the effects of 5-HT in the BNST, we are interested in the modulation of 5-HT responses by stress and stress-hormones. We have shown that corticotropin-releasing factor (CRF) changes the profile of BNST 5-HT responses to favor inhibition, and in the past year have shown that one-week of isolation-housing has the same effect. These data are some of the first showing that a simple behavioral manipulation can change the properties of BNST neurons.

We are also currently in the process of investigating whether chronic treatment with corticosterone can change the profile of BNST 5-HT responses towards excitation. We are also investigating the effects of BNST serotonergic activation on startle behavior, which has been argued to be a behavioral measure of anxiety. We have shown that the 5-HT agonist, 5-CT, decreases baseline startle levels, but until recently it was unclear which 5-HT receptor mediated this effect. Recently we blocked the effects of 5-CT with the 5-HT1A antagonist, WAY100635, showing that 5-HT1A receptors mediate an anxiolytic action within the BNST.

Project 6: Conditioned Defeat in Hamsters (cross-collaboratory projects with Aggression Collaboratory). PI: Kim Huhman

a. Effects of 5HT infused into the dorsal raphe nucleus on social defeat. Previous research on learned helplessness has shown that the behavioral consequences of uncontrollable stress are mediated in part by 5-HT1a autoreceptors in the dorsal raphe nucleus (DRN). We examined whether a 5-HT1a receptor agonist (flesinoxan) given into the DRN would reduce conditioned defeat in hamsters. Consistent with the learned helplessness literature, we found that flesinoxan given into the DRN reduced the acquisition and expression of conditioned defeat.

b. Role of CRF receptors in social defeat. Previous research has shown that corticotropin-releasing factor (CRF) can modulate stress-induced changes in behavior. Some studies have implicated CRF type1 receptors (R1) in the acquisition of stress-induced changes in behavior, while others have demonstrated a role for CRF R2. We have shown that a CRF R2 antagonist, but not a CRF R1 antagonist, given into the lateral ventricle reduces the acquisition of conditioned defeat.

Project 7: Neuroimaging And Memory Encoding. PIs: Anna Bollini, Stephan Hamann, Marise Parent, Elaine Walker,

a. Neuroimaging the effects of cortisol and glucose on declarative memory for neutral and emotional stimuli. The goals of this venture grant were to determine the separate effects of acute administration of cortisol or glucose on (a) brain function, as assessed by functional MRI (fMRI) and (b) declarative memory for neutral and emotional stimuli, as assessed by cognitive tests. A third goal was to determine the relationship between the cognitive and neural effects of cortisol and glucose using correlational
analyses. To date, we have (a) finished collecting all of the data, (b) completed most of the analyses of the FMRI and behavioral memory data for the cortisol portion of the project and are currently analyzing the glucose data, and (c) preparing manuscripts based on these data. Thus, far, various portions of the data have been presented at four scientific meetings.

b. Blood glucose levels correlate with medial temporal lobe and prefrontal brain activation during encoding for words. Glucose administration preferentially enhances hippocampal-dependent memory, such as verbal declarative memory in humans. Research in rodents has shown that the hippocampus is particularly sensitive to the effects of increases in circulating blood glucose levels, and that direct infusions of glucose into the hippocampus enhance hippocampal-dependent memory. The present study tested whether glucose administration would influence regional brain activity observed during encoding of verbal information in humans. Thirteen healthy male college students participated in a single-blind cross-over design consisting of two sessions approximately 1 week apart. At each session participants ingested a lemonade beverage that was sweetened with either placebo (saccharin, 23.7 mg in 8 oz) or glucose (dextrose anhydrous, 50 g). Fifteen minutes later their brain activity was assessed using functional magnetic resonance imaging (fMRI) at 3T while they performed an intentional encoding task for word pairs. Blood glucose levels were measured before, and 15 and 75 min after the beverage was consumed. Recognition memory was tested 24 hr later. The results indicated that glucose significantly elevated blood glucose levels at both time points, but did not influence recognition memory. As expected, increased activity in medial temporal lobe and left prefrontal brain regions was observed during verbal encoding compared to activity during a low-level control task. Interestingly, there was a significant correlation between the magnitude of the increase in blood glucose levels and the degree of activation observed in these same brain areas. These findings are consistent with the hypothesis that elevations in blood glucose selectively influence brain areas important to declarative memory.

c. Stress-level cortisol inhibits neural activity related to working memory and episodic memory in humans: an fMRI study. Acute stress-level elevation of cortisol in humans has been shown to impair working memory and episodic memory in a dose-dependent manner. To investigate the neural basis for this effect, we administered a stress-level oral dose of hydrocortisone (100 mg) and assessed working memory and episodic (face recognition) performance and task-related brain activity in 14 healthy young adult males. A placebo-controlled, double-blinded, within-subject crossover design was used in which subjects performed the same task on two different days (using a counterbalanced order and comparable stimuli), two hours after either hydrocortisone or placebo administration. Brain activity was scanned at 3T while subjects performed a working memory task (alternating blocks of two-back and zero-back tasks) and in a separate run encoded novel faces. To isolate cortisol effects on encoding, recognition memory for the faces was assessed one day after scanning. Cortisol elevation was primarily associated with robust decreases in task-related activity in dorsolateral prefrontal and parietal cortex during high working memory load, relative to the placebo session. Similar cortisol-related decreases were observed for face encoding, with additional decreases in the right hippocampus and fusiform gyrus. For both tasks, in contrast to the robust cortisol-related decreases in task-related brain activity, cortisol-
related increases in task-related brain activity were markedly weaker and were limited in extent. Behavioral data collected during scanning revealed decreased performance in both tasks. These findings suggest that acute stress-level cortisol elevation may influence working memory and nonverbal episodic memory encoding by reducing task-related brain activation.

**Reproduction Collaboratory**

The research in the **Reproduction Collaboratory** has been developed as a direct result of interactions among faculty that have occurred in our collaborative meetings and all of the projects involve multiple laboratories. The Reproduction Collaboratory has recently agreed that sex differences in behavior and neural function are an overarching theme in our research. Thus, during the coming year of support the Reproduction Collaboratory will be working to integrate this theme into research in each of the specific research areas that we have developed during the first years of support. We anticipate that this will lead to integration with research in other collaborative areas as well as a more programmatic development of venture grants within the Reproduction Collaboratory.

Progress is described on four of our active venture grants.

**Project 1:** Sex discrimination across the menstrual cycle: A comparative study in chimpanzees and rhesus monkeys. PI: Agnès Lacreuse

Fluctuations of ovarian hormones across the menstrual cycle influence a variety of behaviors in primates, including social and cognitive behaviors. In the social domain, female rhesus monkeys exhibit heightened interest for males and increased agonistic interactions with other females during periods of high estrogen levels. In the present studies, we examine whether increased interest for males compared to females during the peri-ovulatory period of the cycle is also found at the level of face perception. Furthermore, we investigate the existence of similar mechanisms in chimpanzees, a species closer to humans.

In the first experiment, we tested four intact female rhesus monkeys on a computerized touchscreen system on two face tasks involving neutral portraits of male and female rhesus monkeys, chimpanzees and humans. In the visual preference task (VP), monkeys had to press a button to view a face image. The image remained on the screen as long as the button was depressed. Pressing duration was measured as an index of the monkey’s viewing preference. In the Face-Delayed Recognition Span Test (Face-DRST), monkeys were rewarded for touching the new face in an increasing number of serially presented faces. The pattern of responses was analyzed to evaluate whether subjects attended to or avoided certain faces according to sex. Blood collection was performed every other day to measure levels of estradiol and progesterone. Two of the four females were cycling at the time of testing. As predicted, these two individuals looked longer at conspecifics’ male faces during the peri-ovulatory period and tended to commit more errors on the DRST when choosing male, rather than female monkey faces. Such effects were absent for heterospecific faces and the two noncycling subjects. These data suggest that ovarian hormones influence females’ preferences for specific faces, with heightened preference for male faces during the periovulatory period of the cycle.

The studies in the chimpanzee are ongoing. Three females are tested across two menstrual cycles on the VP, the face-DRST and a face categorization task requiring the
animals to categorize male and female faces of chimpanzees, rhesus monkeys, and humans. Daily ratings of anogenital swellings are used to monitor menstrual cycle phases.

The data should determine whether heightened interest for stimuli of significant reproductive relevance during periods of high conception risk is a widespread phenomenon among primates that may help guiding social and sexual behavior.

**Project 2:** Visual Communication in Northern Cardinals. PIs: Donna Maney, Chris Showalter (Fernbank Faculty)

The male Northern Cardinal (Cardinalis cardinalis) exhibits some of the most striking plumage coloration of any bird species and yet the functional significance of this trait is not well understood. The aim of this study was to look for a link between male plumage coloration and male quality. We hypothesized that brighter, redder males would be healthier - as seen by greater mass, longer tarsi, longer wings and lower heterophil to lymphocyte ratios - than duller, less red males. We tested this hypothesis by trapping birds at six sample sites and taking the four measurements outlined above as well as obtaining an image of each bird’s breast with a flatbed scanner. Color analysis of these images showed that birds scoring higher on a principal component analysis of hue, saturation and brightness tended to have shorter tarsi — a measure of body size.

A second goal of this study was to determine whether using a flatbed scanner is an appropriate substitution for using a spectrophotometer – the current standard for measuring color and brightness in the field. In addition to being costly, our spectrophotometer (USB2000; Ocean Optics, Dunedin Fl.) necessitated at least three hands to operate smoothly. A cheaper, easier method to measure color and brightness would be a welcome methodological advance. To test the two methods against each other, a sample of paint chips spanning the spectrum was scanned with both a scanner (Canoscan LiDE 35, Canon) and the spectrophotometer. Scanner data were transformed using Adobe PhotoshopCS and compared with the spec data. We found that both machines give comparable data. These results suggest that using a scanner may be a viable alternative to using a spectrophotometer, a switch that would save both money and manpower.

**Project 3:** Behavioral effects of neonatal amygdala lesions in monkeys living in a semi-naturalistic environment. (cross-collaboratory project with Fear Collaboratory) PIs: J. Bachevalier, K. Wallen

Previous research has demonstrated the involvement of the amygdala in social cognition. However, little is known about its role in the early development and the long-term maintenance of these cognitive processes. This study proposes to investigate the effects of neonatal damage to the amygdala in the emergence and maturation of behavioral and cognitive processes in non-human primates living in a stable social group (Yerkes Field Station). Specifically, to assess the role of the amygdala in the development of 1) status achievement (independence from mother and acquisition of social rank in the group), 2) fearfulness (toward novel objects and peers) and affiliation (mother-infant attachment and establishment and maintenance of relationships with peers) and 3) maturation of cognitive processes related to social skills (perception and use of social signals) and control of goal-directed behaviors. Our hypothesis is that bilateral
neonatal lesion of the amygdala will affect the emergence and/or maturation of species-
typical behavior and that this may be due to more basic deficits in the development of
cognitive functions. This pilot study proposes to use males but a long-term goal will be to
add females to assess sex differences in the effect of neonatal lesion of the amygdala on
the development of these species-specific behavioral and cognitive processes with the
hypothesis that male infants could be more vulnerable than females.

Four 31-35 days old infant male rhesus macaques and their mothers were
separated from their social group and transported at the Yerkes Main station for a
maximum of 12 days. After 1-2 days of habituation to the environment, the infants were
temporarily separated from their mother to receive MRI-guided neurotoxic injections of
the ibotenic acid bilaterally within the amygdala (AMY Group, N=2) or no injections
(SHAM Group, N=2). All surgical procedures went without major complications. After a
24-hr recovery in the primate nursery, the infants were reintroduced to their mothers who
accepted them eagerly, except one of the female who did not attend to her offspring the
first day. In this case, the infant (from the SHAM Group) was removed and brought back
in the nursery. The following morning the pair was returned to the field station to
increase chances of reunion in a familiar environment. Intensive behavioral surveillance
showed that at the end of the first day back at the field station, the mother was nursing,
carrying and protecting him. The two infants from the AMY Group received a second
MRI one week after the surgery to verify the location and assess the extent of their lesion.
To control for this second separation from the mother, the second SHAM subject was
also separated a second time for 4 hours from his mother. After the second MRI or
separation, the infants were reunited with their mother, who accepted them again easily,
and rapidly each pair was then returned to the field station. Each reintroduction in the
social group was closely monitored and all were entirely successful. We have started
regular behavioral observations of each pair in the social group, which will continue for
the next few months. The last mother-infant pair has just arrived at the main station and
the infant will receive a lesion of the amygdala within the next weeks. Two additional
animals in each group will be added in the Spring 2006. Dr. Goursaud (CBN postdoctoral
fellow) from the Bachevalier’s lab has been involved in all separation/reunion phases and
MRI/surgical procedures. She will now be trained by the Wallen’s lab in field behavioral
observations.

Project 4: Measuring Attachment Security in Rhesus Monkeys. (cross-collaboratory
project with Fear and Affiliation collaboratories) PIs: Mar Sanchez, Kim Wallen

The goal of this proposal is to develop a methodology that bridges the research on
mother-infant relationships in humans and nonhuman primates. The specific aims are:
Aim 1: to adapt a widely used method of assessing attachment security in human
children, the Attachment Q-Sort, for use with captive rhesus monkey mother-infant pairs.
Attachment security measures the balance between exploration and comfort-seeking
behavior in infants/children and is associated with developmental outcomes.
Aim 2: to determine whether measures of attachment security from the non-human
primate version of the Attachment Q-Sort (AQS) are associated with behavioral, socio-
emotional and neurobiological development.
The human Attachment Q-sort (AQS) has been previously adapted for use with Japanese
macaques, and the authors reviewed the appropriateness of this instrument to measure
attachment security in infants of that species, supporting the instrument’s content validity. The main goal of our studies is to assess its discriminant and predictive validity in rhesus macaque infants at the Yerkes National Primate Research Center, through funding received from this CBN venture grant. One of our co-investigators, Dr. James Warfield, who adapted the Japanese macaque AQS for use with free-ranging rhesus monkeys at Cayo Santiago, has worked with us since August 2005 to adapt this AQS methodology for use with captive rhesus monkeys at the Yerkes colony. We have generated a “Yerkes infant attachment Q-set”, consisting of 95 items, and its corresponding criterion sort. Our primate coders (blind to attachment theory) have finished training with Dr. Warfield, reached reliability and are currently coding the experimental tapes. Their current Q-security scores correlations with Dr. Warfield’s range from 0.7-0.88.

Throughout the process of achieving reliability, we have already selected several “training tapes” that will be provided together with this instrument to the primatology community (one of our aims within this venture grant). We are also finishing up a “training tutorial”. Our long-term aim is to analyze whether infant abuse or maternal separation (our current models of early adverse care in rhesus monkeys) affect attachment scores in infant rhesus monkeys, and whether attachment security early in life is associated with the infants’ socioemotional development and functioning of stress-emotion system. Preliminary results from studies funded by this CBN venture grant and based on a random sample of tapes sorted by Dr. Warfield in the 0-6 months age block, abused infants had lower attachment security scores (0.19) than controls (0.39) towards their mothers.

Two new venture grants awarded this year will extend the work of the Reproduction collaboratory into primate cognition and energy utilization. As they have just been awarded they are only starting their research, but are promising new areas for the CBN and reproduction. They are:

**Project 5:** An ethological approach to cognition in monkeys: Inference of social rank.  
PIs: Robert Hampton, Mark Wilson, Andrew Fischer (Behavioral Technology Core)  

Social rank is an important influence on reproduction and reproductive maturity. This project will develop a novel, ethologically-grounded test of nonhuman primate social cognition. Monkeys will be trained to select the dominant individual from a pair of monkeys displayed in video clips on a touch screen. Monkeys will then be tested for the ability to deduce a linear dominance hierarchy based on several such pairs. Mark Wilson (Reproduction) will collaborate by arranging social interactions for filming. Andrew Fischer (Behavioral Technology Core) will provide programming and engineering expertise for production of automated computerized testing equipment. This project will enable us to prepare a grant proposal for extramural funding to study the neural basis of social cognition using imaging, lesion, and single unit recording techniques.

**Project 6:** Developing a model to study the adverse effects of metabolism in primates.  
PIs: Mark Wilson, Tim Bartness, Ruth Harris, Andrew Fischer (Behavioral Technology Core).  

Rates of obesity continue to rise in children which have adverse effects on growth and development and place them on a trajectory for secondary health problems as adults.
New data from rodent models indicates that stress induces the consumption of highly palatable, caloricly dense foods (comfort food) at the expense of normal chow. Consumption of this chow attenuates the neuroendocrine response to stress and, not surprisingly increases fat mass. Non-stressed animals show no preference for the comfort food. We propose a pilot project to validate a monkey model to study the development of obesity and its adverse consequences on growth, metabolism and development. We will use the normal social structure of rhesus monkey groups as the natural stressor as social subordination produce a chronic stressor in this species. The overriding goal of this venture project is to determine whether social stress associated with social subordination results in the preferential consumption of a highly palatable food over monkey chow. Groups of juvenile females eating normal monkey chow will be compared to those who have the choice of eating chow or the comfort food. Food intake will be monitored electronically. Behavioral, metabolic, neuroendocrine, and morphometric data will be collected during the 20-week study. These data will allow us to develop a model to better understand sex differences in the development of obesity in children and its adverse effects on growth, sexual maturation, metabolism, behavior.

2. What are the major impediments for conducting research in the center? Perhaps the main impediment has been finding creative and convenient ways to foster research collaborations across institutions that are located in different parts of Atlanta. Despite the geographical nearness of these institutions, many obstacles such as traffic and parking can make it difficult for busy scientists to work together effectively. The center has developed a videoconferencing system among the participating institutions that has provided a means for groups of investigators at different locations to meet regularly to discuss their research collaborations. In addition, graduate students and postdocs that are supported by the center play a pivotal role in fostering these cross-laboratory and cross-institutional collaborations. Students and postdocs have more flexibility to move between labs and have the time and ability to learn and transfer techniques and knowledge between labs. While providing a creative and useful way to carry out cross-lab and cross-institutional collaborations, having students and postdocs work in more than one lab also broadens their education and training tremendously. Thus, the impediments to conducting the center’s research have been addressed in innovative ways that provide other benefits to those involved.

3. What percentage of the center’s funding has been paid out of Fund Code 10? List amounts for the last five years. The CBSH and CBN has received between $100,000 and $120,000 in Fund Code 10 monies over each of the last five years. This represents approximately 2% of the Centers annual budget.

4. Attach a list of all research activities and other activities (e.g. workshops/programs/conferences/seminars/symposia/etc.) of the center.

CBN events in 2004-2005
November 9 and 10, 2004: Seminars by Robert Johnston
Dept. of Psychology, Cornell University
The Atlanta Room at The Commerce Club, 34 Broad Street
"Individual recognition: a model system for social-cognitive neuroscience"

Lecture room #2, Nabritt, Mapp, McBay Bldg., Morehouse College  
"Understanding individual recognition: behavioral and neural approaches"

**January 25 and 26, 2005: Seminars by John Wingfield**  
Professor of Biology, University of Washington at Seattle  
**Yerkes Research Center Seminar Room**  
"Control of reproduction in diverse habitats: integrating environmental and social cues"  
**Room 233 Science Center, Spelman College**  
"Control of Life Cycles in an Era of Global Climate Change"

**January 31, 2005: Seminar by Alan Watts**  
Associate Professor of Neuroscience, Physiology and Biophysics  
University of Southern California  
**The Atlanta Room, Commerce Club Bldg., GSU**  
“CRH gene expression: what does it really do for CRH neuroendocrine neurons?”

**February 5, 2005 9 am – 1 pm – Annual Brain Bee**  
Fernbank Museum of Natural History  
Regional competition for high school students; winner goes to national competition

**February 15 and 16, 2005: Seminar by Ralph Adolphs**  
Professor of Psychology and Neuroscience, Cal. Tech.  
**Yerkes Research Center Seminar Room**  
"The Role of the Amygdala in Emotion and Social Cognition"  
**Room 233 Science Center, Spelman College**  
"Emotion and the Human Brain"

**March 1, 2005: Seminar by Anne Murphy**  
Associate Professor of Biology, GSU  
**Teasley Hall Auditorium Agnes Scott College**  
“Sex, drugs and pain: How men and women are different”

**March 17, 2005: Seminar by Sarah Pallas**  
Associate Professor of Biology, GSU  
**Hall Auditorium Agnes Scott College**  
“The remarkable plasticity of the young brain”

**March 18-19, 2005 – Annual Neuroscience EXPO**  
Zoo Atlanta  
Friday by invitation only for middle school students  
Saturday open to the general public

**March 21, 2005: Showing of movie Memento**  
Fernbank Museum of Natural History
Movie screening and seminar on memory and amnesia by Stuart Zola

**March 22 and 23, 2005: Seminars by Marc Breedlove**  
Barnett Rosenberg Professor of Neuroscience,  
Depts. Psychology and Zoology, Michigan State University  
The Atlanta Room, Commerce Club Bldg., GSU  
“Why Sex Really Matters”  
Room 233 Science Center, Spelman College  
“Eyeless in Gaza: Meandering into Science”

**March 30, 2005: Systems Core Workshop**  
8:30 – noon, Georgia State University

**March 29, 2005: Seminar by Harold Gouzoules**  
Professor of Psychology, Emory University  
Teasley Hall Auditorium Agnes Scott College  
"Primatological flip-flopping: the evolution of language from communication in monkeys and apes"

**April 7, 2005: Seminar by Joanne Chu**  
Assistant Professor of Biology, Spelman College  
Teasley Hall Auditorium Agnes Scott College  
“The neurobiology of social motivation in amphibians”

**April 21, 2005 – Workshop on “How to Become an Independent Investigator” for postdocs and graduate students, Emory University**

**May 7, 2005 – CBN Annual Retreat**  
8:30 – 3 pm, Morehouse School of Medicine

**MAY 21, 2005 - CBN/ACSFN SPRING SYMPOSIUM**

“Impact of early life stressors on behavior: Nature vs. nurture”  
Speakers:  
Michael Meaney (Douglas Hospital Research Center, Montreal)  
“Influence of maternal care”  
Terese Kosten (Yale)  
“Impact of neonatal stress on adult drug use and abuse”  
Charlie Nemeroff (Emory)  
“Early life experience and depression in humans”  
Jap Koolhaas (Rijksuniversitit; Netherlands)  
“Early life experience and aggression”  
Rick Richardson (Univ. New South Wales, Australia)  
“Developmental aspects of fear”

**September 22nd - Agnes Scott College, Teasley Lecture Hall, Science Center**  
“The neurobiology of social status”
Donald Edwards, Ph.D., Professor, Dept. of Biology
Georgia State University

September 27th – CBN Seminar, Yerkes VRC Seminar Room
"Unraveling the multiple signal transduction pathways that participate in hormonal regulation of female reproductive behavior"
Anne Etgen, Ph.D., Professor, Dept. of Psychiatry and Pediatrics
Albert Einstein Medical School

September 28th – CBN Undergraduate Seminar, Spelman College, Room 130, Tapley Hall
“Are estrogens good for brain cells?”
Anne Etgen, Ph.D., Professor, Dept. of Psychiatry and Pediatrics
Albert Einstein Medical School

October 4th – Agnes Scott College, Teasley Lecture Hall, Science Center
“The neural basis and evolution of sluggish behaviors”
Paul Katz, Ph.D., Associate Professor, Dept. of Biology
Georgia State University

October 14th – Imaging Core Workshop
1 – 5 pm – Emory University, 3rd Floor Conference Room, Whitehead Research Bldg.

October 18th – CBN Seminar, GSU, Brown Room, 18th Floor, Commerce Club Bldg.
“To Be Fit and Fat: Physiological and Molecular Consequences of Obesity in Mammalian Hibernators”
Greg Florant, Ph.D., Associate Professor, Dept. of Biology
Colorado State University

October 19th – CBN Undergraduate Seminar, Spelman College, Room 130, Tapley Hall
"How I got involved in Science: Snakes, Birds, and Marmots"
Greg Florant, Ph.D., Associate Professor, Dept. of Biology
Colorado State University

October 21 – 22, 9 am – 5 pm – CBN Educational Conference, Yerkes Neuroscience and VRC Seminar Rooms
“Considering Best Practices in Science Education: A Conference of Educators, Scientists and Students”

5. Attach separate bibliographies of refereed and nonrefereed publications which have resulted from research activities of the center. List publications for three years only. Due to the large number of these publications, these listed are only from the past fiscal year of the center. Others available upon request.


Hammock, Elizabeth A.D., Miranda M. Lim, Hemanth P. Nair and Larry J. Young. (2004) Vasopressin 1a receptor levels are associated with a regulatory microsatellite and behavior. Genes, Brain and Behavior. 4:289-301.


Zhao, Z., & Davis, M. Fear-potentiated startle in rats is mediated by neurons in the deep layers of the superior colliculus/deep mesencephalic nucleus of the rostral midbrain through the glutamatenon-NMDA receptors. Journal of Neuroscience, 2004, 24, 10326-34.

6. Attach a list of grants submitted in the last three academic years and list all sources of funding. Click here for the format to use. For funded grants, give title, funding source, amount, type of grant (research or instruction), GSU project number, and period funded. Specify the amount of funds received from each category (research or instruction) for each of the last three years.

Venture Grants awarded during 3-year period to Center members:

May 2005:
PI: Laura Carruth - Brain Camp for Kids: Neuroscience in Action! (EDUCATION).

PI: Dolores Bradley, Kai McCormack - Building the concentration in neuroscience at Spelman College (EDUCATION).

PI: Mike Davis, Kerry Ressler - Extinction of performance anxiety using D-cycloserine together with Viagra (FEAR).

PI: Mike Davis, Kerry Ressler, Shella Kielholz - Effects of fear conditioning on Manganese-enhanced circuit tracing in an identified neural circuit (FEAR/IMAGING CORE).

PI: Kyle Frantz, Laura Carruth, Ericka Reid - Retention in Research for Women and Minorities (EDUCATION).

PI: Liz Hammock, Larry Young, Dwight Lawson (Zoo), Tara Stoinski (Zoo) - Evolution of gene structure and social behavior in primates (AFFILIATION/ZOO).

PI: Robert Hampton, Mark Wilson - An ethological approach to cognition in monkeys: Inference of social (AGGRESSION/REPRODUCTION).


PI: Mark Wilson, Tim Bartness, Ruth Harris (UGA), Donna Toufexis, Andrew Fischer - Developing a model to study the adverse effects of metabolism (REPRODUCTION/BEHAVIORAL CORE).

Dec 2004:
PI: Jocelyne Bachevalier, Kim Wallen - Behavioral effects of neonatal amygdala lesions in monkeys living in a semi-naturalistic environment (REPRO/FEAR)

PI: Stuart Zola, Jocelyne Bachevalier - Amygdala-orbital frontal interaction and reward expectancy (FEAR)

PI: Kerry Ressler, Byron Ford - Neuregulin-mediated synaptic plasticity in the acquisition of conditioned fear (FEAR/MOLECULAR CORE)

May 2004:
PI: Balch/Wallen - $30,000 awarded to Ga. Tech, Account active. Automatic tracking and analysis of monkey proximity initiation in an outdoor social group (REPRO/ITI/BEH CORE)

PI: Herberholz/Edwards/Derby - $25,000 awarded to GSU, Account active. The effects of conspecific odor on the behavior of socially experienced crayfish (AGGRESSION)

PI: Maney/Showalter - $24,152 awarded to Emory, Account active. Vocal and visual communication in the Northern Cardinal, Cardinalis cardinalis (AFFILIATION/REPRO)

PI: Sanchez/Wallen - $22,278 awarded to Emory, Account active. Measuring attachment security in rhesus monkeys (REPRO/AFFILIATION)

Dec 2003:
PI: Toufexis/Wilson/Davis - The effect of estrogen and tamoxifen on fear learning in the female rat (FEAR-REPRO)
PI: Rainnie, Davis, Levita - The role of NPY and NPY-expressing interneurons in the basolateral amygdala: An electrophysiological and behavioral study (FEAR)

PI: Baro, Edwards, Jackson - Differences in octopamine receptor distribution in dominant and subordinate anthropods (AGGRESSION)

PI: Askew, Stahl, Fernandez, Albers - Effects of V1a antagonist infusion in the lateral septum on agonistic behavior and dominance status in a food competition procedure (AGGRESSION)

PI: Parr, Preuss, Rilling - Neural correlates of social recognition in chimpanzees and macaques: A pilot study using PET (AFFILIATION)

PI: Rilling, Hu, Preuss - Comparative Diffusion Tensor Imaging (DTI) and magnetic resonance spectroscopy (MRS) in monkeys, apes and humans (AFFILIATION – IMAGING CORE)

PI: Lacreuse, Martin-Malivel, Brown - Sex discrimination across the menstrual cycle: A comparative study in chimpanzees and rhesus monkeys (REPRO – BEHAVIORAL TECH CORE)

PI: Pazol, Patisaul, Wilson, Wallen - Medroxyprogesterone acetate: Mechanisms of estrogen antagonism (REPRO)

PI: Stoinski, Lennard, Powell - Using Animal Behavior to Educate about Science (Zoo Atlanta) (EDUCATION)

PI: Carruth, Bean - Taking the Genomic Revolution into High School Classrooms (Fernbank) (EDUCATION)

May 2003:
PI - Joanne Chu/Matthew Grober - The role of early immediate genes in the regulation of reproductive behavior in non-mammalian vertebrates (REPRO)

PIs - Chuck Derby/Don Edwards - The role of olfaction in establishing social status in crayfish (AGGRESSION)

PIs - Erica Duncan/Mike Davis - Fear potentiation, conditional discrimination, and fear inhibition in posttraumatic stress disorder (PTSD) (FEAR)

PI - Matthew Grober - The effects of inter- vs. intra-specific aggression on the neuroendocrine stress axis (AGGRESSION)

PIs - Jens Herberholz/Don Edwards/Xiaoping Hu - Magnetic resonance imaging of the crayfish brain (AGGRESSION – IMAGING CORE)
PIs - Kim Huhman/Kerry Ressler - Examining the role of BDNF in mediating conditioned defeat in hamsters using lentiviral vectors (FEAR)

PI - Duane Jackson/Don Edwards - Biogenic amines and the behavioral biology of war among termites (AGGRESSION)

PI - Aras Petrulis/Laura Carruth/Andrew Clancy/Kim Huhman - The function of c-fos in sexual behavior (REPRO)

PI - Carol Upshaw/Joanne Chu/Elliot Albers – The neuroendocrine regulation of phonotaxis in Hyla (AFFILIATION)

Dec. 2002:
PI – Timothy Bartness/Andrew Clancy/Ruth Harris - Do gonadal fat lipid levels control reproductive status and behavior? (REPRO)

PI – Andrew Clancy/Tim Bartness - Androgen and estrogen sensitive neurons and the neural circuit for male mating (REPRO)

PI – Andrew Clancy/Laura Carruth/Aras Petrulis/Deb Baro/Matthew Grober - Estrogen and male mating (REPRO)

PI – Fernando Gonzalez/Elliott Albers - Food competition and physiological concomitants of dominance in the rat (AGGRESSION)

PI – Stephan Hamann/Kim Wallen/Mark Wilson/Xiaoping Hu - Acute androgen effects on human fMRI response to sexual stimuli (REPRO – IMAGING CORE)

PIs - Kerry Ressler/Larry Young – A novel tool to visualize the “labeled-line” representation of olfactory memories (FEAR-AFFILIATION)

PI – Jeanne Stahl, Fernando Gonzalez, Elliott Albers, Brown - Dominance and submission in competition for space, food, and sex (AGGRESSION – BEHAVIORAL TECH CORE)

PI – Jim Winslow/Pat Whitten/Mar Sanchez - Dopaminergic development and social affiliation (AFFILIATION-REPRO)

D. Center Personnel

List all personnel funded through the center for the prior fiscal year. Use this format. Faculty who receive course releases or full or partial summer pay should be counted as center members. Center faculty are not directly funded by center money except for venture grant projects, collaboratory or core money. Some postdocs and
graduate students are fully or partially supported with center funds. For simplicity, participants who have received any center funds during the past fiscal year are noted with "*" beside their names.

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Appendix C1. Unit’s strategic plan and goals as of the beginning of the self-study period

The department’s goals and objectives as defined after the 1994 self-study cannot be found in university files. However, the Departmental Goals and Objectives defined after the previous self-study (October 1990) remain informative and are reproduced here.

PSYCHOLOGY DEPARTMENT GOALS AND OBJECTIVES
October 11, 1990

Goal 1. Enhance the academic reputation and visibility of the department.

Objective 1. Double the scholarly output of the department within the next five years.

Implementation plan:

The production of scholarship that contributes to public knowledge depends upon the convergence of a number of factors: faculty members who have the desire and requisite skills, supported by students committed to learning to do research and to developing the necessary skills; adequate time; adequate financial resources; adequate space; an atmosphere that promotes colleagueship, scholarly discussion and debate; a network of scholars at other universities to provide stimulation and critique; access to external resources when internal resources are inadequate, and adequate institutional support in submitting and administering grants. Without the motivated faculty members me other resources are of little value, but without many of the other resources even the most highly talented and motivated faculty members will soon lose that motivation and be unable to produce. Thus, the following plans are designed to facilitate the implementation of this objective.

a. Develop scholarly interest/research groups within the department.

b. Continue to lobby the college and university administration for increased resources directly related to scholarly output, including money, space, and released time.

c. Encourage and provide resources for students to make research presentations and/or publish their research.

d. Lobby for improved administrative resources at all levels to support grant writing and budget management.

e. In order to foster stimulation of faculty and students by scholars from outside the university, and to develop and maintain an effective network of "friends of GSU" in other universities, develop the financial resources to provide a stable and financially supported colloquium series with invited distinguished psychologists from other universities who would be paid honoraria and travel expenses.

f. Because access to outlets for publication and to external money for research depends in no small way upon the external reputation of the department and the university, it is important to improve external and internal public relations in regard to the research and scholarly activities of faculty and students.

   g. Develop specific and effective incentives to encourage faculty to seek external support for research and training of graduate students. Because of me important role in research productivity played by graduate students, the recruitment of a sufficient number of highly talented students who are committed to devoting full time to their graduate studies, including the conduct of high quality research, is essential. Such recruitment will depend upon the ability of the department to provide full financial support for them.

Objective 2. Support individual excellence in a manner that is consistent with the needs and goals of the department and at the same time maximizes strengths and interests of individual faculty.
Implementation plan:

a. In cooperation with the Dean, and with the assistance of an outside review committee, establish a departmental process to select a few themes around which present and future research and instructional resources will be concentrated.

**Objective 3.** Increase involvement in research of issues affecting the metropolitan area and the state.

**Implementation plan:** to be determined.

**Goal 2.** **Raise the level of the educational experience in the graduate program so that students may be better prepared for excellence in their professional activities.**

**Objective 1.** Increase the quality of the educational experience of graduate students.

**Implementation plan:**

The cornerstone of a high quality program is (1) a solid background in core psychology combined with (2) in-depth course work in selected specialty areas, plus (3) individual research and other professional experiences closely supervised by high quality faculty. We are doing reasonably well with (1), but (2) and (3) require improvement. One problem is that current enrollment minima (9 in graduate classes) make it difficult to offer the specialized classes needed for advanced training without at the same time admitting too many students to permit adequate individual research and practicum supervision. The diversity of the programs in the department makes this problem particularly difficult to resolve. Items a and b below should provide some improvement:

a. Reduce the graduate student/faculty ratio to no more than 5/1. This would be accomplished primarily through reduced admissions, but some additional faculty may be needed.

b. Reduce the lower limit of enrollment in advanced graduate courses to 5. Higher limits could be employed for basic core courses, with an overall departmental average enrollment of 7 or 8 students.

c. Raise the quality of students entering our graduate programs through more active recruitment and financial support of the most outstanding candidates.

d. Develop procedures to insure that students are evaluated early in their programs on basic subject matter and professional issues before being admitted to more advanced study.

e. Review the core curriculum and its relationship to advanced course work to the end of making possible greater flexibility in advanced course work.

**Objective 2.** Increase support of graduate students.

**Implementation plan:**

a. Increase the funds available for laboratory, research, and teaching assistantships for graduate students. Both the dollar value of individual assistantships and the number of assistantships available should be increased.

b. Raise the quality and quantity of the department's allotted physical facilities to the level necessary for excellence in the doctoral-level education and training to which the department and the university are committed.

**Goal 3.** **Foster a sense of community for minority students and a scholarly focus on minority issues.**

**Objective 1.** Increase the number of minority students who enter and complete our graduate programs.

**Implementation plan:**

a. Recruit and provide financial support for outstanding minority graduate students.
b. In consultation with the departmental Minority Affairs Committee, identify and develop support services needed to enhance the retention and graduation of minority students.

**Objective 2.** Increase course offerings, research programs and service delivery activities relevant to the interests of minority graduate students.

**Implementation plan:**

a. Develop at least one graduate course on ethnic and racial diversity.

b. Develop at least one undergraduate course on ethnic and racial diversity.

c. Encourage the inclusion of ethnic and racial issues in current courses,

**Objective 3.** Increase research into minority issues.

**Implementation plan:**

Encourage and actively support faculty with research interests in minority issues.

**Goal 4.** Raise the level of instruction in undergraduate courses to improve the depth and breadth of understanding of the discipline of psychology.

**Objective 1.** Insure consistency and excellence in the undergraduate program.

**Implementation plan:**

a. Establish a continuing faculty committee on undergraduate studies, whose duties would be; (1) maintain and update a strong curriculum, (2) ensure consistency in catalog descriptions, (3) coordinate teaching schedules, (4) monitor the staffing patterns and the assignment of academic credit, and (5) continue to support the current system of advisement, monitoring and expanding it as deemed necessary.

b. Appoint the Director of Undergraduate Studies as an ex-officio member of the Executive Committee.

c. Assign to the Director of Undergraduate Studies the responsibility of monitoring the supervision of GTAs and PTIs, supported by appropriate release time.

d. Develop a standardization of courses offered by GTAs and PTIs in order to insure the maintenance of content and level of difficulty.

e. Implement a system to identify and encourage potential honors students and others who show promise for continuing to graduate school.

**Objective 2.** Increase participation of full-time faculty in the undergraduate program.

While it might be seen as desirable that all full-time faculty participate in the undergraduate program, such would not be in the best interests of the department, the graduate program, or the undergraduate program. Given the complexity and size of the graduate program, the increasing level of external support for research which involves the purchase of release time from grants, and the necessity of maintaining accreditation of the program in clinical psychology, it would be neither efficient nor effective to require that all faculty teach in the undergraduate program. Nonetheless, it does seem advisable to examine the possibilities for more such participation, and to do so continually.

**Implementation plan:**

Charge the Undergraduate Program Committee with the task of periodically reviewing the participation of full-time faculty in the undergraduate program, and of making recommendations to the Executive Committee and the Chair for changes in staffing.
Goal 5. Foster a sense of community and a scholarly atmosphere for all students and faculty.

Objective 1. Increase the effectiveness and representativeness of departmental governance.

Implementation plan:

a. Reconsider criteria and procedures for promotion and tenure, including the composition of the Promotion and Tenure Committee, in the light of emerging changes at the college and university levels. All criteria and procedures should be made known to the entire faculty.

b. Reconsider how faculty evaluations are conducted and how teaching loads and salary increases are determined.

c. Reconsider policies related to the terms of service of the various departmental administrative and representative positions, including the chair.

Objective 2. Reward faculty in a way that supports individual excellence and productivity in teaching, research, and service, and that balances individual interests and strengths with the need to improve departmental scholarship and visibility (Goal 1) and undergraduate education (Goal 4).

Implementation plan:

a. Review the current point system in the light of this objective, and modify it as necessary to support this objective.

Objective 3. Increase the integration among teaching, research and applied areas of the department.

Implementation plan:

Charge the Executive Committee with the task of recommending ways to accomplish this objective.

Objective 4. Increase the integration of the undergraduate program into the work of the department.

Implementation plan:

Charge the Undergraduate Program Committee with the task of recommending ways to accomplish this objective.
## Undergraduate Learning Outcomes

### Table 1 Overview of Undergraduate Courses by Learning Goals and Assessment Strategy

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Note:

Assessment Strategies:

- CCD = Classroom and course data
- PA = Performance assessment
- IP = Individual projects
- SAR = Self-Assessment / Reflection
- X = To be determined
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<td>Population of students enrolled in 1101</td>
<td>Comparison of unit and final exam performance, across and within sections and semesters</td>
<td>70% accuracy on MC questions</td>
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<td>Random sample of 150 across sections</td>
<td>Comparison of performance over time within sections</td>
<td>Average improvement between initial and final measures greater than or equal to 30% of possible points Average performance on final measures greater to or equal to 75% of possible points for each assignment for students who have received a C or higher in the course;</td>
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<td>Qualitative reviews with use of rubrics, comparing performance across and within sections and semesters</td>
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<td>Self-assessment / Reflection</td>
<td>Performance Assessment</td>
<td>Practicum Course Supervisor (Jackson)</td>
<td>Reaction paper (revised from current)</td>
<td>Research practicum supervisors</td>
<td>Cross-sectional</td>
<td>All enrolled students per semester (N= 60)</td>
<td>Qualitative review with use of rubrics</td>
<td>Frequency distributions of midsemester and final evaluation data</td>
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<tr>
<td>4770</td>
<td>A, C, I, &amp; J</td>
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<td>Qualitative review with use of rubrics</td>
<td>Frequency distributions of midsemester and final evaluation data</td>
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</table>
Graduate Learning Outcomes

Goal 1 - Theory and Content: Develop expertise with major concepts, theoretical perspectives, empirical findings, and historical trends in the field of Psychology, the program area, and the research specialty area.

Representative Skills 1:
1. Uses psychological concepts fluently to explain and predict behavior; evaluates the validity of concepts as explanation; generates new concepts.
2. Exploits discrepancy between intuitive findings and research as opportunity to explore new ideas.
3. Generates original theoretical explanations; assumes responsibility for criticizing and improving theory.

Assessment 1:
Field of Psychology
1. Performance in Psych 8500, History of Psychology.
2. Ratings and written evaluations by departmental faculty during yearly review.

Program Area:
1. Performance in required & elective courses in program area.
2. General Exam – Written; scored by committee of faculty.
3. General Exam – Oral Defense; conducted by committee of faculty.
4. Ratings and written evaluations by program faculty during yearly review.
5. Ratings and written evaluations by practicum supervisors completed each semester.

Research Special Area:
1. Masters Thesis - Proposal; evaluated by faculty committee and defended orally in committee meeting.
3. Dissertation - Proposal; evaluated by faculty committee and defended orally in committee meeting.
4. Dissertation – Final Document; evaluated by faculty committee and defended orally in committee meeting.
5. Ratings and written evaluations by departmental faculty during yearly review.

Goal 2 – Research Methods: Understand and apply research methods including research design, data analysis, and interpretation.

Representative Skills 2:
1. Be competent in a variety of research techniques relevant to area of specialization (e.g., observation, action-research, survey methods).
2. Strives to produce optimal research and measurement strategies for reducing challenges to validity of conclusions.
3. Interprets behavior at appropriate level of complexity that reflects contextual factors.
4. Establishes a research focus that identifies and builds on primary interests in behavior.
5. Uses statistical reasoning routinely for evaluating research, develops fair and appropriate applications of statistics and other analytical methods that are consistent with data.
6. Implements and demands high standards for adherence to ethical standards and to research methods to minimize complications of bias and confounds.

Assessment 2:
1. Performance in Psych 8410-8420, Psychological Research Statistics I & II.
2. Performance in methods courses required by program area.
3. Ratings and written evaluations by departmental faculty during yearly review.
4. General Exam – Written; scored by committee of faculty.
5. General Exam – Oral Defense; conducted by committee of faculty.
6. Masters Thesis - Proposal; evaluated by faculty committee and defended orally in committee meeting.
7. Masters Thesis – Final Document; evaluated by faculty committee and defended orally in committee meeting.
8. Dissertation - Proposal; evaluated by faculty committee and defended orally in committee meeting.

Goal 3 – Application: Apply psychological principles in professional activities.

Representative Skills 3:
1. Develops unique applications of theory and research methods.
2. Evaluates relevant content from broader range of available resources; reflects how context influences actions, shows refined and flexible use of published research.
3. Uses psychological concepts fluently to explain and predict behavior.
4. Creates compelling arguments with attention to subtle meaning of content; anticipates and defends against criticism, adapts arguments for wide range of audiences.
5. Engages in ethical professional behavior.

Assessment 3:
1. Ratings and written evaluations by departmental faculty during yearly review.
2. Course evaluations and teaching portfolios
3. Faculty evaluations of teaching.

Goal 4 – Communication and Collaboration Skills: Communicates and works in groups effectively.

Representative Skills 4:
1. Creates compelling arguments with attention to subtle meaning of content; anticipates and defends against criticism; adapts arguments for wide range of audiences.
2. Uses APA format expertly with minimal errors; demonstrates sophisticated conventional oral and written expression.
3. Independently completes sophisticated group projects that require collaboration over time.
4. Systematically plans project completion strategy, including back-up plans to overcome likely obstacles.
5. Convenes colleagues to improve quality of projects and programs.
6. Conscientiously seeks expression of broad opinions and productive conflict resolution.
7. Actively promotes and enjoys group creativity.

Assessment 4:
1. Yearly student report of conference presentations and publications.
2. Ratings and written evaluations by departmental faculty during yearly review.
3. General Exam – Written; scored by committee of faculty.
4. General Exam – Oral Defense; conducted by committee of faculty.
5. Masters Thesis - Proposal; evaluated by faculty committee and defended orally in committee meeting.
7. Dissertation - Proposal; evaluated by faculty committee and defended orally in committee meeting.
8. Dissertation – Final Document; evaluated by faculty committee and defended orally in committee meeting.
9. Course evaluations and teaching portfolios.
10. Faculty evaluations of teaching

Goal 5 – Critical Thinking Skills: Respect and use critical and creative thinking, skeptical inquiry, and the scientific approach.

Representative Skills 5:
1. Practices scientific method and accepts its limitations.
2. Acknowledges and guards against bias or subjective influences.
3. Seeks the most precise explanation.
4. Uses skepticism consistently as an evaluative tool.
5. Enjoys complexity during search for clarifying behavioral explanations.

Assessment 5:
1. Ratings and written evaluations by departmental faculty during yearly review.
2. General Exam – Written; scored by committee of faculty.
3. General Exam – Oral Defense; conducted by committee of faculty.
4. Masters Thesis - Proposal; evaluated by faculty committee and defended orally in committee meeting.
5. Masters Thesis – Final Document; evaluated by faculty committee and defended orally in committee meeting.
6. Dissertation - Proposal; evaluated by faculty committee and defended orally in committee meeting.
7. Dissertation – Final Document; evaluated by faculty committee and defended orally in committee meeting.
8. Course evaluations and teaching portfolios
9. Faculty evaluations of teaching.
10. Supervisor evaluations of practicum performance.

**Goal 6 – Personal Development:** Shows insight into one’s own and other’s behavior and mental processes and applies effective strategies for self-management and self-improvement.

Representative Skills 6:
1. Uses self assessments to establish goals.
2. Formulates back-up plans to anticipate and overcome obstacles.

Assessment 6:
1. Ratings and written evaluations by departmental faculty during yearly review.
2. Course evaluations and teaching portfolios
3. Faculty evaluations of teaching.

**Goal 7 – Information and Technology Literacy:** Acquire skills in accessing and disseminating information with the use of computer technology.

Assessment 7:
1. Ratings and written evaluations by departmental faculty during yearly review.
2. Masters Thesis - Proposal; evaluated by faculty committee and defended orally in committee meeting.
4. Dissertation - Proposal; evaluated by faculty committee and defended orally in committee meeting.
5. Dissertation – Final Document; evaluated by faculty committee and defended orally in committee meeting.

**Goal 8 – Values in Psychology:** Weigh evidence, tolerate ambiguity, act ethically, and reflect other values underpinning psychology.
Representative Skills 8:
1. Monitors ethical practices in area of specialization.
2. Routinely evaluates research, practice, and teaching from an ethical standpoint as an ongoing professional responsibility.
3. Advocates for the best ethical practices to protect the public and improve the discipline.

Assessment 8:
2. Ratings and written evaluations by departmental faculty during yearly review.
3. General Exam – Written; scored by committee of faculty.
4. General Exam – Oral Defense; conducted by committee of faculty.
5. Masters Thesis - Proposal; evaluated by faculty committee and defended orally in committee meeting.
7. Dissertation - Proposal; evaluated by faculty committee and defended orally in committee meeting.
8. Dissertation – Final Document; evaluated by faculty committee and defended orally in committee meeting.
9. Course evaluations and teaching portfolios
10. Faculty evaluations of teaching.

Goal 9 – Sociocultural and International Awareness

Assessment 9:
1. Performance in Psyc 8050 or 8060, Issues of Human Diversity in Psychology.
2. Ratings and written evaluations by departmental faculty during yearly review, especially relevant to experiences in applied research, intervention, and consultation with special populations.
3. Performance in required and elective courses with emphasis on socio-demographic, cross-cultural, and contextual influences on human behavior.
4. General Exam – Written; scored by committee of faculty.
5. General Exam – Oral Defense; conducted by committee of faculty.
6. Supervisor evaluations of practicum performance in settings that provide experience with diverse American or global population groups.

Goal 10 – Career Planning and Development: Emerge from graduate school with credentials and plans for career path.

Representative Skills 10:
1. Attends and participates in conferences relevant to area of specialization.
2. Collaborates on publications relevant to area of specialization.
3. Gain teaching experience and credentials through GLA and GTA responsibilities.
4. Gain research experience and credential through GRA activities.

Assessment 10:
1. Presentations at regional, national, international conferences.
2. Number of publications in peer reviewed journals, invited chapters.
3. Course evaluations and teaching portfolios.
4. Faculty evaluations of teaching
5. Ratings and written evaluations by departmental faculty during yearly review.

I. Assessment Procedures - Undergraduate

A. Outcomes Assessed.

The Department of Psychology assessed all learning outcomes listed in Table 3 except C2: Students articulate how psychology can further social understanding and public policy and E3: Students analyze phenomena at multiple levels of analysis including the biological, individual, family, community, and society. Table 4 illustrates courses in which outcomes were assessed.

Table 3 Department of Psychology Undergraduate Learning Outcomes

<table>
<thead>
<tr>
<th>A. Theory and Content: Demonstrate familiarity with major concepts, theoretical perspectives, empirical findings, and historical trends</th>
</tr>
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<tbody>
<tr>
<td>1. Students learn the historical development of the discipline, its contemporary context (including social and political contexts, organizational and self-governance), and interaction with other disciplines.</td>
</tr>
<tr>
<td>2. Students learn key psychological theories and concepts (e.g. biological, psychological, and social bases of affect, behavior, and cognition) and the nature and scope of supporting data.</td>
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<thead>
<tr>
<th>B. Research Methods: Understand and apply basic research methods including research design, data analysis, and interpretation.</th>
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<tbody>
<tr>
<td>1. Students develop testable hypotheses, differentiate research designs and/or statistics, evaluate aptness of research conclusions, and generalize them appropriately.</td>
</tr>
<tr>
<td>2. Students design and conduct quantitative or qualitative research studies in laboratory or field settings.</td>
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<tr>
<td>3. Students adhere to ethical guidelines for collection, storage, and use of data from human or non-human participants.</td>
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<tr>
<td>4. Students use print and electronic library resources effectively and appropriately.</td>
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</tbody>
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<tr>
<th>C. Application: Understand and apply psychological principles in personal, social, and organizational matters.</th>
</tr>
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<tbody>
<tr>
<td>1. Students identify psychology’s major applications in laboratory and field settings (e.g. clinical, industry, education).</td>
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<tr>
<td>2. Students articulate how psychology can further social understanding and public policy.</td>
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<tr>
<th>D. Communication and Collaboration skills: Communicate and work in groups effectively</th>
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<tbody>
<tr>
<td>1. Students demonstrate effective written communication skills and use discipline specific writing conventions and formats.</td>
</tr>
<tr>
<td>2. Students demonstrate effective oral communication skills.</td>
</tr>
<tr>
<td>3. Students work effectively within groups or teams.</td>
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</table>
E. Critical thinking skills: Respect and use critical and creative thinking, skeptical inquiry and the scientific approach.

1. Students use research data to formulate or evaluate new research questions, using reason and persuasion in a logical argument.
2. Students summarize and evaluate a body of research including primary literature, and can compare psychology’s methods with other disciplines’ methods.
3. Students analyze phenomena at multiple levels of analysis including the biological, individual, family, community, and societal.

F. Personal development: Shows insight into one’s own and others’ behavior and mental processes and apply effective strategies for self-management and self-improvement.

1. Students apply psychology to personal and professional development.
2. Students are aware of their thoughts, feelings, and behaviors.
3. Students define personal and professional integrity.

G. Information and Technological Literacy: Demonstrate information competence and the ability to use computers and other technology for many purposes

1. Students demonstrate competent, ethical, and responsible use of information in academic work.
2. Students apply software in research reports (e.g. statistical)
3. Students master computer basics such as Internet navigation, document and spreadsheet generation.
4. Students assess web-based sources of information, popular presentations of psychological research, as well as pseudoscience.

H. Values in Psychology: Weigh evidence, tolerate ambiguity, act ethically, and reflect other values underpinning psychology

1. Students understand the need to behave ethically in personal and professional domains, and appreciate the need to tolerate ambiguity.
2. Students demonstrate skepticism and intellectual curiosity, attunement to scientific evidence, civic responsibility, and respect for human diversity.

I. Sociocultural and International Awareness

1. Students respect individual differences.
2. Students define diversity and its role in psychological theory and research.
3. Students consider and explain the role of cultural, racial, ethnic and economic factors, privilege, and discrimination, in affect, behavior, and cognition.

J. Career Planning and Development: Emerge from the major with realistic ideas about how to use psychological knowledge, skills, and values in various occupations, and in graduate or occupational schools.

1. Students apply psychological principles to career decision-making.
2. Students identify and pursue realistic career paths.
3. Students identify realistic graduate education pathways.
4. Students take practical career steps.
5. Students value lifelong learning and ongoing professional development.

Table 4 Learning Outcomes Assessed in Psychology Major Curriculum

<table>
<thead>
<tr>
<th>Learning Outcomes</th>
<th>COURSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1-A2</td>
<td>1101</td>
</tr>
<tr>
<td>B1-B4 &amp; E1-E2</td>
<td>3010</td>
</tr>
</tbody>
</table>
B. Elements of Assessment / Data Collection / Data Analysis.

PSYC 1101 Introduction to Psychology: Outcomes A1-A2

PSYC 1101 is a broad survey of the major topics in psychology, including research methodology, the biological and social factors that influence behavior, development, learning, memory, personality, and psychological disorders. The course can be used to fulfill part of the Social Science core requirement (Area E) for the College of Arts and Sciences. Approximately sixteen sections, composed of 75-120 students each, are offered across Fall and Spring semesters. Content is typically presented through lecture and large group discussion.

Sample & Procedure
Instructors administered a 50-question, pencil-and-paper mastery test to all students in all sections at the end of the Fall 2004 and Spring 2005 terms. All of the questions were multiple-choice with four or five options. Questions focused on basic psychological theories and phenomena, with a particular emphasis on the application of these concepts to real-life situations and current events.

Instructors were given the option of administering the mastery test by itself, during the last week of classes or as part of the final exam. In the latter case, the 50 mastery test questions were always presented as a block before or after any additional questions the instructor included in the final exam. Each semester, two instructors chose to give the mastery test before the final exam; the remainder (six for Fall 2004 and five for Spring 2005) incorporated the mastery questions into their final exam. With one exception in Fall 2004, the questions were presented in the same order and prior to any other section-specific questions.

At the end of each semester, instructors submitted the original exam answer sheets for independent analysis by the course coordinator. Prior to analysis, these sheets were coded by section using a letter of the alphabet that was unrelated to the instructor’s name or the official computer registration number. The sheets were processed by the GSU Testing Center following standard survey analysis procedures. This analysis generated electronic data files for each section of the course indicating the response given by each student to each question. A spreadsheet program was used to calculate descriptive statistics at the section and course levels.

Analyses & Results
Students’ scores (0=wrong; 1=correct) were summed across the multiple choice questions, and their percentage of correct answers was calculated.
For the Fall 2004 term, data were collected for 781 students. The median percent correct for all 50 questions was 75%. The percentage correct ranged from a low of 31% to a high of 99%. Sixty percent of the students scored 70% correct or higher on the mastery test as a whole.

For the Spring 2005 term, data were collected for 513 students. The median percent correct for all 50 questions was 72%. The percentage correct ranged from a low of 34% to a high of 98%. Slightly more than one-half of the sample (51%) scored 70% correct or higher on the test overall.

**PSYC 3010 Psychological Statistics: Outcomes B1-B4 & E1-E2**

PSYC 3010 provides an introduction to descriptive and inferential statistics as applied to psychological research questions and is required for all Psychology majors. Four sections are offered each semester (Fall and Spring), with typical enrollments between 48 and 75 students. Topics include measures of central tendency and variability, an introduction to probability and hypothesis testing, the t test for independent and related samples, analysis of variance including repeated measures, correlation and regression, and chi-square tests of independence. Concepts are introduced and discussed in class through lecture and discussion and then are applied through exercises in laboratory and homework assignments. Students who successfully complete this course should be able to understand and apply basic research statistics including data analysis and interpretation.

**Sample & Procedure**

Instructors were asked to randomly sample students from their sections for a projected sample size of $N = 150$ across all sections offered during the academic year. Data were collected on a set of standardized multiple choice questions on key concepts and computations assessed throughout the semester. Additionally, instructors rated students’ written interpretation of key statistics (i.e., t-test, ANOVA, correlation) and students’ use of APA style in the write-up. These open-ended questions were rated on a scale from 1 to 5. A score of 1 on interpretation means that the student completely misunderstood the statistical procedure. A score of 1 on APA format means that the student made more than 5 errors in the write-up. A score of 5 on interpretation means that the study interpreted the statistical procedure and results completely correctly, and a score of 5 on APA format means no errors were made in the write-up. Finally, students were administered a 10-question pre-test on the first day of the semester, and they completed an identical post-test on the last day of the semester.

**Analyses and Results**

*Multiple choice.* Valid multiple choice data were collected on 124 students. Students’ scores (0=wrong; 1=correct) were summed across the multiple choice questions, and their percentage of correct answers was calculated. The median percent correct was 74%, and the percentage correct ranged from a low of 26% to a high of 100%.
Open-ended questions. Valid data were collected on 103 students. Students’ ratings were averaged across statistical procedure for interpretation and APA format. On the 1-5 scale, the median interpretation score was 2.67 (M = 2.62, SD = .89), with a range from 1 to 4. The median APA score was also 2.67 (M = 2.50, SD = .77), with a range from a low of 1 to a high of 4.

Pre- and post-test. A total of 83 students had valid pre- and post-test data. The median pre-test score was 3 out of 10 correct, with a range from 0 correct to 4 out of 10 correct. The median post-test score was 6 out of 10 correct, with a range from 2 to 10. A paired sample t-test was computed to examine whether students got significantly more questions correct on the post-test than on the pre-test. The results indicated that they did perform better on the post-test (M = 6.45, SD = 1.70) than on the pre-test (M = 2.39, SD = 1.25), t(82) = 18.65, p < .001.

PSYC 3030 Principles and Methods of Psychological Investigation: Outcomes B1-B4, C1, D, E1-E2 & G

PSYC 3030 is a small, writing intensive course that meets a major requirement for the Department of Psychology. The focus is to provide students with a detailed knowledge of the variety of research methods that psychologists use, the range of decisions that psychologists must make when planning, conducting, and presenting research, and the factors that must be considered when making these decisions. The course has a lecture and laboratory. Labs involve the design of studies, collection of data, and analysis of data. As a part of both the lecture and lab, students develop familiarity with the style of the American Psychological Association and practice writing in that style. Typical enrollment for the course is approximately 130 students in the Fall (five sections) and 160 students (six sections) in the Spring.

Sample & Procedure

For this assessment, all students in all sections of the course were required to complete two specific writing assignments. The first was a 3-4 page essay on research ethics, including an assessment of the compliance of a particular study with the APA code of ethics; this was submitted during the third week of the course. The second assignment was an original, full-length research paper, based on data they themselves collected and analyzed over the course of the semester; this was submitted during the last week of the course. Both assignments required students to use the current version of APA style and incorporate information from one or more peer-reviewed journal articles. Students were told to put forth their best effort with regard to grammar, spelling, paragraph structure, and argument structure.

Students submitted electronic versions of both assignments to their instructors, who then forwarded these to the course coordinator each semester. The coordinator then randomly selected 20 of the students who had completed both assignments and assessed these assignments in terms of the quality of writing overall and the use of APA style. Overall writing quality was defined as the organization of the essay and the author’s ability to “clearly distinguish between fact and opinion,” “support factual statements with observable evidence,” “motivate opinions with well-reasoned
arguments,” and “use wording that is clear and concise.” A score from 1-5 was given for each of these writing elements, for a total possible overall writing score of 25. The use of APA style was defined in terms of the author’s ability to appropriately paraphrase the ideas of others, without plagiarizing, provide all necessary citations and references in the correct format, present ideas in an objective manner, and follow APA style guidelines for the presentation of numbers and the use of abbreviations. A score from 1-5 was given for each of these five APA elements, for a total possible APA style score of 25. The total of the overall and APA scores was used as the final assessment score for an assignment.

For each semester, the course coordinator compared the assessment scores for the ethics essays (pretest) with those for the research papers (posttest). Differences in the scores were intended to reflect the development of the students’ writing skills over the term.

**Analyses & Results**
For the Fall 2004 term, the assessment scores for the ethics papers had a median value of 34, with a range of 25 to 47. The scores for the research papers had a median of 42.5 and a range from 32.5 to 47.5. A paired sample t-test showed that the ethics paper scores ($M = 34.9, SD = 7.1$) were significantly lower than the research paper scores ($M = 41.0, SD = 6.6$), $t(19) = -4.2, p < .05$.

For the Spring 2005 term, the median assessment score for the ethics papers was 36.25, with a range of 25 to 46. The scores for the research papers had a median of 42.5 and a range from 25 to 48. Again, a paired sample t-test revealed the assessment scores for the ethics papers ($M = 34.9, SD = 7.4$) to be significantly lower than those for the research papers ($M = 38.8, SD = 7.2$), $t(19) = -4.2, p < .05$.

**PSYC 3110 Psychology of Interpersonal Behavior: Outcomes D2, F1-F3 & H1**
PSYC 3110 (Psychology of Interpersonal Behavior) was originally developed within the Department of Psychology at GSU to facilitate undergraduate students’ psychological understanding and application of interpersonal skills. Accordingly, the evaluation strategy used to assess learning outcomes in this course focused on students’ acquisition of 11 different communication skills. These skills, which are systematically taught in the course via didactic and experiential methods, fall into two domains: listening and talking. Listening skills include attending, acknowledging, inviting, summarizing, and asking open-ended questions. Talking skills include speaking for one’s self, describing sensory data, expressing thoughts, sharing feelings, disclosing wants, and stating actions. Approximately ten sections, with maximum enrollments of 26 students, are offered each semester (Fall and Spring).

**SAMPLE**
Students enrolled in ten of 21 sections of PSYC 3110 during Fall 2004 and Spring 2005 completed a pre- and post-test self-report questionnaire. These sections were
taught by six different instructors. Valid data were not available from all of the students enrolled in PSYC 3110 in the 2004-2005 academic year because either instructors failed to administer the questionnaires or students did not follow directions. An $N$ of 150 was available to analyze the self-report data.

Three instructors responsible for a total of four sections were asked to complete a behavioral evaluation. Data from all four sections were available. After dropping the behavioral rating forms with incomplete data, an $N$ of 64 was included in this phase of the evaluation.

**Procedures**

The pre-and post-test self-report measure, “Gauge My Progress,” was drawn from the Core Communication (Miller & Miller, 1998) workbook used in the course. Consisting of questions pertaining to the 11 communication skills listed earlier, it asks the respondent to rate on a 5-point scale his or her typical and desired behaviors vis-à-vis the different skills. Improvement in communication skills is indicated by an increasingly smaller differential between ratings of typical and desired behaviors. The pre- and post-test measures were administered on the first and last days of class, respectively.

Developed for purposes of this evaluation, the behavioral measure assessed students’ maximal performance in an interpersonal role-play situation in which they worked in groups of three rotating through the roles of listener, talker, and evaluator. The role-plays involved relational conflicts of an ethical nature. The students were evaluated on their ability to display each of the five listening and six talking skills at least once during the role-plays. To reach criterion in listening and talking, they had to demonstrate at least 80% of the listening skills and 80% of the talking skills. The behavioral measure was administered during the last week of classes.

**Data Analysis**

**Self-report**

Average typical-desired rating differences pre- and post-test across the eight sections were 41.71 (SD = 22.06) and 37.94 (SD = 22.64), respectively. This difference was significant, $t (149) = 2.15, p < .05$.

**Behavioral Ratings**

Combining the results of the four sections that completed the behavioral portion of the evaluation, 72.20% of the students exhibited criterion level performance for listening skills and 81.80% for talking skills.

**PSYC 4760 Research Practicum: OUTCOMES B, D, E, G, H, J**

The goal of research practicum is to expose undergraduates to the mechanics of psychological research in a professional setting, thereby helping students develop realistic career goals. Thus, the evaluation strategy used to assess learning outcomes
in this course assessed both professional development as well as research related learning outcomes.

**Sample**

Evaluations were completed for 49 students enrolled in PSYC 4760 during the fall and spring semesters. Data were missing for 8 students.

**Procedures**

Faculty completed evaluations of students’ performance and returned the evaluation to the practicum coordinator. The evaluation consisted of 18 questions and a space for comments. Faculty used a likert scale (1 = poor to 5 = excellent) to respond to all questions. Five questions assess outcome H (values in psychology, i.e. professional development outcomes). The average score across these questions was calculated. Ten questions assessed outcomes B, D, E, & G (research relevant outcomes) and as above, average scores were calculated. The remaining 3 questions were not specific to the evaluation plan. To assess career planning and development (outcome J), students wrote a brief self-assessment and listed five experiences that described their practicum. This list was used to evaluate whether the experiences helped the student refine career goals.

**Data Analysis**

The mean score for professional development items was 4.84 ($SD=.40$). These scores ranged from a minimum of 2.60 to a maximum of 5.0. Only 2% or 1 student received a score below 4 (good).

The mean score for research outcomes was 4.58 ($SD=.56$). These scores ranged from a minimum of 3.0 to a maximum of 5.0. Six students (18%) received a score below 4 (good).

Eighty-six percent of students enrolled provided a list of 5 experiences that characterized their practicum. Thirty-five percent specifically mentioned that their practicum experiences either confirmed or refined their career goals. Only one student rejected a psychology related career goal as a result of the practicum. Fifty percent mentioned at least one specific skill they acquired and an equal amount mentioned gaining at least one new important insight into the process of research or academic life.

**PSYC 4770 Applied Practicum: OUTCOMES A, C, H, I, & J**

The goal of applied practicum is to expose undergraduates to a professional setting in psychology or an allied field, to facilitate the development of realistic career goals. Thus, the evaluation strategy used to assess learning outcomes in this course assessed both professional development as well as learning outcomes related to the application of psychological theory and content.
Sample

Forty-six students were enrolled in PSYC 4770 during the fall and spring semesters. Evaluations regarding outcome H were completed for 43 and evaluations for remaining outcomes were completed for 41 students.

Procedures

Field supervisors completed evaluations of students’ performance and returned the evaluation to the practicum coordinator. The evaluation consisted of 13 questions and a space for comments. Faculty used a likert scale (1 = poor to 5 = excellent) to respond to all questions. Five questions assess outcome H (values in psychology, i.e. professional development outcomes). The average score across these questions was calculated. Five questions assessed outcomes A, C, & I (application relevant outcomes) and as above, average scores were calculated. The remaining 3 questions were not specific to the evaluation plan. To assess career planning and development (outcome J), students wrote a brief self-assessment and listed five experiences that described their practicum. This list was used to evaluate whether the experiences helped the student refine career goals.

Data Analysis

The mean score for professional development items was 4.73 (SD=.48). These scores ranged from a minimum of 3.20 to a maximum of 5.0. Only 9% or 4 students received a score below 4 (good).

The mean score for application outcomes was 4.64 (SD=.54). These scores ranged from a minimum of 3.2 to a maximum of 5.0. Five students (12%) received a score below 4 (good).

Ninety-four percent of students enrolled provided a list of 5 experiences that characterized their practicum. Fifty-three percent specifically mentioned that their practicum experiences either confirmed or refined their career goals. Only three students rejected a psychology related career goal as a result of the practicum. Thirty-two percent mentioned at least one specific skill they acquired and over 90% mentioned gaining at least one new important insight into the professional and personal requirements for applied work.

Assessment Procedures - Graduate

A. Outcomes Assessed.

In March, 2005, the Psychology Department faculty agreed on a set of 10 learning goals for graduate students. The goals were derived from guidelines for graduate training developed by the American Psychological Association, and were revised and expanded by the faculty to better suit the aims of our graduate programs. Outcomes
were assessed to address each of these goals. Specifically, learning outcomes were assessed in the following domains: 1. expertise in theory and content, 2. expertise in research methods, 3. application of psychological principles in professional activities, 4. communication and collaboration skills, 5. critical thinking skills, 6. personal development, 7. information and technology literacy, 8. ethics and values, 9. sociocultural awareness, and 10. career planning and development. See Attachment A for a description of each of the learning goals and representative skills.

B. Elements of Assessment.

For each learning goal, a set of from 4 to 12 assessment strategies was specified. Across the various outcomes, the elements of assessment include student performance (grades) in course work relevant to each goal, student progress and performance on master’s theses and doctoral dissertations, faculty evaluations of general exams completed usually in the third year of graduate study, yearly faculty reviews of each student as summarized in faculty ratings (clinical program only) and yearly evaluation letters, semester evaluations of practicum performance by practicum supervisors and, for graduate students who taught courses, teaching portfolios and student course evaluations.

C. Data Collection.

Course grades are available on-line through university records. The assistant director of graduate studies maintains a database to track the completion of major milestones, including proposal and defense of the masters thesis and dissertation, and completion of the general exam and the outcome (pass/fail). The database is updated on an ongoing basis as milestones are achieved. The assistant director also keeps records on any student placed on academic probation by the college for poor grades. Yearly faculty reviews of each student are completed during the fall semester. For students enrolled in the clinical program (approximately 50% of all graduate students), ratings are solicited from all faculty members for every student the faculty member has supervised during the year. The ratings are completed by course instructors, supervisors of graduate assistantships, teaching supervisors, graduate advisors who direct masters theses and dissertations, thesis and dissertation committee members, practicum supervisors, and general exam committee members. The ratings are made in any of four content areas, including academic performance, research-scholarship, clinical skills, and professionalism. The ratings are given on a six-point scale from 1 = poor to 6 = exceptional. Faculty members also make written comments about the student. For students in programs other than clinical, evaluative comments are gathered from faculty members in program-area faculty meetings. In all programs, these data are summarized in a yearly evaluation letter kept in the student files, with a copy distributed to the student. Clinical students who are enrolled in practicum also received written evaluations by the supervisor each semester, which are kept on file by the clinical program and reviewed by the faculty are part of the yearly review process. Graduate students who teach courses enroll in a teaching practicum seminar.
(PSYC 9960A/B), for which they submit teaching portfolios that are evaluated by the course instructor. Also, student course evaluations are obtained for all courses.

D. Data Analysis.

The data were compiled and summarized by the assistant director and director of graduate studies, into a chart listing the assessment methods, criteria, and outcomes for each learning goal. This chart is Attachment B. The criterion for success for course grades is a grade of B or better, or S. For the completion of masters theses, dissertations, and general exams, the percent of students who passed was calculated. In addition, at the beginning of the fall term, the graduate program committee reviews the progress of all graduate students to identify students who are not meeting progress guidelines for completing these milestones as stipulated in the graduate program handbook. These students are placed on probation and required to develop a plan for the completion of the milestone in a timely manner. The number of students placed on probation by the committee was used as a second outcome criterion for these milestones. The yearly evaluation ratings were examined to determine the percent of students who obtained ratings of at least 4 = very good for each of the four domains evaluated. The yearly faculty review evaluation letters were reviewed by the graduate program director to identify students who were seen as having significant problems in relations to each of the learning outcomes. This review also identified the number of students who were commended for giving presentations at professional conferences and for publishing articles or book chapters during the prior year. The graduate program director also reviewed all teaching course evaluations to identify students with significant problems.

II. Achievement of Departmental Objectives for Students

A. Undergraduate

PSYC 1101 Introduction to Psychology: Outcomes A1-A2

Our goal was for students to answer 70% of the mastery questions correctly. Between 51-60% of students met this goal, depending on the semester they took the course.

PSYC 3010 Psychological Statistics: Outcomes B1-B4 & E1-E2

The findings are mixed. Students approached but did not quite meet the goal of 75% correct on the multiple choice questions and the post-test questions. However, students’ improvement from pre-test to post-test was double the department’s goal of 15%.

PSYC 3030 Principles and Methods of Psychological Investigation: Outcomes B1-B4, C1, D, E1-E2 & G
The goal was to demonstrate a significant improvement in formal written communication in a discipline-specific style over the semester. This goal was met for both the Fall 2004 and Spring 2005 terms.

**PSYC 3110 Psychology of Interpersonal Behavior: Outcomes D2, F1-F3 & H1**

The results of this evaluation of the effectiveness of PSYC 3110 are mixed. On the one hand, the pre- and post-test self-report data suggest that by the end of the course, students judge that their communication skills have significantly improved. On the other hand, the behavioral data imply that at the end of the course, 20-30% of students do not demonstrate criterion level interpersonal skills. Approximately 80% reached criterion for talking skills, and fewer (approximately 70%) for listening skills. Although the majority of the students performed at criterion in these domains, it was anticipated that 90% or more of the students would have done so. Of note is that one of the instructors whose section was included in the behavioral evaluation reported that he or she devoted little class time to the communication exercises. This was at variance with the curriculum plan for PSYC 3110. Predictably, his or her section performed poorly. When data from this section were dropped from the analyses, the percentages of students obtaining criterion for listening and talking skills increased to 78.60% and 88.40%, respectively.

**PSYC 4760 Research Practicum: OUTCOMES B, D, E, G, H, J**

The results of this assessment were mixed. For outcome H (values/professional development), 98% of students met the criterion of an evaluation from the supervisor of at least **good**, exceeding the goal of 90%. The criterion was not met for outcomes B, D, E, or G (research related outcomes). Only 82% were evaluated as at least **good**. The criterion that 90% of students confirm or refine their career goals was not met.

**PSYC 4770 Applied Practicum: OUTCOMES A, C, H, I, & J**

The results of this assessment are generally positive. The criteria set for 90% of student to be evaluated as at least **good** was met with respect to outcome H (values/professional development). Ninety-one percent of students met this criterion. The criterion was not met for outcomes A, C, & I (application outcomes). However, 88% were evaluated as at least **good**, falling just short of the criterion.

**B. Graduate**

The objectives are that all students will show criterion performance or expected progress in all learning outcome domains. The data indicate that the objectives were generally achieved in all domains. With one or two exceptions, all students passed all courses, the vast majority received satisfactory ratings for academic performance in course relevant to all 10 learning outcomes, over 75% completed theses, dissertations, and general exams on time, and all who completed the milestones received passing evaluations. The outcomes are particularly favorable in theory and content (Domain 1), research methods (Domain 2), critical thinking skills (Domain 5), information and technology literacy (Domain 7), values in psychology (Domain 8), and sociocultural and international awareness (Domain 9). The outcomes for application (Domain 3) indicate that 15% of the clinical students obtained at least one rating below “very
good” for clinical skills. However, since these evaluations are conducted as part of ongoing monitoring during the course of skill development rather than as final evaluations of ultimate success, it should be expected that fewer than 100% of the students would reach criterion. Similarly, regarding personal development (Domain 6), the fact that 18% of the clinical students obtained at least one rating below criterion may be acceptable for skills that are expected to show continuous development during the course of graduate training. Outcomes for communication and collaboration skills (Domain 4), and career planning and development (Domain 10), are difficult to evaluate because of ambiguity in interpreting the data regarding professional presentations and publications. It is likely that the data are incomplete because faculty may have neglected to report these data in the yearly evaluation letters. Also, since a target level of involvement was not specified in our goals, it is unclear whether involvement in presentations by two-thirds of the graduate students, and publication by nearly half during one year is a satisfactory outcome.

III. Changes to Procedures or Curriculum Based on Assessment
A. Undergraduate

**PSYC 1101 Introduction to Psychology: Outcomes A1-A2**
Although a majority of PSYC 1101 students are able to answer 70% or more of the mastery test questions correctly at the end of the term, 40-49% of our students are still not realizing this goal. For the upcoming year, mastery test questions that 50% or fewer got right will be reviewed for possible revision or replacement. Particular attention will be given to insuring the quality and clarity of questions involving application of concepts in novel situations; these seem to present the greatest challenge for students in this course. Instructors for PSYC 1101 in 2005-06 will be provided with these results. The course supervisor will work with a team of instructors to develop and disseminate strategies for increasing students’ ability to apply and generalize key concepts.

**PSYC 3010 Psychological Statistics: Outcomes B1-B4 & E1-E2**
Based on the findings, slight changes will be made to the curriculum and procedures. For the few multiple choice questions on which fewer than 50% of students received a correct score, reworded questions assessing those constructs will be written, and instructors will be alerted of students’ difficulty with those constructs. Additionally, the post-test questions will be integrated into the in-class and final exams rather than being administered separately on the last day of class. Anecdotal evidence suggests that many students did not put much effort into the post-test because it did not contribute to their course grade. Finally, instructors will be asked to include students’ course grades in their data files so that results can be stratified based on whether students passed (a grade of at least C) the course.

**PSYC 3030 Principles and Methods of Psychological Investigation: Outcomes B1-B4, C1, D, E1-E2 & G**
The structure and result of the current assessment is satisfactory. However, in light of departmental intentions to increase the size of each section to 50-75 students, some modifications to the assessment strategy are likely to be necessary. During 2005-
2006, an effort will be made to increase the number of students whose work is assessed and to distribute the responsibility for this assessment across multiple individuals. In order to increase the number of students’ whose work is assessed by at least two-fold, fewer elements of each assignment will be assessed and the rating scale will be compressed from 1-5 to 0-2.

**PSYC 3110 Psychology of Interpersonal Behavior: Outcomes D2, F1-F3 & H1**

Although the inclusion of both self-report and behavioral ratings of interpersonal competence are strengths of this assessment, interpretations of the findings are only suggestive in the absence of baseline behavioral ratings to allow for assessment of change over the course of the semester, and/or control of such potentially confounding variables as time and attention. Further evaluation of outcomes for PSYC 3110 should incorporate additional measures of these types of data. The curriculum should be reviewed to identify strategies to place greater emphasis on the acquisition of interpersonal skills, particularly in the listening domain.

**PSYC 4760 Research Practicum: OUTCOMES B, D, E, G, H, J**

1) Encourage research supervisors to use evaluation instrument to conduct mid-semester evaluations as a way of providing feedback to students regarding strengths and weaknesses and setting individualized goals.

2) Refine evaluation instrument to align more closely with specific outcomes.

3) Ask a specific question about whether the practicum experience assisted the student in confirming or refining career goals.

4) Improve compliance with evaluation by faculty to 100%

5) Improve compliance with self-assessment by students to 100%

**PSYC 4770 Applied Practicum: OUTCOMES A, C, H, I, & J**

1) Encourage field supervisors to use evaluation instrument to conduct mid-semester evaluations as a way of providing feedback to students regarding strengths and weaknesses and setting individualized goals.

2) Refine evaluation instrument to align more closely with specific outcomes.

3) Ask a specific question about whether the practicum experience assisted the student in confirming or refining career goals.

4) Improve compliance with evaluation by field supervisors to 100%

4) Improve compliance with self-assessment by students to 100%

**B. Graduate**

One change to the assessment procedure will be the development and use of a set of performance rating scales to be completed by faculty committee members to rate students’ attainment of learning outcomes with regard to theses, dissertations, and general exams. The rating scales will ask the faculty to evaluate the student in each
of the relevant domains of learning outcomes. In order to collect more accurate data on the number of professional presentations and publications by graduate students, we will require students to turn in a report of their professional accomplishments in a standardized electronic format at the end of the next academic year. Other changes to the assessment procedures may be developed after the review of this first year of data by the graduate program committee during the fall 2005 semester. Changes in curriculum are instigated by the faculty in an ongoing fashion based on a variety of considerations. Since this is the first year of for compiling data on learning outcomes, there have been no curriculum changes based specifically on this assessment. During the 2005-06 academic year the data will be shared with the faculty in departmental faculty meetings, program area faculty meetings, and graduate program committee meetings, for possible use in making future curriculum changes.

IV. Changes to Department’s Assessment Goals

A. Undergraduate

PSYC 1101 Introduction to Psychology: Outcomes A1-A2
No change in goals is anticipated.

PSYC 3010 Psychological Statistics: Outcomes B1-B4 & E1-E2
Criteria for learning will be revised to focus more on change over the semester than on absolute percentage correct.

PSYC 3030 Principles and Methods of Psychological Investigation: Outcomes B1-B4, C1, D, E1-E2 & G
No change in goals is anticipated.

PSYC 3110 Psychology of Interpersonal Behavior: Outcomes D2, F1-F3 & H
In the future, the evaluation design should assess PSYC 3110 students’ acquisition of not only applied skills, but also key concepts and empirical findings in interpersonal psychology.

PSYC 4760 Research Practicum: OUTCOMES B, D, E, G, H, J
No change in goals is anticipated.

PSYC 4770 Applied Practicum: OUTCOMES A, C, H, I, & J
No change in goals is anticipated.

B. Graduate

Because these data from the first assessment cycle have not yet been processed and discussed by the faculty, there are not yet any changes in the department’s assessment goals. Appropriate changes may be identified in the coming academic through review of these first-year data. One topic for discussion will be departmental expectations for presentations and publications for students in our graduate program.
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<th>Assessment Method</th>
<th>Criterion</th>
<th>Outcome</th>
</tr>
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**II. Research Methods**

<p>| Performance in Psyc 8410 &amp; 8420 - Psychological Statistics I &amp; II | % passed (B or better) | 100%   |
| Performance in Psyc 9900 | % passed (B or better) | 100%   |</p>
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<td>IV. Communication and Collaboration Skills</td>
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<td>Goal</td>
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<tr>
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<td># students placed on probation for late thesis</td>
<td>n = 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% theses accepted by committee</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissertation (Proposal) - Evaluated by faculty committee and defended orally in committee</td>
<td># dissertations proposed</td>
<td>n = 14</td>
<td></td>
</tr>
<tr>
<td>Goal</td>
<td>Assessment Method</td>
<td>Criterion</td>
<td>Outcome</td>
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<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Goal Assessment Method</td>
<td></td>
<td># students placed on probation for late proposal n = 5 % proposals accepted by committee 100%</td>
<td></td>
</tr>
<tr>
<td>Dissertation (Final Document) -</td>
<td>Evaluated by faculty committee and defended orally in committee meeting</td>
<td># dissertations completed n = 16 # students placed on probation for late dissertation n = 2 % dissertations accepted by committee 100%</td>
<td></td>
</tr>
<tr>
<td>Faculty evaluation of teaching, including review of course evaluations and teaching portfolio</td>
<td>% passed (grade = S) teaching practicum (PSYC 9960A/B) 100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratings and written evaluations by practicum supervisors completed each semester</td>
<td>% with Professionalism ratings of &quot;very good&quot; or better (clinical students only, N=61) 82%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratings and written evaluations by departmental faculty during yearly review</td>
<td>% of students identified with significant problems n = 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI. Personal Development</td>
<td>Faculty evaluation of teaching, including review of course evaluations and teaching portfolio Ratings and written evaluations by practicum supervisors completed each semester</td>
<td>% passed (grade = S) teaching practicum (PSYC 9960A/B) 100%</td>
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</tr>
<tr>
<td>Ratings and written evaluations by departmental faculty during yearly review</td>
<td>% passed (grade = S) 99%</td>
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<tr>
<td>Ratings and written evaluations by departmental faculty during yearly review</td>
<td>Faculty evaluation of teaching, including review of course evaluations and teaching portfolio Ratings and written evaluations by practicum supervisors completed each semester</td>
<td>% passed (grade = S) 99%</td>
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<tr>
<td>Goal</td>
<td>Assessment Method</td>
<td>Criterion</td>
<td>Outcome</td>
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</tr>
<tr>
<td>VII. Information and Technology Literacy</td>
<td>Ratings and written evaluations by departmental faculty during yearly review</td>
<td># of students identified with significant problems</td>
<td>n = 0</td>
</tr>
<tr>
<td></td>
<td>Masters Thesis (Proposal) - Evaluated by faculty committee and defended orally in committee meeting</td>
<td># theses proposed</td>
<td>n = 14</td>
</tr>
<tr>
<td></td>
<td></td>
<td># students placed on probation for late proposal</td>
<td>n = 4</td>
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<td></td>
<td></td>
<td>% proposals accepted by committee</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Masters Thesis (Final Document) - Evaluated by faculty committee and defended orally in committee meeting</td>
<td># theses completed</td>
<td>n = 14</td>
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<td></td>
<td># students placed on probation for late thesis</td>
<td>n = 4</td>
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<td></td>
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<td>% theses accepted by committee</td>
<td>100%</td>
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<td></td>
<td>Dissertation (Proposal) - Evaluated by faculty committee and defended orally in committee meeting</td>
<td># dissertations proposed</td>
<td>n = 14</td>
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<tr>
<td></td>
<td></td>
<td># students placed on probation for late proposal</td>
<td>n = 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% proposals accepted by committee</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Dissertation (Final Document) - Evaluated by faculty committee and defended orally in committee meeting</td>
<td># dissertations completed</td>
<td>n = 16</td>
</tr>
<tr>
<td></td>
<td></td>
<td># students placed on probation for late dissertation</td>
<td>n = 2</td>
</tr>
<tr>
<td>Goal</td>
<td>Assessment Method</td>
<td>Criterion</td>
<td>Outcome</td>
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</tr>
<tr>
<td>VIII. Values in Psychology</td>
<td>Performance in Psyc 8490 - Scientific and Professional Ethics in Psychology</td>
<td>% dissertations accepted by committee</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>General Exam (Written) - Scored by committee of faculty</td>
<td>% passed (B or better)</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>General Exam (Oral defense) - Conducted by committee of faculty</td>
<td>% passed</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Masters Thesis (Proposal) - Evaluated by faculty committee and defended orally in</td>
<td>% passed</td>
<td>100%</td>
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<tr>
<td></td>
<td>committee meeting</td>
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<tr>
<td></td>
<td>Masters Thesis (Final Document) - Evaluated by faculty committee and defended</td>
<td></td>
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<td></td>
<td>orally in committee meeting</td>
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<tr>
<td></td>
<td># theses proposed</td>
<td>n = 14</td>
<td></td>
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<td></td>
<td># students placed on probation for late proposal</td>
<td>n = 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% proposals accepted by committee</td>
<td>100%</td>
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<td></td>
<td>Dissertation (Proposal) - Evaluated by faculty committee and defended orally in</td>
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<td>committee meeting</td>
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<td># dissertations proposed</td>
<td>n = 14</td>
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<td></td>
<td># students placed on probation for late proposal</td>
<td>n = 5</td>
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<tr>
<td></td>
<td>% proposals accepted by committee</td>
<td>100%</td>
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<tr>
<td>Goal</td>
<td>Assessment Method</td>
<td>Criterion</td>
<td>Outcome</td>
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</tr>
<tr>
<td>Dissertation (Final Document) - Evaluated by faculty committee and defended orally in committee meeting</td>
<td># dissertations completed&lt;br&gt;# students placed on probation for late dissertation&lt;br&gt;% dissertations accepted by committee</td>
<td>n = 16&lt;br&gt;n = 2&lt;br&gt;100%</td>
<td></td>
</tr>
<tr>
<td>Faculty evaluation of teaching, including review of course evaluations and teaching portfolio</td>
<td>% passed (grade = S) teaching practicum (PSYC 9960A/B)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Ratings and written evaluations by practicum supervisors completed each semester</td>
<td>% passed (grade = S)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>IX. Sociocultural and International Awareness</td>
<td>Performance in Psyc 8050 - Issues of Human Diversity in Psychology</td>
<td>% passed (B or better)</td>
<td>100%</td>
</tr>
<tr>
<td>Ratings and written evaluations by department faculty during yearly review, especially relevant to experiences in applied research, intervention, and consultation with special populations</td>
<td># of students identified with significant problems</td>
<td>n = 0</td>
<td></td>
</tr>
<tr>
<td>Performance in required and elective courses with emphasis on socio-demographic, cross-cultural and contextual influences on human behavior</td>
<td>% passed (B or better)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>General Exam (Written) - Scored by committee of faculty</td>
<td>% passed</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Goal</td>
<td>Assessment Method</td>
<td>Criterion</td>
<td>Outcome</td>
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<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
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</tr>
<tr>
<td>General Exam (Oral defense)</td>
<td>Conducted by committee of faculty</td>
<td>% passed</td>
<td>100%</td>
</tr>
<tr>
<td>Supervisor evaluations of practicum</td>
<td>performance in settings that provide experience with diverse American or global</td>
<td>% passed (grade = S)</td>
<td>100%</td>
</tr>
<tr>
<td>population groups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students who gave presentations at</td>
<td>regional, national, international conferences</td>
<td>% noted in evaluation letters</td>
<td>68%</td>
</tr>
<tr>
<td>Student who published or submitted papers</td>
<td>in peer reviewed journals, invited chapters</td>
<td>% noted in evaluation letters</td>
<td>45%</td>
</tr>
<tr>
<td>Faculty evaluation of teaching, including</td>
<td>review of course evaluations and teaching portfolio</td>
<td>% passed (grade = S) teaching practicum</td>
<td>100%</td>
</tr>
<tr>
<td>Rating and written evaluations by</td>
<td>departmental faculty during yearly review</td>
<td># of students identified with significant problems (encouraged to publish)</td>
<td>n = 6</td>
</tr>
<tr>
<td>X. Career Planning and Development</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix D2: Current course syllabi for all approved Writing Intensive courses

Principles and Methods of Psychological Investigation
PSYC 3030 (#12195) Spring 2005
CLASS: Tuesday/Thursday * 1:00 – 2:15 p.m. * 424 Sparks Hall
LAB: Tuesday * 2:30 – 4:30 p.m. * 1014 Urban Life

Instructor Dr. Kim Darnell
Office Hours Walk-in Hours: Th 2:30 – 4:30 p.m.
Office 1138 Urban Life Building Appointments: W only

Prerequisites PSYC 3010 completed with a grade of C or better (no exceptions)

Course Description This course introduces the psychology major to research design, data analysis, and report writing as practiced by professional psychologists of all specialties. It provides the basis for a higher level of understanding of advanced courses, the development and writing of honors theses, and graduate study.

This course has a class and laboratory. Classes and lab meetings will include lecture with discussion and in-class projects. Labs also require class participation in the design studies, collection of data, and analysis of data. As a part of the lab, each student will also develop familiarity the style of the American Psychological Association and practice writing in that style.

Course Goals After completing this course, you should be able to:
❖ identify and use the basic terminology of psychological research design
❖ describe the scientific method and explain the advantages of using the scientific method to explore psychological phenomena
❖ describe and apply the ethical guidelines for the development, conduct, and presentation of psychological research
❖ name and explain different research designs and state the advantages and disadvantages of each
❖ evaluate the methodology and design of published psychological research
❖ use library resources like PsycINFO to find references for a topic in psychology
❖ develop and conduct an original psychological research project in collaboration with other members of the class
❖ analyze novel data sets using SPSS and provide a reasonable interpretation of the findings
❖ present research findings in a scientific report according to the guidelines of APA style

Writing Across the Curriculum PSYC 3030 is a Writing Across the Curriculum course. In practical terms, this means that a variety of writing assignments will be used in-class and out-of-class to help you learn new material, integrate new material with previous
experiences, and communicate what it is that you know -- or don't know. Writing assignments in this course can generally be broken down into two categories:

**Writing to Learn** – Writing to Learn (WTL) assignments are those that are designed to help you process material, discover what you do and don’t understand, and describe your learning in a personal way. The primary audience for WTL audiences is you and, in some cases, other members of the class. This is a less formal type of writing; your effort should focus on expressing your thoughts rather than on style or grammar. Many WTL assignments will be submitted electronically via your Web Journal or handwritten in class.

**Writing to Communicate** – Writing to Communicate (WTC) assignments involve crafting your knowledge for a formal audience. In class, this audience will generally be Sheridan or me, but in the real world, this means people beyond the classroom who are interested in psychological research. Because this type of writing is formal and is intended to share your knowledge with others in the field, you must pay special attention to the writing style, organization, grammar, and content of these kinds of assignments. Unless otherwise specified, WTC assignments must

- be submitted both in hardcopy and on a disk (.doc format ONLY)
- be in essay format, including proper use of paragraphs and paragraph structure
- be typed, double-spaced, and proofread for grammar and spelling
- have 1” margins and utilize a 12-point Times or Times Roman font

All writing assignments will be assessed according to relevant criteria, which may vary from assignment to assignment. If at any time you feel as if you need more information about how to complete a writing assignment, its purpose, or how it will be assessed, please feel free to contact me.

**Required Texts**


If an activity or assignment requires that you have one or more of these books in class and you fail to bring it with you, you may receive a 0 for the assignment. Do not depend on your classmates to bring their books and share with you.

**Additional**

In addition to the basic materials needed for any college course,
Materials

**you must have:**
- two (2) standard floppy disks formatted for the PC. These discs should be dedicated to this class (i.e., do not put material from other classes on them)
- two (2) manila envelopes
- access to a stapler
- access to relevant technology, including the internet, Microsoft Word/PowerPoint/Excel, software for reading digital images (e.g., Photoshop) and audio files (e.g., RealPlayer), Adobe Acrobat Reader, etc.

Also recommended (but not required) for this course:
- graph paper
- basic calculator (non-programmable)
- a three-ring binder dedicated to this course
- access to a three-hole punch

WebCT

This course has a companion WebCT site. The site includes an on-line version of the syllabus, materials related to in-class activities, and handouts that you can download. The site also has email, bulletin board, and chatroom features for discussion and presentation of class material.

You are responsible for checking WebCT on a regular basis and for contributing to on-line activities there that are related to this course. If you are having trouble logging onto the site, please see me immediately. You should have accessed the site and posted a self-introduction to the bulletin board no later than the Friday of the first week of class.

The URL for WebCT courses at GSU is

[http://webct.gsu.edu](http://webct.gsu.edu)

If you have never used WebCT before, you can get started by going to:

[http://www.student.gsu.edu/webct/started.html](http://www.student.gsu.edu/webct/started.html)

Email Policies and Procedures

**WebCT Email.** Because of the large amount of email that I receive at my GSU email account, I require that you send me email messages related to this course via the WebCT email feature on our course website. I will check the course email regularly and respond within two business days. Please be aware that I do not check work-related communications outside of regular business hours.

**GSU Email.** As of Fall 2002, all GSU students are required to activate and monitor their university e-mail accounts. Your student.gsu.edu account is the medium through which GSU distributes announcements and other information to you, and you are responsible for any and all school-related information sent to this account -- whether you actually read the messages or not. If you have
any questions about how to activate or use your free university account, go to:

http://www.student.gsu.edu/network/email.html

It is your responsibility to check your GSU email account regularly to make sure that your account is working properly and your inbox is not full. You can forward the contents of your GSU email account to an off-campus, commercial account (e.g., AOL, gmail). Be aware, however, that sending messages to GSU accounts from off-campus accounts may result in your messages being identified as potential viruses or SPAM; such messages are regularly tagged and deleted without even being read. Most campus folks, including me, disavow themselves of responsibility for unsolicited messages or content that is sent to them from unknown email accounts. If you must send me email outside of WebCT, use your GSU student email account.

My GSU email address is kimad@gsu.edu. You may send email to this address in the event that:
   a) WebCT is down;
   b) your post to WebCT has gone unanswered for more than two business days;
   c) you need to send or CC a message to me and another member of the GSU community who is not in our class;
   d) you are trying to contact me at some point after the semester is over.

Examinations

Regular Exams. There will be three regular exams, each worth 100 points. Each exam will cover material addressed since the last exam. Exams will consist of fill-in-the-blank, multiple choice, short answer, and essay questions. Collaborating on exams is not allowed.

There are no make up exams in this class. Your lowest regular exam score will be dropped and replaced with your reading quiz score, if the reading quiz score is higher. Should you miss an exam, the reading quiz score will automatically replace the 0 you would have earned.

Final Exam. The final exam in this course is cumulative and will resemble the regular exams in structure and length. It will be administered in our regular classroom during the final exam period. A complete final exam schedule for this term is available online from the Office of the Registrar:

http://www.gsu.edu/registrar/what_we_do_spring_exam_schedule.htm

The final exam can only be taken at the scheduled time. You may not take it early, make it up, or replace the score with your reading quiz points. Should you miss the final exam for any reason, you will earn a 0 for that exam and your final grade will be calculated accordingly. The final exam is worth up to 100 points toward your final grade.
Reading Quizzes

To encourage you to stay current on the readings for the course, I will periodically give quizzes in lecture related to assigned readings. These quizzes will focus on basic vocabulary and concepts. In some cases, you will be able to use reference materials (e.g., the APA manual) to complete your quiz. Your reading quiz score may contribute up to 100 points toward your final grade. Specifically, I will exchange your total score for all reading quizzes for your lowest regular exam score, if the quiz score is higher. If you miss a regular exam, your total reading quiz score will automatically be substituted for the missing exam score. In the event that take all three regular exams and your quiz total is lower than any of those three scores, the quiz score will be ignored during the calculation of your final grade.

Web Journal

The WebCT bulletin board functions as a reasonable simile of an online journal: individuals can post their thoughts and discoveries related to the course content; others in the community can respond to the posts and share any insight, experiences, and other thoughts they have regarding the post’s content. This forum also makes it easy for members of the class to share psychology-related weblinks and files (e.g., songs, pictures) that they come across.

Both quality and quantity are valued in web journaling. You are encouraged to post to your web journal and our web community as often as you have something interesting to say. At a minimum, you must initiate one new thread per week and join (make substantive comments in) one thread that you did not initiate. In some cases, I will give you a Web Journal assignment that must be completed by a particular deadline. These journaling assignments will be announced in class and/or on WebCT at least one week prior to their due dates. Your web journal activities are worth up to 100 points toward your final grade.

When making a journal post, make sure you follow the guidelines regarding content listed below. Failure to do so may result in penalties being assessed against your final grade in the course.

- the content must be obviously related to the course material
- the content should warrant and encourage discussion from others
- most folks shouldn’t have seen the content before (new is good!)
- content of associated weblinks and files must be “appropriate” for the class environment and come from reputable sources
- subject lines for posts should be clear and short
- keep threads simple; if the discussion begins to deviate from the topic of the original post, a new thread with a new subject line should be started
- don't troll (i.e., post inflammatory things for the sole purpose of getting others to argue with you or each other)
- show the same respect for others' posts and opinions as you yourself would like to be afforded
Article Critique

Throughout the term you will read peer-reviewed articles from various areas of psychological research. You will write a 2-3 page guided critique of one of these articles and continue to revise and resubmit the critique until it is evaluated as A-quality work or you have completed three drafts, whichever comes first. The article critique is worth up to 50 points toward your final grade.

Research Project

Report writing is a form of technical writing, and psychologists generally write reports using APA style. This style focuses on communicating scientific information in a clear, concise way to other researchers in the discipline. By the end of the course, you will have generated a complete APA style research report about data you have collected. This paper is considered the major product of the lab portion of the course and will be graded on content, style, and overall quality given your stage of development as a psychological researcher. The final draft of your research paper is worth 100 points.

Lab Activities

During each lab meeting, you will work on some activity related to the formal presentation of psychological research. These activities include, but are not restricted to: learning how to find and recognize appropriate peer-reviewed journal articles in the library; identifying the aspects of a formal research report; crafting portions of a research report; and learning to do data entry and data analysis on the computer. Some activities will be completed during lab; others will require you to do work outside of lab, then return with your results. Lab assignments are graded mostly on effort (Did you do the assignment according to the instructions and complete it on time?), although some weight will be placed on quality (Did you do a reasonable job given that you are at least a college junior and a psychology major?). If you complete an assignment on time you will always get at least half credit. You can earn up to 100 points toward your final grade through lab activities.

Preparation and Participation

In addition to attending class, you are expected to have completed all preparatory assignments for the day’s topic. These assignments may be provided in the syllabus, given in a previous class, or announced through WebCT. All class members are expected to actively participate in class discussions and activities. Any student who demonstrates a pattern of poor preparation or participation will have penalties assessed against his/her an initial “p-score” of 50 points. Point deductions will occur in 5-point increments; the maximum penalty is 50 points for the semester.

Grading Scale

Your final grade will be based on total points earned out of 800 possible points according to the following scale:

- 800-720 100-90% A
<table>
<thead>
<tr>
<th>Score Range</th>
<th>Percentage Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>719-640</td>
<td>89-80%</td>
<td>B</td>
</tr>
<tr>
<td>639-560</td>
<td>79-70%</td>
<td>C</td>
</tr>
<tr>
<td>559-480</td>
<td>69-60%</td>
<td>D</td>
</tr>
<tr>
<td>479-below</td>
<td>59-0%</td>
<td>F</td>
</tr>
</tbody>
</table>
ASSIGNMENT | POINTS POSSIBLE
---|---
Exam 1 | 100
Exam 2 | 100
Exam 3 | 100
Web Journal | 100
Article Critique* | 50
Research Project* | 100
Lab Activities | 100
Final Exam | 100
Participation | 50
TOTAL | 800 pts

*WTC assignments (may require documented writing assistance)

Your overall reading quiz score can be substituted for any one of your three regular exam scores. If you miss an exam, the substitution is automatic.

The points you earn determine the grade you receive. You must earn the minimum number of points for a letter grade in order to receive that letter grade for the course. I do not use rounding when assigning letter grades at the end of the term. Asking for special consideration regarding your final grade will only result in both of us being disappointed.

It is your responsibility to keep track of your grade at any given point in the course. If you have any questions at any time concerning your grade, please do not hesitate to talk to me. Federal guidelines prevent me from discussing specific grades or grading issues over any potentially unsecured channel (e.g., telephone, email). If you have an issue with a grade, you must speak to me in person.

**Writing Standards**

At this point in your college career, you should already have good command of essay and report writing skills, as well as some familiarity with ethical research and citation techniques. In this course we will build on these skills and develop your ability to write about scientific topics in a manner that is consistent with the dominant style and the ethical standards in the field of psychology.

In some cases, students need help with the fundamental writing skills that serve as the foundation of APA style and other scientific communication. Although Sheridan and I can both give feedback in this regard, we cannot spend a lot of time assisting students with basic writing issues – there is just too much other material that we have to cover. This doesn’t mean that addressing these issues isn’t a priority, it just means it isn’t *our* priority. Rather, we expect students with these kinds of concerns to prepare assignments sufficiently in advance to get feedback on them from one of the consultants at the GSU Writing Studio (see below) and make revisions as necessary *before* these assignments are turned in to us for grading.

If you submit a WTC assignment that falls below the writing standards
necessary to succeed in this course (i.e., below 70%), I will then require that you receive documented writing assistance (DWA) on all future WTC assignments. DWA involves working with a consultant at the Writing Studio on at least one rough draft of each WTC assignments and securing signed and dated documentation from the consultant. In order to receive credit for any WTC assignment, you must submit the rough draft (with comments on it) and DWA documentation, along with the final version. Otherwise, the assignment will be returned without a grade and you will not earn any credit.

The Writing Studio

All PSYC 3030 students are encouraged to visit the GSU Writing Studio as they prepare WTC assignments for this course. The Writing Studio is a tutoring service open to all GSU students that is staffed by faculty and graduate students in the Department of English. Information about how to schedule an appointment with a Writing Studio consultant, along with their location and hours, is available on their website:

http://www.gsu.edu/~wwweng/services/center.html
**Scientific Writing and Plagiarism**

As part of your training in this course, you will learn about the standards for ethical conduct defined by the American Psychological Association (APA). The writing intensive nature of PSYC 3030 demands that I highlight one of these standards here. That is, when writing research reports or other “official” documents (e.g., any assignment submitted for points), you cannot use the structure or the wording generated by another person without giving him/her proper credit. What makes this standard especially challenging for students is that -- in contrast to styles used in other academic disciplines (e.g., MLA, Chicago) -- APA style actively discourages quoting. Instead, scientific writers summarize and paraphrase the original work in their own words, then provide an appropriate citation in the text to indicate the where the original ideas for the content came from. Doing this effectively, without infringing on the intellectual property rights of the original author, requires practice and conscious effort. It is, however, a skill that you can master.

The reality is that you *will* use material created by others as the basis for your own writing in this class. When you do, following the rules below will minimize the likelihood that you will plagiarize your sources:

1. Do not use the sentence structure or paragraph structure of the original author and just change words.

2. Do not take phrases or chunks of words from the original and stick them in your own sentence(s). Sentences in your work shouldn't map up with sentences in the original.

It is much better NOT to turn in sloppy scientific writing and get a 0 than to turn in sloppy scientific writing and get written up on charges of academic misconduct – that earns you a 0 AND the agony that is my professional academic wrath AND a mark on your academic record.

**Late Work**

Work that is not turned in (and in the *appropriate format*) within the first five minutes of class on the day that the assignment is due will be considered late. Assignments that are turned in late during the class period -- including those that are turned in to my mailbox -- will receive an automatic 10% deduction. After the class has ended, late assignments will only be considered when accompanied by a late-work petition.

A late-work petition includes a *typewritten* explanation of why the assignment is late and copies of any supporting official materials. Official documents must have the date, the name of the issuing party (e.g., your physician), and a contact phone number. They must also clearly indicate that you were *unable* to submit
the assignment on the regular date at the regular time, according to some relevant authority. (As an example, a bill from a physician’s office showing that you were there around the time of an exam is not enough to warrant the approval of your petition. You must have a signed note from the physician saying that you were hospitalized or ordered to stay home from school and work on the day the assignment was due because of your physical or mental condition.) Elective medical or dental appointments are never excused.

All documentation relevant to your late-work petition must be given in person to me or to the receptionist at the Psychology main desk of the 11th floor of the Urban Life Building within 48 hours of when the assignment was due. (If you turn it in to the receptionist, be sure to have it time and date stamped, so I know when it was turned in.) If your documentation is late or incomplete, I will not accept it and your petition will not be considered. After assessing the evidence, I will notify you by e-mail as to whether your case warrants permitting late work. If it does not, you will receive a grade of 0 for the missed assignment. Assignments that are submitted late may not be eligible for full credit, even if the petition is approved.

I do not accept late-work petitions or supporting documentation by e-mail or FAX. You must show me the original paperwork for all supporting documentation, although you need only provide me with a copy to keep for my records. Falsification of materials related to makeup work is considered a violation of the Student Code of Conduct and will result in a minimum of a failing grade on the assignment for which the documentation was falsified.

Withdrawals

As stated in the Georgia State University General Catalog, you may receive a W for this course if you withdraw before the midpoint of the semester (March 4th) and are performing at a passing level. Otherwise, you will receive a WF. All withdrawals must be approved by the Office of the Dean of Students Services.
Disabling Conditions

Georgia State University complies with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Students with disabilities who seek academic accommodations must first take appropriate documentation to the Office of Disability Services located in Suite 230 of the New Student Center.

Any student who has a documented disabling condition that requires accommodations in this class or on assignments must provide the appropriate documentation from the Office of Disabled Student Services by the end of the first week of class. If your condition is identified during the semester, please see me as soon as possible after you have received the relevant supporting documentation so we can make arrangements to accommodate you for the remainder of the term.

Attendance

First Day Attendance. All students registered for a psychology course must attend the first day of class. Students who do not attend the first day of a class for which they have registered will be administratively dropped immediately from the course within one (1) business day. If a student must be absent, the absence must be excused according to standard university policy (i.e. illness, jury duty or court appearance, family death or emergency etc). Further, the student must notify the professor in writing by e-mail or phone by 4:00 pm on the first day of class indicating the reason for the absence. If the first class begins at 4:00 pm or later, the student must notify the professor in writing via e-mail or by phone before 12:00 pm the very next day. Seats that come open will be filled with waitlisted students according to priority status.

General Attendance. You are expected to attend class, arrive on time and leave only when I dismiss you. Students who demonstrate a pattern of late arrival or early departure from class will be considered in violation of the Board of Regents Policy on Disruptive Behavior (see the Classroom Behavior section, below). If you know that you will be late or have to leave early, please notify me in advance and get a confirmation from me.

If you are unable to attend a class, it is your responsibility to get notes from another student. I will not repeat content for absent students under any circumstances. However, if you have questions concerning a missed class that you are unable to answer yourself, please do not hesitate to contact me.

Veterans’ Attendance. The Department of Veterans Affairs requires that institutions of higher learning immediately report to them when a student discontinues attendance. Veterans who are receiving benefits to fund their education will be reported to the DVA if they do not attend class for a period of two weeks or more.
Academic Honesty

The Department of Psychology follows the University system policy on academic honesty that is published in On Campus: The Official Student Handbook. You may obtain a copy of this handbook from the Office of the Dean of Students, Room 300 Student Center, 404-463-9023, or you may download a PDF version from here:

http://www.gsu.edu/images/Downloadables/UndergraduateCatalog04-05.pdf

You are expected to know the University’s standards of academic honesty and are responsible for abiding by these standards. Lack of knowledge of these standards is not an acceptable defense for academic misconduct. A direct link to the Policy on Academic Honesty is provided below.

http://www2.gsu.edu/~wwwdos/codeofconduct_conpol.html#1

Acts of academic dishonesty include:

- **Plagiarism**: presenting another person's work as your own, whether or not doing so was intentional.
- **Cheating on examinations**: giving or receiving unauthorized help before, during, or after an examination
- **Unauthorized collaboration**: submitting academic work, whole or in part, as your individual effort when it has been developed in collaboration with another person or source
- **Falsification**: misrepresenting material or fabricating information in order to gain an unfair advantage over others
- **Multiple submissions**: submitting the same work, whole or in part, for credit more than once without the explicit consent of the faculty member(s) to whom the material is submitted

The penalty for academic misconduct in this course varies from a 0 on the assignment to a failing grade in the course, depending on the severity of the offense and the student’s history of academic conduct. Disciplinary action may be taken in addition to the academic penalty if the instructor, department, college, or university feels such action is warranted. All acts of academic dishonesty will be reported to the Chair of the Department of Psychology, the Director of Undergraduate Studies in Psychology, and the Dean of the College of Arts and Sciences.

All members of the University community, including students, faculty, and staff, are expected to report violations of academic conduct to the appropriate authorities. Failure to report academic misconduct of which you are aware reflects complicity with the misconduct. Such complicity may also result in an academic and/or disciplinary penalty.
**Classroom Behavior**

All students in this class are bound by the Student Code of Conduct and Policies as published by the Office of the Dean of Students. I encourage you to review your rights and responsibilities as outlined at the site linked below.

[http://www2.gsu.edu/~wwwdos/codeofconduct.html](http://www2.gsu.edu/~wwwdos/codeofconduct.html)

Disruptive Behavior. All members of the class are expected to treat each other in a respectful, civil manner – particularly when engaging in activities related to this course. Students who exhibit behaviors that I consider obstructive or disruptive to the class or its learning activities will be treated according to the Board of Regents Policy on Disruptive Behavior (see below). Disruptive students will first receive a verbal warning. Continued violations will result in the student being removed from the classroom, a meeting with the Chair of the Department of Psychology, and finally formal disciplinary action at the University level. In addition, any student who engages in disruptive behavior may be assessed point deductions from his/her final grade or administratively withdrawn from the course.

FOR THE PURPOSES OF THIS CLASS, “DISRUPTIVE BEHAVIOR... INCLUDES, BUT IS NOT LIMITED TO, VERBAL OR PHYSICAL THREATS, REPEATED OBSCENITIES, UNREASONABLE INTERFERENCE WITH CLASS DISCUSSION, MAKING/RECEIVING PERSONAL PHONE CALLS OR PAGES DURING CLASS, LEAVING AND ENTERING CLASS FREQUENTLY IN THE ABSENCE OF NOTICE TO INSTRUCTOR OF ILLNESS OR OTHER EXTENUATING CIRCUMSTANCES, AND PERSISTING IN DISRUPTIVE PERSONAL CONVERSATIONS WITH OTHER CLASS MEMBERS. FOR PURPOSES OF THIS POLICY, IT MAY ALSO BE CONSIDERED DISRUPTIVE BEHAVIOR FOR A STUDENT TO EXHIBIT THREATENING, INTIMIDATING, OR OTHER INAPPROPRIATE BEHAVIOR TOWARD THE INSTRUCTOR OR CLASSMATES OUTSIDE OF CLASS.”

[http://www2.gsu.edu/~wwdos/codeofconduct_adminpol_a.html](http://www2.gsu.edu/~wwdos/codeofconduct_adminpol_a.html)

I find electronic communications during class and tardiness to be particularly irritating. I do not hesitate to deduct points for these sorts of disruptions, because they are almost entirely under the individual’s control (I recognize that there are exceptions). To be fair, however, I will also award points should I myself violate these guidelines.

**Extra Credit**

There is no extra credit offered for this class. My students consistently report that the amount of work I already require is enough to keep them plenty busy.
I’m absolutely sure I don’t need more to grade. Really, it’s better this way.

**Return of Materials**

When graded materials are returned to you, it is your responsibility to keep them for any further review or discussion with me. In order to receive print materials completed at the end of the semester, you must provide a self-addressed, stamped envelope with appropriate postage to me during the last week of class. Once materials are returned to you, you accept responsibility for possible loss.

Federal regulations prohibit me from giving graded work to anyone but the person whose name is on the assignment, unless that person gives me specific permission to do so in writing. If you are unavailable when I return graded work in class, you can make arrangements with me via email to pick it up from the 11th floor UL receptionist; you will need to show the receptionist a photo ID before the materials will be returned to you.

Lastly, once I have brought materials (e.g., assignments, handouts, etc.) to class, I will not bring them again. It is your responsibility to come to my office during office hours or to schedule an appointment to pick up any items you miss. Some materials may also be available for download from WebCT.

**Contacting Me**

Email is the generally the most effective way to get in touch with me. You can also post general questions or messages to your Web Journal, which I will read regularly. If electronic communication is not sufficient or appropriate for what you want to discuss, please do not hesitate to come talk to me during my office hours. I have both walk-in hours (no appointment necessary; first come, first served) and appointment time (scheduled via email; requests must be submitted by 4:00 p.m. on Mondays; all appointments are on Wednesdays).

My office phone number is 404-651-2929. You are welcome to leave a message on my machine, but be aware that I dislike using telephones and generally only check these messages once every other day or so. Similarly, I am not good about returning phone calls and I avoid calling students’ private or work lines. Your chances of getting a faster, more favorable response increase dramatically if you contact me online.

Whether in conversation or in writing, please address me correctly. My proper title is Dr. Darnell. I will also accept Dr. D, Dr. Kim, Dr. D Crunk, or Professor Darnell. Other forms of address are unacceptable and I will correct you if you use them. Similarly, you should expect that I will address you with respect and in a manner appropriate to the classroom. Please do not hesitate to coach me on the correct pronunciation of your name if I make a mistake.

**Lecture and Laboratory Schedule**

Although I reserve the right to make changes to this schedule, the following calendar provides a reliable framework for what material will be covered when during the lecture and the laboratory. You are expected to have completed the required readings and assignments before the class for which they are assigned.

If the schedule indicates that an assignment is DUE on a given day, this means that you should have the assignment completed when you arrive to class. If an assignment is listed as a topic for a given day, it means that you will work on it during class time; it may or may not be collected on that day.

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DAY</th>
<th>TOPIC</th>
<th>READING</th>
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<tbody>
<tr>
<td>1</td>
<td>1.11 (Tue)</td>
<td><strong>INTRODUCTION TO COURSE: HOW HARD IS IT?</strong></td>
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<tr>
<td></td>
<td>LAB</td>
<td>Scientific writing and APA style</td>
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<td></td>
<td>1.13 (Thur)</td>
<td>Ways of knowing</td>
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<td></td>
<td></td>
<td>The scientific approach</td>
<td>RMP Ch. 1</td>
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<tr>
<td>2</td>
<td>1.18 (Tue)</td>
<td>Critical thinking vs. common sense</td>
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<td></td>
<td>LAB</td>
<td>Library knowledge pretest</td>
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<td></td>
<td></td>
<td>Introduction to library resources for psychology</td>
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<td></td>
<td>1.20 (Thur)</td>
<td>Library knowledge posttest</td>
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<td></td>
<td></td>
<td>Advanced library skills</td>
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<td></td>
<td><strong>DUE: Research Assignment #1</strong></td>
<td>Meet in UL 1014</td>
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<tr>
<td>3</td>
<td>1.25 (Tue)</td>
<td>Testing theories and generating hypotheses</td>
<td>RMP CH. 2</td>
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<tr>
<td></td>
<td>LAB</td>
<td>Research Assignment #2</td>
<td>BRING PPR</td>
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<tr>
<td></td>
<td>1.27 (Thur)</td>
<td>Models, theories, and laws</td>
<td></td>
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<tr>
<td>4</td>
<td>2.1 (Tue)</td>
<td>APA Code of Ethics</td>
<td>RMP CH. 3</td>
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<td></td>
<td>LAB</td>
<td>Introduction to <em>A Writer’s Reference</em> online:</td>
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<td></td>
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<td>Summarizing and paraphrasing <em>without</em> plagiarizing</td>
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<td><strong>DUE: Bibliographical information and abstracts for 3 peer-reviewed journal articles related to your research hypothesis</strong></td>
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<td>2.3 (Thur)</td>
<td>Debating the ethics of Milgram (1963)</td>
<td>PPR RDG.12</td>
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<tr>
<td>Week</td>
<td>Date</td>
<td>Topic</td>
<td>Assignment/Activity</td>
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<tr>
<td>5</td>
<td>2.8</td>
<td><strong>OBSERVATION WITH AND WITHOUT INTERVENTION</strong></td>
<td>RMP Ch. 4</td>
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<tr>
<td></td>
<td>(Tue)</td>
<td>LAB Developing survey questions</td>
<td>Bring PPR</td>
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<td></td>
<td></td>
<td>Begin Research Assignment #3</td>
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<td></td>
<td>2.10</td>
<td>LAB Developing survey questions</td>
<td>Bring PPR</td>
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<td></td>
<td>(Thur)</td>
<td>2.10 (Thur) Sampling techniques for descriptive observation</td>
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<tr>
<td>6</td>
<td>2.15</td>
<td>The challenges of collecting descriptive data</td>
<td>PPR Rdg. 15</td>
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<td></td>
<td>(Tue)</td>
<td><strong>DUE: Research Critique</strong></td>
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<td></td>
<td></td>
<td>LAB Finish Research Assignment #3</td>
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<td></td>
<td>2.17</td>
<td>LAB 2.17 (Thur) EXAM 1</td>
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<td>7</td>
<td>2.22</td>
<td>Why correlation does not equal causation</td>
<td>RMP Ch. 5</td>
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<td></td>
<td>(Tue)</td>
<td>LAB Review of survey</td>
<td>Bring PPR</td>
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<td>Research Assignment #4</td>
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<td></td>
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<td>2.24 (Thur) Different types of validity</td>
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<tr>
<td>8</td>
<td>3.1</td>
<td>Archival research</td>
<td>RMP Ch. 6</td>
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<td></td>
<td>(Tue)</td>
<td>LAB Preparing the Introduction and Method section of your research paper</td>
<td>Bring PPR</td>
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<td></td>
<td></td>
<td>Begin Research Assignment #7</td>
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<td></td>
<td>3.3</td>
<td>LAB 3.3 (Thur) Content analysis</td>
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<td></td>
<td>(Thur)</td>
<td>3.4 (Fri) SEMESTER MIDPOINT - Last day to drop and possibly earn a ‘W’</td>
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<td>9</td>
<td>3.6</td>
<td><strong>SPRING BREAK</strong> – No classes</td>
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<tr>
<td>10</td>
<td>3.15</td>
<td><strong>AN INTRODUCTION TO EXPERIMENTAL DESIGNS</strong></td>
<td>RMP Ch. 7</td>
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<td></td>
<td>(Tue)</td>
<td>LAB Research Assignment #5</td>
<td>Bring PPR</td>
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<td><strong>DUE: 10 completed surveys</strong></td>
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<td></td>
<td></td>
<td>3.17 (Thur) More on experimental designs</td>
<td>RMP Ch. 8</td>
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<tr>
<td>11</td>
<td>3.22</td>
<td><strong>IDENTIFYING AND EVALUATING EXPERIMENTAL DESIGNS</strong></td>
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<tr>
<td></td>
<td>(Tue)</td>
<td>LAB Introduction to SPSS</td>
<td>Bring PPR</td>
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<tr>
<td>Date</td>
<td>Activity</td>
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<td>3.24 (Thur)</td>
<td>DUE: Introduction and Method section of research paper, bibliography (Research Assignment #7)</td>
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<tr>
<td>3.29 (Tue)</td>
<td>Continue data analysis</td>
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<td></td>
<td>Meet in UL 1014</td>
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<tr>
<td>3.31 (Thur)</td>
<td>Complex experimental designs</td>
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<td>4.1 (Fri)</td>
<td>PURC 2005 – Student Center</td>
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<td>4.5 (Tue)</td>
<td>Main effects and interactions</td>
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<tr>
<td>4.7 (Thur)</td>
<td>Analyzing complex experimental designs</td>
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<td>DUE: Results and Discussion sections of research paper, table/figure, figure captions</td>
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<td>4.12 (Tue)</td>
<td>GRAPHING AND INTERPRETING SMALL-N DATA</td>
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<td>Prepare abstract, cover page, and author’s note</td>
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<td>4.14 (Thur)</td>
<td>Non-equivalent control group designs</td>
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<td>4.19 (Tue)</td>
<td>Interrupted time series designs</td>
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<td>Research Assignment #8: Peer Review of Research Report Drafts</td>
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<td>4.21 (Thur)</td>
<td>Program evaluation</td>
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<td>4.26 (Tue)</td>
<td>EXAM 3</td>
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<td>4.28 (Thu)</td>
<td>Evaluation of lab</td>
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<td>Final revisions of research paper</td>
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<td></td>
<td>DUE: Final version of research paper</td>
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<td></td>
<td>Review for final exam</td>
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</table>

This schedule is tentative. I reserve the right to make changes to contents and deadlines herein. All changes will be posted to WebCT.
Psychology of Women  
PSYC 4620/WST 4620  
A Writing Across the Curriculum Course  
Spring 2005

Class Sessions  
Tuesdays and Thursdays, 11:00am to 12:15pm, Aderhold 303

Instructor  
Dr. Tracie Stewart  
Office: Urban Life 712; Phone: 404-651-1631; E-mail: stewart@gsu.edu  
Mailbox: See receptionist, 11th Floor  
Office Hours: Thursdays 1:30pm-3:00pm and by appointment

Teaching Assistant  
Catherine Morris  
Office: Urban Life 1169AB; E-mail: cmorris13@student.gsu.edu  
Office Hours: Wednesdays 2:45pm-4:15pm and by appointment

Writing Consultant  
Aura Cabrera  
Meeting Location: Library North, 3rd Floor, table near computers; E-mail: acabrera1@student.gsu.edu  
Office Hours: Tuesdays 9:00am-10:00am and by appointment

Course Description and Objectives  
This course introduces students to the psychological literature on women and gender. Course topics include the causes of sex differences and similarities in abilities and personality, the influence of gender roles on the enactment of aggressive and altruistic behaviors, women's close relationships in traditional and non-traditional families, portrayals of women in the media, the diversity of women's experiences, gender and psychological disorders, and applied gender-related issues such as sexual harassment. These topics are explored from a feminist psychology perspective. The intersections of sex, gender, sexuality, race, ethnicity, social class, and age are emphasized.

The four primary objectives for this course are that students (a) gain a general overview of what psychologists have learned about the role of gender in people’s daily lives, (b) explore, in depth, psychological research and theory on gender-related topics of interest to the student, (c) demonstrate the ability to design, critique, and present psychological studies of gender, and (d) further develop their writing skills (“writing to learn, as well as learning to write”). Course components designed to help students achieve these objectives include attending class sessions led by the instructor, guest speakers, and student presenters; completing course readings; working in a
team to present a current article on the psychology of women and gender; and completing various writing assignments, including in class writing and a term paper.

**Course Requirements and Grading**

Students’ achievement of the course objectives will be assessed through a variety of assignments. Final course grades will be based on performance on the following course requirements: weekly in-class writing assignments (30%), midterm examination (15%), final examination (15%), term paper (15%), article presentation (15%), class participation (5%), and two documented meetings with the course writing consultant (5%). A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = Below 60%.

**Weekly In-Class Writing Assignments.** Eleven in-class writing assignments will be implemented. These assignments are designed to help students clarify their understanding of course material and develop their own perspectives. For each assignment, students will write for approximately 10 minutes during a class session. Some two-part assignments will span two class sessions. Writing assignments will be graded on a 10-point scale. The nature of the writing assignments will vary, ranging from reports of self-reflection on course topics to applications of the course material to “real world” situations. These assignments will generally not be announced in advance. Students cannot make-up a writing assignment unless they have documentation of official GSU business on that day. Consequently, high-quality performance on these assignments is best achieved by keeping up with course readings and attending class regularly.

**Examinations.** The midterm and final examinations will be administered, respectively, on **Thursday, March 3rd**, and **Thursday, May 5th**. Both non-cumulative exams will be comprised of multiple-choice and essay questions and will cover all material presented in the assigned readings and in class, including students’ article presentations. Students with an unexcused absence on an examination day will receive a failing grade on the missed exam. Students with an excused absence on the midterm examination day, as determined by the instructor based on appropriate documentation, will have the option to take a 4-question make-up essay examination. No make-up examinations are possible for the final examination.

**Term Paper.** The 8-12 page term paper will be comprised of three components. A draft of the first component is due at the start of class on February 15th. A draft of the second component (minimum 3 pages completed) is due at the start of class on March 17th. A draft of the third component (minimum 2 pages completed) is due at the start of class on April 7th. The final paper, comprised of revised versions of all three components, is due at the start of class on April 28th. The drafts of the three individual components will not be graded. However, 2 points will be deducted from the final paper grade for each day that a component is late. No extensions on the final paper deadline are possible. The paper must be written in APA format. Take particular care to ensure that your references, citations, and section headings are consistent with APA guidelines.

**Component One.** For the first component of the paper, your first step will be to relate in an approximately one page document a question, observation, or hypothesis you have about women or gender. You might describe questions about whether men and women are capable of being equally effective parents, whether men are really better than women at math, what the consequences are for labeling oneself as “feminist,” or why many women stay in violent relationships. Or you might describe observations such as perceived regional differences in the tendency for men to open doors for women or a perceived tendency for boys to play more aggressively than girls. Or perhaps you
will want to tender your own hypothesis about a gender related-issue, such as arguing that exposure
to larger-weight models might lead to lower eating disorders in adolescent girls. The goal for this
component is simply to describe your topic of interest in a clear and thorough manner. The
instructor will read this component and, if possible, give you feedback on articles addressing this
topic, researchers who specialize in your question of interest, or keywords to use in addressing this
topic via PsycInfo.

\textit{Component Two}. For the second component, you will describe, synthesize, and critique two
psychology articles (from approved journals listed later in this syllabus) dealing with your topic of
interest. The goal is to demonstrate knowledge of the studies’ goals, to compare and contrast the
findings reported in the two articles, and to suggest ideas for ways the research might be improved
in future work. A reference section should be included. You will be required to meet with the writing
consultant during a specific time period to discuss possible strategies to strengthen this component of
your paper (see schedule for a list of the dates during which the meetings must occur).

\textit{Component Three}. For the third component, you will describe in detail your own novel experiment in
your research area of interest. Your proposed study might be a direct extension of one of the studies
summarized in component two, or it might be a new methodology designed to address questions that
the studies you reviewed were not able to address. If not already included, you will want to revise
component two to add a concluding section concerning why the specific study you propose is a
needed addition to the literature you have reviewed. The third component should be written in strict
APA format for a Method section of a research article. It might be helpful for you to meet with either
the teaching assistant, the writing consultant, or the instructor to discuss your ideas before beginning
to write this section. You will be required to meet with the writing consultant during a specific time
period to discuss possible strategies to strengthen this component of your paper (see schedule for list
of meeting dates).

Final Paper: The order of the final paper will be a cover page (including paper title, your name, and
the last 4 digits of your student ID number), component one, component two (not including
references), component three, and your reference section.

\textit{Article Presentations}. Student teams will present to the class a research article (or articles) of their
choice during 30 minutes of designated class sessions. The selected article will be related to a topic
of interest regarding the psychology of women that the students identified on the first day of class.
These presentations will provide an in-depth look at the techniques and findings of particular
experiments on the psychology of women and gender. In addition, students will present an idea for
a new experiment designed to extend the research described in their selected article. Articles may be
selected from citations in the course readings, through a PsycInfo search on the designated topic, or
through browsing through current psychology journals. The Readings section of this syllabus
includes a list of approved journals for this assignment.

Student teams must provide copies of their selected presentation article to the instructor by the start
of class on \textbf{Tuesday, January 25th}. Two points will be deducted from the presentation grade for
each day the article is late. Dr. Stewart will assign dates for each team’s article presentation based
on fit with the course material.
Presentations should include discussion of the purpose, methodology, findings, and possible critiques of the research in the selected article. In addition, each presentation should include a demonstration of how the article relates to the world outside of the classroom (e.g., show a brief – no more than 2 minutes - movie clip, display an advertisement, describe a recent relevant incident in one's life). Presenters should also outline a new study designed to extend the research discussed in their selected article. Presenters' primary goals should be to provide an interesting and engaging in-depth look at a paradigm designed to study the psychology of women and to promote thought and class discussion of the issues introduced in the article. Although the presenters will "lead" the class sessions, some time should be devoted to class discussion; therefore, presenters should compose questions aimed at encouraging discussion. Audio-visual equipment not already available in the classroom must be arranged by the presenters at least one week prior to the presentation. Students are also required to post copies of their article on Web CT the day before their presentation or to bring copies of their article for all students in the class on the presentation day. Powerpoint slides for the presentation should be posted on Web CT the day after the presentation. Class handouts are recommended. Presentation teams are required to meet with the instructor during the week prior to their presentation date to discuss presentation plans. Clarity, comprehensiveness, and creativity are considered in the presentation grade. I’m looking forward to hearing and discussing your ideas!

NOTE: DETAILED INFORMATION CONCERNING THE PRESENTATION ASSIGNMENT WILL BE PROVIDED ON THE “PRESENTATION REQUIREMENTS AND GUIDELINES” HANDOUT TO BE DISTRIBUTED IN CLASS AND POSTED ON WEB CT.

**Class Participation.** Class participation scores are based on contributions to class discussions, bringing reading assignments to class sessions, arriving in class on time, and not leaving class early. Formal attendance will not be taken, but students should realize that failure to attend class usually results in poor performance on exams and may result in missed in-class writing assignments. To successfully contribute to class discussions, students must remain current on the required readings listed in the course schedule. *A Note on Student Conduct:* Class participation scores will also reflect students’ respectful attention and responses to others’ comments and questions. Respectful disagreement and debate on course topics can make for an interesting and lively class session. However, disrespect directed toward other members of the class is counterproductive to the academic goals of the course and will not be tolerated. Keep in mind that the aim of the course is to understand more about psychological research on women and gender.

**Disruptive Behavior**

Students who disrupt this class or its learning activities will be considered under the Board of Regents Policy on Disruptive Behavior. Disruptive behaviors include but are not limited to the following: sleeping, habitual tardiness or leaving early, interrupting others, talking out of turn, inappropriate behavior during group work, and verbal behavior that is disrespectful of other students or the instructor. In this class, “male bashing” is not tolerated, nor is it to be confused with critiques of patriarchy, patriarchal societies, systems, or structures. The instructor will verbally warn disruptive students. Continued violations will result in a written warning and a meeting with the chair of the Department of Psychology, and will be subject to disciplinary procedures. Repeated cell phone disruptions will result in deductions from class participation points.

**Writing Consultant**

The purpose of a Writing Consultant is to provide students assistance in the writing process preparation. This preparation includes individual in-person sessions during office hours or by
appointment. Focus in these sessions can be placed on brainstorming, organization, and/or writing mechanics but cannot be an opportunity to have the Writing Consultant editing the work. Students who would like additional in-depth and focused tutoring throughout the semester are encouraged to visit the University’s Writing Center on the 9th floor of GCB, Room 976.

Internet Components of the Course
The course syllabus and powerpoint slides for some lectures will be available online by accessing the course WebCT site. Additional materials and announcements will also be posted on the site throughout the semester. It is recommended that you check the WebCT site frequently for announcements. You will need to have a WebCT ID in order to access the course pages. NOTE: The most efficient way to contact the instructor is via email (rather than voice-mail or posting on web ct). Email the instructor using your “student.gsu.edu” email address. Email from other addresses will generally be deleted before being opened, due to campus virus concerns.

Retention of Materials
Students are responsible for retaining course materials returned by the instructor in case the student wishes to request that the course grade be corrected or to appeal a grade.

Date for Midpoint of Semester: March 4, 2005
Students must withdraw by this date in order to be eligible to receive a “W.” If a student is failing the course (i.e., as earned less than 60% of the points possible by that date) and withdraws by the drop date, the student will receive the grade of “WF.”

Academic Integrity
Cheating and plagiarism (the representation of someone else's work as one's own) are serious offenses. Such acts will result in a failing grade on the assignment in question and, possibly, in the course. The university’s Policy on Academic Honesty (Section 409) is published in On Campus: The Undergraduate Co-Curricular Affairs Handbook. The policy represents a core value of the university, and all members of the university are responsible for abiding by its tenets. Lack of knowledge of this policy is not an acceptable defense to any charge of academic dishonesty. All members of the academic community – students, faculty, and staff – are expected to report violations of these standards of academic conduct to the appropriate authorities.

READINGS
Required text, available for purchase in the bookstore:


Manual to be consulted in formatting term papers (available in library or can be purchased or ordered from bookstore; purchasing recommended but not required):


Additional required readings will be available online through Web CT and/or the E-reserves system.
Student teams are required to post copies of their presentation article on Web CT the day before their presentation or to bring hard copies of the article to all students in the class. Teams should also post copies of their powerpoint slides on the day after the presentation or bring hard copies of the slides to class.

Articles for students’ presentations and background articles for papers must be selected from the following journals:

- Sex Roles
- Psychology of Women Quarterly
- Personality and Social Psychology Bulletin
- Journal of Experimental Social Psychology
- Basic and Applied Social Psychology
- Journal of Applied Social Psychology
- American Psychologist
- Journal of Personality and Social Psychology
- European Journal of Social Psychology
- British Journal of Social Psychology
- Group Processes and Intergroup Relations
- Social Cognition
- Developmental Psychology
- Journal of Experimental Child Psychology
- Child Development
- Journal of Counseling Psychology
- Journal of Adolescence
- Journal of Abnormal Psychology

**Final Note**
This syllabus provides a general plan for the course. Deviations may be necessary. Additional information about assignments will be provided in class handouts and on Web CT.
<table>
<thead>
<tr>
<th>DATE</th>
<th>READINGS</th>
<th>CLASS PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PART ONE: INTRODUCTION</strong></td>
<td></td>
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<tr>
<td>Tuesday, January 11</td>
<td>---------</td>
<td>Introduction to the Course</td>
</tr>
<tr>
<td>Thursday, January 13</td>
<td>Shibley Hyde: Ch. 1</td>
<td>General Introduction to the Psychology of Women; Organization of Presentation Teams</td>
</tr>
<tr>
<td>Tuesday, January 18</td>
<td>Shibley Hyde: Ch. 2</td>
<td>Theoretical Perspectives on the Psychology of Women</td>
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<tr>
<td><strong>PART TWO: CURRENT SOCIAL ISSUES</strong></td>
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<tr>
<td>Thursday, January 20</td>
<td>Unger &amp; Crawford: Ch. 2</td>
<td>Images of Women</td>
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<tr>
<td>Tuesday, January 25</td>
<td></td>
<td>Images of Women II</td>
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<tr>
<td>Thursday, January 27</td>
<td></td>
<td>Images of Women III</td>
</tr>
<tr>
<td>Tuesday, February 1</td>
<td>Shibley Hyde: Ch. 14</td>
<td>Violence Against Women</td>
</tr>
<tr>
<td>Thursday, February 3</td>
<td></td>
<td>Violence Against Women II</td>
</tr>
<tr>
<td>Tuesday, February 8</td>
<td></td>
<td>Violence Against Women III</td>
</tr>
<tr>
<td>Thursday, February 10</td>
<td>Shibley Hyde: Ch. 8</td>
<td>Women and Achievement</td>
</tr>
<tr>
<td>Tuesday, February 15</td>
<td>Shibley Hyde: Ch. 9</td>
<td>Women and Work; Gender, Status, &amp; Power</td>
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<tr>
<td></td>
<td>Takiff, Sanchez, &amp; Stewart.</td>
<td>Draft of Paper Component I Due</td>
</tr>
<tr>
<td></td>
<td>(2001). <em>What’s in a name? The status implications of students’ terms of address for male and female professors.</em></td>
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<tr>
<td>Thursday, February 17</td>
<td></td>
<td>Presentation (1): _______________</td>
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<td></td>
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<td>Presentation (2): _______________</td>
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<tr>
<td>Tuesday, February 22</td>
<td>Shibley Hyde: Ch. 11</td>
<td>Women’s Physical and Mental Health</td>
</tr>
<tr>
<td>Thursday, February 24</td>
<td>Shibley Hyde: Ch. 15</td>
<td>Women’s Physical and Mental Health II; Women’s Life Stresses at GSU</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Text</td>
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<tr>
<td>Tuesday, March 1</td>
<td>Women’s Physical and Mental Health III; Exam Review</td>
<td><em>image and self-esteem: A comparison of African-American and Caucasian women.</em></td>
</tr>
<tr>
<td>Thursday, March 3</td>
<td>** MIDTERM EXAMINATION **</td>
<td></td>
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<tr>
<td>Tuesday, March 8, &amp; Thursday, March 10</td>
<td>NO CLASS: SPRING BREAK</td>
<td>PART THREE: ORIGIN, DEVELOPMENT, &amp; DIVERSITY OF GENDER</td>
</tr>
<tr>
<td>Tuesday, March 15</td>
<td>Shibley Hyde: Ch. 3</td>
<td>Gender Stereotypes; Gender Differences &amp; Similarities</td>
</tr>
<tr>
<td>Thursday, March 17</td>
<td>Shibley Hyde: Ch. 10</td>
<td>Gender Differences &amp; Similarities II; Draft of Paper Component II Due (contact A. Cabrera to arrange ½ hour meeting to review this draft between March 21st and April 1st)</td>
</tr>
<tr>
<td>Thursday, March 24</td>
<td>Shibley Hyde: Ch. 4</td>
<td>The Diversity of Women</td>
</tr>
<tr>
<td>Tuesday, March 29</td>
<td>Shibley Hyde: Ch. 5 &amp; 6</td>
<td>Doing Gender: Language and Emotion</td>
</tr>
<tr>
<td>Thursday, March 31</td>
<td><em>Presentation (3): ________________________________</em></td>
<td><em>Presentation (4): ________________________________</em></td>
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<tr>
<td>Date</td>
<td>Faculty/Reading/Assignment</td>
<td>Notes</td>
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<tr>
<td>Thursday, April 7</td>
<td>Shibley Hyde: Ch. 7</td>
<td>Draft of Paper Component III Due (contact A. Cabrera to arrange 1/2 hour meeting to review this draft between April 11th and April 25th)</td>
</tr>
<tr>
<td>Tuesday, April 12</td>
<td>Shibley Hyde: Ch. 16</td>
<td>PART IV: SEXUALITY AND RELATIONSHIPS</td>
</tr>
<tr>
<td>Tuesday, April 19</td>
<td>Shibley Hyde: Ch. 12 &amp; 13</td>
<td>Attraction, Love, &amp; Relationships II; Female Sexuality</td>
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<tr>
<td>Thursday, April 21</td>
<td></td>
<td>Presentation (5): __________________________________________</td>
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<td>Presentation (6): __________________________________________</td>
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<td>PART FIVE: WOMEN AND GENDER NOW AND IN THE FUTURE</td>
</tr>
<tr>
<td>Tuesday, April 26</td>
<td>Risman, <em>Gender Vertigo</em>: Ch. 2, 3, &amp; 7</td>
<td><em>Gender Vertigo</em> Discussion</td>
</tr>
<tr>
<td>Thursday, April 28</td>
<td>Shibley Hyde: Ch. 17</td>
<td>The Future of Women and Gender; Overview; Exam Review</td>
</tr>
<tr>
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<td></td>
<td>Final Papers Due</td>
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<td>*** FINAL EXAMINATION ***</td>
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**Psychology of Women**  
**PSYC 4620**  
A Writing Across the Curriculum Course  
Spring 2005  

Instructor: Sarah L. Cook, Ph.D.  
Office: 1118 Urban Life  
Office Hours: by appointment  
Phone: (404) 651-0762
Course Description

This course exposes students to feminist psychology, a perspective frequently excluded from standard psychology courses. The intersections of sex, gender, sexuality, race, ethnicity, social class, and age are emphasized. The course examines psychological issues relevant to students’ everyday lives including health, work, family, sexuality and reproduction, and close relationships. Through formal and informal writing opportunities, students will learn to critique related psychological research as well as begin to identify their personal perspectives. The key question throughout the course will be, “How can feminist psychology and the psychology of women transform psychology, ourselves, and society?”

Course Objectives

Course readings, assignments, and class discussions:

- Increase students’ knowledge of psychological theory and research about women.
- Familiarize students with feminist criticisms of traditional psychology and enhance students’ ability to formulate and critically examine theoretical and research questions.
- Develop scientific writing skills.
- Develop critical thinking skills to evaluate media and popular culture portrayals of research about the psychology of women, feminism, gender, and the study of difference.

According to Halpern (1989) critical thinking has at least three components: it has a purpose, it is reasoned, and it approaches a problem from more than one perspective. In this class our purpose will be to apply information to our everyday lives and to probe beneath the surface of issues and events in order to advance our understanding. We will use reason by examining all the information relevant to a problem to reach a logical and reasonable conclusion. We will understand a feminist approach to further understanding. In all likelihood, other sources have provided alternative views. The feminist approach should not be accepted without question, just as other approaches should not be, but we will evaluate what and how different approaches contribute to understanding problems and issues.

Topical Outline

<table>
<thead>
<tr>
<th>Classes</th>
<th>Topic</th>
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<tbody>
<tr>
<td>2-3</td>
<td>Introductions and expectations; Diversity in Feminist Thought; Feminist Transformations of Psychology; Bias in Psychological Methods</td>
</tr>
</tbody>
</table>
5-7 The Intersection of Sex, Gender, and Sexuality
8-9 Questioning the Significance and Meaning of Gender Differences
10 Images of Women
11 Women of Color
12 Gender and Emotion
13-14 Development Across the Lifespan
15-18 Achievement and Work
19-23 Biological Influences on Women's Behavior, Women's Health, and Sexuality
24-27 Male Violence Against Girls and Women: Harassment, Rape, and Abuse
28 Mental Health
29 Psychology of Men
30 Looking Back and Looking Ahead

Course Format

The format of this course is primarily lecture although classes will include discussion, in-class exercises, films/documentaries, and extemporaneous writing. Most classes begin with lecture to stimulate discussion and/or participation in in-class exercises. This course emphasizes writing as a vehicle to learn content as well as critical thinking skills.

Course Prerequisites

All students must have either PSY 1101 or the quarter equivalent. The Department of Psychology checks computer records to determine whether students meet prerequisites for courses. If you do not have the prerequisite, inform your instructor and change to another course right away. If you do not have the prerequisite, you must drop this course. Although not required, students will find knowledge, skills, and abilities gained through social science research design and method courses helpful when completing writing assignments.

Course Materials

Required text:

"Composing a Life beautifully explodes the notion that life should or can follow a straight, pre-defined course. Instead, it reveals the richness of a life that is discovered and created as it is led. Mary Catherine Bateson, daughter of anthropologist Gregory Bateson and Margaret Mead, weaves a rich tapestry in telling the lives of five unconventional women (including herself), and constructing a mirror for the many possible reflections of our own. The experiences of these women, presented in lush narrative, are more than inspirational; they serve to illustrate that our own lives are like a canvas, each ready to hold a palette of possibilities." (Rosoff, 1997).


One blue book (exam book, purchased from the bookstore).

For the interested, suggested, but not required, additional reading:

A collection of essays from prominent feminist psychologists that explore the implications of society’s and psychology’s emphasis on documenting gender differences. Challenging to read and provocative.


Course Expectations (See the Student Code of Conduct)

WebCT
This course uses WebCT technology EXTENSIVELY. For example, the course syllabus and reading list are posted, as are PowerPoint Notes, Documentary Guides, etc under COURSE MATERIALS. Students will complete surveys, submit assignments, and received graded assignments through WebCT. Students are also expected to participate in bulletin board discussions.

Communication with Professor
As of Fall 2002, all students are required to activate their university e-mail account (i.e., one ending in 'student.gsu.edu'). This is the official account that I will use to distribute critical announcements about the course. Verify that your university account is active. If you have questions about how to activate or use your FREE university account, go to:

http://www.gsu.edu/~wwwccs/faqs/studentemail/student.htm

Note that you can forward mail from your university account to a third party email account (e.g., hotmail.com, aol.com), however, I will not send messages to third party accounts, I will use only your university e-mail account.

Attendance & Participation
Student involvement is essential. Attendance will not be taken, but students should realize that failure to attend class usually results in poor performance on writing to learn assignments. Specifically, lack of attendance will result in the loss of graded, in class, unscheduled writing opportunities. Participation is defined as demonstration of knowledge of readings, participation in exercises, and remaining engaged in class discussions and exercises.

Late Assignments
Assignments are due on the date noted. Late assignments will be accepted but at a penalty of 10% per day, up to three days after the due date. For example, if an assignment worth 100 points due at noon is submitted via WebCT anytime between 12:00 p.m. on the due date and 12:00 p.m. the following day, the student automatically loses 10 points. Thus, the student begins with a maximum potential grade of 90 points. Problems with WebCT technology are not acceptable excuses because students have adequate opportunity to learn and practice the WebCT technology. In addition, all assignments are presented on the first day of class, providing all students with adequate time to begin and complete them.

Academic Honesty
The Department of Psychology follows the University system policy on academic honesty, published in the Faculty Affairs Handbook and in On Campus: The Undergraduate Co-Curricular Affairs Handbook and is available to all members of the university community. The policy represents a core value of the university and all members of the university community are responsible for abiding by its tenets. Lack of knowledge of this policy is not an acceptable defense to any charge of academic dishonesty. All members of the academic community --students, faculty, and staff --are expected to report violations of these standards of academic conduct to the appropriate authorities.
Disruptive Behavior

Students who disrupt this class or its learning activities will be considered under the Board of Regents Policy on Disruptive Behavior. Disruptive behaviors include but are not limited to the following: sleeping, HABITUAL TARDINESS OR LEAVING EARLY, interrupting others, talking out of turn, inappropriate behavior during group work, and verbal behavior that is disrespectful of other students or the instructor. In this class “male bashing” is not tolerated, nor is it to be confused with critiques of patriarchy, patriarchal societies, systems, or structures. The instructor will verbally warn disruptive students. Continued violations will result in a written warning and a meeting with the chair of the Department of Psychology, and will be subject to disciplinary procedures. If you carry a cell phone and you must have it activated during a particular class session, inform the instructor on the first day of class. If a cell phone rings during class turn off the ringer after the first ring and leave the classroom immediately. Failure to abide by this guidance (two occurrences) will result in a final grade reduction of one letter (e.g. A to B).

Retention of materials

Students are responsible for retaining course materials returned by the instructor in case the student wishes to request that the course grade be corrected or to appeal a grade.

Writing Consultant

The purpose of a Writing Consultant is to provide students assistance in the writing process preparation. This preparation includes online discussions during office hours and individual sessions by appointment. Focus in these sessions can be placed on brainstorming, organization, and/or writing mechanics but cannot be an opportunity to have the Writing Consultant editing the work. Due to the size restrictions of the class, students who would like in-depth and focused tutoring throughout the semester are encouraged to visit the University's Writing Center on the 9th floor of GCB room 976.

Course Requirements (Assignments will only be accepted through the WebCT Assignment Drop Box)

1. Formal Writing to Learn Assignments (comprise » 54% of final grade)
   a. Memo……………………….50pts
   b. Gender Rebellion Exercise…75pts (25 pts initial draft/50 pts final draft)
   c. Interview……………………100pts (33 pts initial draft/67 pts final draft)

Formal writing assignments advance student’s research, critical thinking, and writing skills, including mastery of APA style. Because students learn to write through opportunities to revise, and learning occurs through writing, students will submit initial drafts to the writing consultant for feedback. Initial drafts are not graded on quality per se. Students will earn points by submitting drafts. See below for further detail.

2. Informal Writing to Learn Assignments (comprise » 22%)
   a. 2 Bulletin Board Posts………40 pts total (20 pts each)
   b. 5 In-Class Responses……….50 pts total (10 pts each)

Informal writing assignments help student’s clarify their understanding of course material and develop their own perspectives. Throughout the semester, each student will write two bulletin board posts of approximately 250 words on a topic of their choosing, and in response to a question posted by the instructor, writing
consultant, or psychology teaching assistant. Posts are graded on quality of thought and clarity of expression. In addition, each student will respond to 5 in-class thought questions that may be posed at the beginning, middle, or end of class. In-class responses will usually be about one to two paragraphs in length, and will be recorded in a blue exam book.

3. 5 Surveys (comprise » 6%)…………….25 pts total (5pts each)

Surveys allow students opportunities to become familiar with psychological measures and inventories. Data collected through surveys will be used in class discussion, and may be used as stimuli for in-class responses (see above). The surveys are not graded, students simply earn points by completing them. They are also anonymous. Surveys correspond to course topics and must be completed by the due date posted on WebCT. Students will not be able to complete surveys after the due date.

4. 1 Research Article Presentation (comprise » 18%)…………75 pts total

Students will be randomly assigned a chapter from which they will draw a reference to a peer-reviewed research article. Students will read the article and make a short (10-minute) presentation on the article for the class, linking it to the overall topic. Presentations are graded on clarity, organization, and content.

Grades will be assigned as follows:

A = 373.5 - 415
B = 332-373.49
C = 290.5 – 332.9
D = 249-290.49
F = 0-249.9

1a. Formal Writing: Memo Re: Woman Psychologist (50 pts: DUE 1.31.05)

Before beginning this assignment, review files under WEBCT: SURVEYS AND ASSIGNMENTS.
Assignment Objectives
Given the name of a woman psychologist, student will research her life, education, the impact of her work on the field of psychology, and whether her work is acknowledged in contemporary textbooks. Based on this research, students will write a brief memo of approximately 600 words to a publishing executive, making as strong a case as possible why today’s psychology undergraduate students should learn about their psychologist’s life and work.

Psychologists will be randomly assigned to students via WebCT (see MY GRADES).

Do not rely solely on the Internet for information. Use the LIBRARY, particularly the reference section and enlist the assistance of the reference librarian if needed. Do not seek help in locating materials from your instructor or the teaching assistant until you have requested help from Dr. Lyn Thaxton in person or at http://www.library.gsu.edu/liaisons/classes/psyc4620/.

Resources that will be helpful include Psychology of Women texts in the stacks, reference books on biographies of psychologists, PSYCINFO (a database of psychological literature), and books about women in psychology, particularly the history of women in psychology. See additional information under ASSIGNMENTS on WebCT. Dr. Thaxton, Psychology Liason in Pullen Library, will provide an orientation to researching this assignment during the second week of class.
1b. Formal Writing: Gender Rebellion (75 pts: DRAFT DUE 02.14.05 & FINAL PAPER DUE 02.23.05)

Before beginning this assignment, review files under WEBCT: SURVEYS AND ASSIGNMENTS.
Assignment Objective: Students will test and analyze the existence and strength of gender roles by planning, executing, and reporting a gender rebellion in a 900 (» 3 pages) word research paper written in APA format.

What is a gender rebellion? It is something that violates a gender role (what we DO that identifies us as women or men). Refrain from illegal or unsafe rebellions; please check with me first if you are unsure).

1c. Interview (100 pts.) (DRAFT DUE 04.04.05 & FINAL PAPER DUE 04.18.05)

Before beginning this assignment, review files under WEBCT: SURVEYS AND ASSIGNMENTS.
Assignment Objective: After selecting a woman to interview, students will develop an interview protocol, conduct the interview, analyze the data, and report findings in a 1,500 word (» 5 pages) research paper written in APA format.

Choose a woman to interview about a particular topic that we discuss in class. Be sure to ask questions that will allow you to answer the following:

- Why did you choose this particular woman to interview?
- What is your interviewee’s age, race/ethnicity, occupation, family composition, education, socio-economic status (sexual orientation, ableness, if applicable)?
- What messages did she get growing up about her choices regarding the particular topic of the interview (sexuality, marriage, friends, work/career, gender roles)?
- How did she arrive at her choice?
- What limitations did she find along the way? Were they related to her gender, sexual orientation, race/ethnicity/ SES/education/family?
- What would she have done differently? Does she have any regrets?
- What are her future plans?
- How did you feel about interviewing this woman, what did you learn? What did you learn about yourself?
- What does the psychology of literature tell you to help you understand this woman her life choices, and yourself?
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignment</th>
<th>Reading</th>
<th>Film</th>
<th>Tutorial/Workshop</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.10.05</td>
<td>Course Introduction and Expectations</td>
<td>Survey #1: Student Background</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>01.12.05</td>
<td>Transforming Psychology and Theoretical Perspectives</td>
<td>Survey #2: Questions about Feminism</td>
<td>Hyde Chapter 1; Begin reading Bateson Chapters 1-6</td>
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<td>01.19.05</td>
<td>Transforming Psychology continued</td>
<td>2 Articles: <em>(Engaging Feminism &amp; Ally McBeal)</em></td>
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<td><em>My Feminism</em> (print documentary guide before class)</td>
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<td>01.24.05</td>
<td>Doing your best on assignments</td>
<td>Review Biography Reference Material, APA Style Resources, Essential Elements of APA Style, and WebCT Tools; Begin Biography</td>
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<td>APA Reference Format w/ Erin Nelson/Cathy Morris and Research Tips with Librarian Lyn Thaxton, Ph.D.</td>
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<td>01.26.05</td>
<td>The Intersection of Sex, Gender, and Sexuality</td>
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<td>Hyde Chapter 2</td>
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<td>01.31.05</td>
<td>The Intersection...continued</td>
<td>Memo Due</td>
<td>(print documentary guide before class)</td>
<td>Gender: The Enduring Paradox</td>
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<td>Memo Discussion</td>
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<td>02.07.05</td>
<td>Composing a Life; Gender Stereotypes and Gender Differences</td>
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<td>Complete Bateson Chapters 1-6; Begin Bateson Chapters 7-12; Hyde Chapter 3</td>
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<tr>
<td>02.09.05</td>
<td>Gender Stereotypes and Gender Differences...continued Sexism: Sexist Prejudice, Stereotypes and Discrimination</td>
<td>Surveys #3: Ideas about Men and Women and #4: Ideas about Male/Female Relationships</td>
<td>Schedule time to view Still Killing Us Softly in Media Center</td>
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<td>02.14.05</td>
<td>Images of Women -- Guest: Tracie Stewart, Ph.D.</td>
<td>Gender Rebellion Draft 1 Due</td>
<td>Still Kill Us Softly 3 (print documentary guide before viewing)</td>
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<td>02.16.05</td>
<td>Women of Color</td>
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<td>Hyde, Chapter 4</td>
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<td>02.21.05</td>
<td>Gender and Language</td>
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<td>Hyde Chapter 5</td>
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<td>02.23.05</td>
<td>Development Across the Lifespan</td>
<td>Gender Rebellion Due</td>
<td>Hyde Chapter 7</td>
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<td>02.28.05</td>
<td>Development…continued</td>
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<td>(print documentary guide before class)</td>
<td>Acting Our Age</td>
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<td>03.02.05</td>
<td>Abilities, Achievement, and Motivation</td>
<td>Hyde Chapter 8</td>
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<td>03.14.05</td>
<td>Women and Work</td>
<td>(print documentary guide before class) The Wilmar 8</td>
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<td>03.16.05</td>
<td>Work...continued</td>
<td>Hyde Chapter 9</td>
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<td>Complete Bateson Chapters 7-12</td>
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<td>03.23.05</td>
<td>Biological Influences on Women's Behavior</td>
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<td>03.28.05</td>
<td>Psychology and Women's Health Issues</td>
<td>Hyde Chapter 11</td>
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<td>03.30.05</td>
<td>Psychology and Women's Health Issues</td>
<td>3 Articles: US abortion in context: Selected characteristics and motivations of women seeking abortions. Why is abortion such a controversial issue in the United States &amp; The New Civil War: The psychology, culture, and politics of abortion Jane: An Abortion Service (print documentary guide before class)</td>
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<td>Female Sexuality</td>
<td>Interview Draft Due</td>
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<td>04.06.05</td>
<td>Lesbian and Bisexual Women: Guest</td>
<td>Hyde Chapter 13</td>
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<td>04.11.05</td>
<td>Male Violence Against Women</td>
<td>Hyde Chapter 14 (focus on pp.375-387)</td>
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<td>04.13.05</td>
<td>Male Violence...continued</td>
<td>War Zone (print documentary guide before class)</td>
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<td>04.18.05</td>
<td>Male Violence...continued</td>
<td>Interview Due</td>
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<td>04.20.05</td>
<td>Male Violence...continued</td>
<td>Hyde Chapter 14 (focus on pp.387 - 405)</td>
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<td>04.25.05</td>
<td>Women and Mental HealthGuest: Angela Coleman, WSI MA Student</td>
<td>Hyde Chapter 15</td>
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<td>04.27.05</td>
<td>Psychology of Men -- Guest</td>
<td>Survey #5: Questions about Feminism</td>
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<td>05.02.05</td>
<td>Looking Back, Looking Ahead</td>
<td>Summarize and Evaluate the Course</td>
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Date references: 03.02.05, 03.14.05, 03.16.05, 03.21.05, 03.23.05, 03.28.05, 03.30.05, 04.04.05, 04.06.05, 04.11.05, 04.13.05, 04.18.05, 04.20.05, 04.25.05, 04.27.05, 05.02.05
Appendix D3: Degree Requirements

Undergraduate Degree Requirements
(from Undergraduate Catalogue)

Programs Offered:

Bachelor of Arts in Psychology
  General Program in Psychology
  Concentration in Community Psychology
  Concentration in Pre-education

Bachelor of Science in Psychology
  General Program in Psychology
  Concentration in Community Psychology
  Concentration in Premedicine

Minor in Psychology

Department of Psychology
11th floor, Urban Life Building
404/651-2283
www.gsu.edu/psychology

Mary K. Morris, Chair
Roger Bakeman, Associate Chair
Sarah Cook, Director of Undergraduate Studies

Psychology is the science of the behavior of humans and animals. The topics of investigation range from the life sciences to the social sciences, and applications occur in clinical, industrial, community, and other social contexts. Psychological knowledge contributes to the understanding of experience and behavior and to the formation of optimal personal relations.

A career in psychology usually requires a graduate degree. An undergraduate major in psychology can serve as a prerequisite for graduate study in psychology or as background for other careers, e.g., business, law, medical or allied health sciences, and teaching. A major in psychology also can serve the general interest of liberal arts education. The department maintains reference materials, including videotapes and an Internet website to assist in career advisement. Students wishing to be psychology majors must first be advised by Academic Assistance of the College of Arts and Sciences and then by the psychology undergraduate adviser.

Program Admission
State admission requirements if applicable to degree.

Program Financial Information
State financial information, extra fees, scholarships or other expenses outside of regular GSU fees if applicable to degree.

Program Academic Regulations
Before taking upper-division courses, students must have completed 60 hours or have the permission of the instructor.

All majors must complete the courses in Areas 1, 2, and 3, as specified below. Concentrations have more specific requirements (for more details see the concentration requirements that are listed after the area requirements). Majors who meet the requirements in Areas 1, 2, and 3 and do not choose to pursue a concentration will graduate in the general program.

B.A. Degree
Students must take a foreign language and six additional hours from courses in Area E. (See “Foreign Language Requirement for B.A. and B.S. Majors,” previously described.)

**B.S. Degree**

Students must take nine semester hours from the courses listed below. We strongly recommend a two-course lab sequence in Principles of Biology, Introduction to Chemistry, or Introduction to Physics.


**Program Degree Requirements**

The Department of Psychology offers a general program in psychology plus concentration in specific areas of psychology. The general program offers the most choice in courses for a degree in psychology. Concentrations have more restrictive curricula than the general program and are intended to prepare students for a more specific career path. Most students will be in the general program. Students planning graduate school or other advanced training in an area related to one of the concentrations should consider applying for admission to that concentration.

In addition to the Program Degree Requirements, students must fulfill the College of Arts and Sciences Degree Requirements (see section 3030) and the University Degree Requirements (see section 1400).

**B.A. in Psychology and B.S. in Psychology**

**Areas A-E: Core Curriculum Recommendations**

1. Recommended course:
   - Psyc 1100 Natural Science Aspects of Psychology (3)

**Area F: Courses Appropriate to the Major (18)**

1. Psyc 1101 Introduction to General Psychology (3) (take here rather than in Area E)
2. Select two courses. (6)
   - Psyc 2040 Introduction to Applied Psychology (3)
   - Psyc 2050 Introduction to Drugs and Behavior (3)
   - Psyc 2070 Introduction to Human Sexuality (3)
   - Psyc 2101 Introduction to the Psychology of Adjustment: A Personal Growth Course (3)
   - Psyc 2103 Introduction to Human Development: Individual and Family Issues (3)
3. Non-Psychology courses (9)

**Area G: Major Courses (32)**

**General Program in Psychology (32)**

**Area 1: Basic Requirements (11)**

Area 1 courses must be completed by the end of the junior year (90 hours). Students with 90 hours who have not completed all Area 1 courses may not register for any psychology courses other than those in Area 1. To insure that this requirement is met, students should take Psyc 3010 (a prerequisite for Psyc 3030) during the first semester of the junior year. Failure to complete these courses in a timely manner may delay graduation.

**Required Courses:**

- Psyc 3010 Psychological Statistics (4)
- Psyc 3030 Principles and Methods of Psychological Investigation (4) (This course has a laboratory and is the Psychology Writing Across the Curriculum course.)
- Psyc 3110 Psychology of Interpersonal Behavior (3)

**Area 2: Advanced Core (9)**

Take one course from each group and one additional course from either group for a total of three courses.

**Group A:**

- Psyc 3140 Abnormal Psychology (3)
Psyc 4020  Social Psychology (3)
Psyc 4040  Developmental Psychology (3)
Psyc 4160  Theories of Personality (3)
Psyc 4510  Community Psychology (3)

Group B:
Psyc 4100  Cognitive Psychology (3)
Psyc 4110  Physiological Psychology (3)
Psyc 4120  Learning (3)
Psyc 4130  Sensation and Perception (3)

Area 3: Psychology Program (12)
Select 12 hours in psychology courses at the 3000 level or above.

Concentrations

Psychology majors wishing to graduate in a concentration must be accepted into the concentration and meet the requirements for graduation listed below. They also must meet all general program requirements listed above.

Students must complete all lower-division requirements prior to being admitted to a concentration. Application for a concentration may be made during the semester when the lower-division requirements will be completed or a later semester. Students completing a concentration will receive a certificate and will have an appropriate annotation placed on their transcript.

Community Psychology Concentration (32)

Community Psychology is an area of psychology that aims to apply psychology toward improving the well being of human groups. An ecological perspective, a prevention orientation, and an appreciation of diversity characterize this area. Often community psychology takes the form of “action research” in which knowledge gained from basic research or psychological theory is applied in real-world settings. At other times it takes the form of relatively more basic research on social problems or community functioning. The concentration is most appropriate for students who are concerned about social and environmental problems, such as drug abuse, homelessness, and violence. The curriculum should prepare graduates either to pursue graduate education in community psychology or to work in community-based organizations.

Area 1: Basic Requirements
(See “General Program in Psychology,” Area 1, described above.)

Area 2: Advanced Core (9)
1. Required Courses (6)
   Psyc 4020  Social Psychology (3),
   Psyc 4510  Community Psychology (3)
2. Select one course. (3)
   Psyc 4100  Cognitive Psychology (3)
   Psyc 4110  Physiological Psychology (3)
   Psyc 4120  Learning (3)
   Psyc 4130  Sensation and Perception (3)

Area 3: Psychology Program (12)
1. Select one course. (3)
   Psyc 4240  People in Organizations (3)
   Psyc 4520  Environmental Psychology (3)
2. Select one course. (3)
   Psyc 3520  Introduction to African-American Psychology (3)
   Psyc 4620  Psychology of Women (3)
3. Psyc 4770  Practicum in Psychology (3)
4. Select one additional psychology course at the 3000 level or above. (3)
Pre-Education Track in Psychology
Social Studies Education Concentration in Psychology

The Social Studies Education Concentration in Psychology is designed for students who wish to become secondary school teachers. This degree provides the initial content area preparation for the Alternative M.Ed Program in Social Studies Education in the College of Education at Georgia State University or a similar master’s degree at another university. Contact the department for additional information.

Premedicine Concentration

Students interested in attending medical school are advised to consider the premedicine concentration. Those wishing to pursue this concentration should be aware that the requirements will differ from those listed in the regular psychology curriculum. The psychology department has a premedicine adviser. For more information on the premedicine curriculum contact the Office of Academic Assistance, College of Arts and Sciences, Room 724, General Classroom Building, 404/651-2291.

Area H: Minor and Additional Courses

Students majoring in psychology are not required to take a minor.

Minor in Psychology

Students who wish to minor in psychology must take 15-18 hours in courses in psychology including at least nine semester hours at the 3000 level or above. Students taking more than 15 hours in courses in psychology may count the additional hours toward their electives or may consider completing a double major. (A grade of C or higher is required in all courses counting toward the minor.)

Honors Program and Psi Chi

The department participates in the Honors Program (See “Honors Program,” described previously) and sponsors a chapter of Psi Chi, the national honor society in psychology. Qualified students are encouraged to participate in these programs. The diplomas of students who complete the University Honors Program indicate that they graduate with honors in psychology.
Graduate Degree Requirements. Policies, and Procedures

(Graduate Program Handbook: 2005-2006)

Department of Psychology
College of Arts and Sciences
Georgia State University

Mary K. Morris, Chair
Frank Floyd, Director of Graduate Studies
Robin M. Jackson, Assistant Director of Graduate Studies
(August 1, 2005)
TABLE OF CONTENTS

INTRODUCTION .......................................................................................................... 222

THE CURRICULUM ..................................................................................................... 223

DEPARTMENTAL CORE CURRICULUM .................................................................... 223

CLINICAL CURRICULUM ............................................................................................ 224
  Required General Psychology Courses ................................................................. 224
  Required Clinical Courses ................................................................................... 224
  Supervised Clinical Work ..................................................................................... 225
  Professional Development ..................................................................................... 226
  Pre-Doctoral Clinical Internship ........................................................................... 226

COMMUNITY CURRICULUM .................................................................................... 228
  Courses Required for Community Students .......................................................... 228
  Courses Required for Joint Clinical and Community Students ............................. 228

DEVELOPMENTAL CURRICULUM .......................................................................... 230
  Courses Required for Developmental Students ..................................................... 230
  Minor in Developmental Psychology ..................................................................... 230

NBN CURRICULUM .................................................................................................. 232
  Courses Required for NBN Students ...................................................................... 232
  Courses Required for Joint Clinical and NBN Students ....................................... 232
  Elective Courses for NBN or Joint Clinical/NBN Students .................................... 233

SOCIAL/COGNITIVE CURRICULUM ..................................................................... 234
  Courses Required for Social/Cognitive Students .................................................. 234
  Courses for Primary and Secondary Emphases ...................................................... 234
  Elective Courses ..................................................................................................... 235
  Social/Cognitive Minor .......................................................................................... 235

WAIVING REQUIRED COURSES ......................................................................... 236
  Departmental Core Courses .................................................................................. 236
  Courses Required by Programs ............................................................................. 236

DEGREE REQUIREMENTS ........................................................................................ 237

MASTER OF ARTS DEGREE .................................................................................... 237
  Master’s Coursework .............................................................................................. 237
  Master’s Thesis and Committee ............................................................................ 237
  Transfer of a Master’s Degree from Another University ....................................... 237

DOCTORAL GENERAL EXAMINATION .................................................................. 239
  General Examination Committee ......................................................................... 239
  General Exam for Clinical Students ..................................................................... 240
  General Exam for Community Students ............................................................... 240
  General Exam for Joint Clinical and Community Students .................................. 241
  General Exam for NBN Students .......................................................................... 242
  General Exam for Joint Clinical and NBN Students ............................................ 242
  General Exam for Social/Cognitive Students ....................................................... 243

DOCTOR OF PHILOSOPHY DEGREE .................................................................... 244
  Doctoral Coursework .............................................................................................. 244
  Dissertation Committee ......................................................................................... 244
  Dissertation Proposal ............................................................................................. 244
  Dissertation and Defense ......................................................................................... 244

THESIS AND DISSERTATION GUIDELINES ............................................................ 246
  General Guidelines for Theses and Dissertations .................................................. 246
INTRODUCTION

The Graduate Program Handbook describes requirements for earning advanced degrees in the Department of Psychology, College of Arts and Sciences, Georgia State University. It gives departmental and program curricula along with departmental policies and procedures that govern graduate students. Graduate students in the department are expected to be familiar with all of the requirements, policies, and procedures described herein.

In addition to the requirements and policies described here, students are also responsible for knowing about and complying with the policies and requirements of the College of Arts and Sciences as described in the Graduate Catalog.

In general, students must adhere to the course and other requirements in effect when they enroll, as described in the edition of the Graduate Program Handbook that corresponds to the year they entered. However, students may elect to be governed by a later edition of the handbook. They should submit a request in writing to the Director of Graduate Studies.
THE CURRICULUM

Coursework and other requirements specified by both the department and the individual programs are described in this section of the handbook.

DEPARTMENTAL CORE CURRICULUM

All students are expected to complete the departmental core curriculum within two years of entering the program. The departmental core consists of five courses. All students take the following four courses:

8490  Scientific and Professional Ethics in Psychology  
8500  History of Psychology  
8410  Psychological Research Statistics I  
8420  Psychological Research Statistics II

Additionally, students are also required to take at least one methodology course as specified by their program.

Students who have taken similar graduate courses previously and for that reason believe that any of these required courses should be waived should make such requests in writing to the Director of Graduate Studies during their first semester of study. (See Waiving Required Courses later in this handbook.)
CLINICAL CURRICULUM

The following clinical and clinically-related course work and activities constitute the course of study for all students in the Clinical Program. Clinical students also complete all departmental and college requirements. Additional requirements for students enrolled in both the Clinical and either the Community or the Neuropsychology and Behavioral Neuroscience Program are described under those programs.

Required General Psychology Courses

Biological Bases of Behavior:
8610 Behavioral Neuroscience

Cognitive and Affective Bases of Behavior:
8540 Advanced Cognitive Psychology

Social Bases of Behavior (one of the following):
8510 Advanced Social Psychology
8200 Introduction to Community Psychology

Human Development (one of the following):
8551 Cognitive, Perceptual and Linguistic Development
8552 Social and Emotional Development

Required Clinical Courses

8020 Assessment I
8030 Assessment II
8650 Psychopathology
8670 Therapy I
8680 Therapy II
8050 Diversity Issues in Clinical Psychology

Consulting and Supervision (one of the following):
8260 Clinical and Community Consultation
9240 Clinical Supervision

Methodology (one of the following):
8010 Research Methods in Psychology
8014 Research Methods in Community and Applied Social Psychology

Clinical Electives (two of the following):
9130 Seminar in Advanced Approaches to Assessment*
9230 Seminar in Advanced Approaches to Therapy*
8620 Introduction to Clinical Neuropsychology
8630 Developmental Neuropsychology
9140 Neuropsychological Assessment
9470 Basic Processes in Group Interaction
8640 Psychopharmacology
* may be taken more than once if topic is different

**Supervised Clinical Work**

Clinical students must take a minimum of 30 credit hours of supervised clinical experiences distributed among the following practicum courses:

9950C Assessment (minimum of 6 credit hours)
9950E Psychotherapy
9950M Specialized Skills

In addition, all clinical students must register for 1 hour of Apprenticeship (9950A) fall and spring semesters of their first year in the program. This experience places first year students in clinical supervision with advanced students who are doing assessment and therapy.

Clinical students will complete a sufficient variety of practicum experiences to ensure a breadth of training in assessment and intervention. Students are expected to enroll in clinical practica every semester they are active in the program. Students will maintain a record of their activities for inclusion in their annual reports and internship applications using the spreadsheet provided to them by the Director of Clinical Training.

A Professional Development Seminar is offered weekly in the Psychology Clinic during the fall and spring semesters. Topics include clinical research, ethics, case presentations, and professional issues. All students are welcome. Students beyond their first year in the program are expected to register for the seminar (Psyc 9940 I, one credit) and attend consistently for a minimum of 4 semesters.

Students will enroll for 3 hours of Psychotherapy (9950E) or Specialized Skills (9950M) each semester they provide intervention services to one or two clients under the supervision of one supervisor. Students will enroll for one additional hour of credit for each additional client served under the supervision of the same supervisor. Students who provide intervention services under the supervision of additional supervisors will enroll for additional hours of Psychotherapy (9950E) or Specialized Skills (9950M) in accordance with the guidelines described above. Students will also enroll in a minimum of three credit hours of Assessment (9950C) or Specialized Skills (9950M) each semester they provide assessment services. Students will enroll for additional hours of credit based upon the services to be provided as determined by the supervisor. It is expected that advanced students will continue to carry at least one client in the Psychology Clinic throughout their time in the program.

Students must complete two semesters of assessment practica on-campus under the supervision of members of the clinical program faculty or staff before they may enroll in assessment practica for work conducted off-campus and/or under the supervision of clinicians who are not members of the clinical program faculty. Similarly, students must complete two semesters of intervention practica on-campus under the supervision of
members of the clinical program faculty or staff before they may enroll in intervention practica for work conducted off-campus and/or under the supervision of clinicians who are not members of the clinical program faculty. The Psychology Clinic and the Regents Center for Learning Disorders are examples of on-campus practicum sites.

Professional Development

Students will engage in at least two of the following three sets of activities to foster their professional development and strengthen their professional identity. Advisors will assist students in meeting these requirements and certify that they have been satisfied. Students should ensure that certification is recorded in students' clinical files.

1. Author or co-author of a presentation at a state, regional, or national meeting.
2. Author or co-author an article or chapter in a psychological journal or book.
3. Prepare or assist faculty in preparing a proposal for extramural funds.

Pre-Doctoral Clinical Internship

Clinical students are required to complete a 2000 hour one-year pre-doctoral internship in accordance with standards of the Education and Training Board of the American Psychological Association. Generally, credit for the clinical internship will be granted only for training completed within APA-approved centers. Students who find it necessary because of personal circumstances to seek an internship in a non-APA-approved center must petition the clinical faculty for approval. The limited number of APA-accredited internship/residency opportunities in the state of Georgia in general, and in the metropolitan-Atlanta area in particular, dictates that students must be prepared to complete this internship elsewhere.

Students wishing to apply for internship should meet with their clinical advisor and with the Director of Clinical Training no later than April 1 of the year preceding the internship appointment to review their readiness to begin the application process. Approval to apply for internship will be based on a determination of the student’s academic and clinical competence, a history of ethical and professional behavior, and satisfactory progress on the dissertation. Before being permitted to apply for internship students must have their dissertation proposal accepted and be making acceptable progress toward completion of the research. All other program requirements must also be completed. The clinical advisor will present the student to the Clinical Committee for approval. The Director of Clinical Training will inform the student of the committee’s decision.

The typical Association of Psychology Postdoctoral and Internship Centers (APPIC) internship/residency setting requires applicants to have between 800 and 1000 hours of practicum work. The practicum work includes direct client contact during the therapy/assessment session itself and supervision activities, as well as preparation for the therapy/assessment session and preparation of reports. This program will use the APPIC internship/residency formula to guide the distribution of time among preparation, supervision, and client contact for its practicum work. The APPIC formula states that approximately 25% of supervised clinical work hours should consist of direct client contact, with the remaining 75% consisting of related supervision and preparation activities. Students preparing themselves for the typical internship/residency should therefore accumulate 200-250 hours of direct client contact plus 600 to 750 hours of related activities. However, some students may choose to apply only to internships/residencies that require less than 800 hours of practicum work. Other students may find it possible to substitute other qualifications and accomplishments, such as
appropriately supervised intervention research or employment involving the provision of clinical services, for some of the hours of practicum work required by the typical APPIC program. Students are therefore encouraged to track carefully their clinical activities so that they accumulate the number of clinical, supervision, and preparation hours necessary to meet their professional goals.
COMMUNITY CURRICULUM

Students in the Community Psychology Program must meet all departmental and college requirements. Students who plan to seek licensure should also take four courses that satisfy the Clinical Program’s general psychology course requirement.

Courses Required for Community Students

8014  Research Methods in Community Psychology
8060  Issues of Human Diversity in Community Psychology
8200  Introduction to Community Psychology (plus one hour of Psyc 9910, Adv. Directed Readings)
8220  Community Interventions and Social Change
8230  Program Evaluation
8430  Psychological Statistics III or 9900 Qualitative Methods
9900  Prevention
9940B  Specialized Seminar in Psychology (3 x 1)
9960C  Practicum in Community Psychology (9 hours)

Two of the following:
8240  Psychology and Public Policy
8260  Clinical and Community Psychological Consultation
9900  Ecological Theory and Assessment
9900  Community Organizing

Courses Required for Joint Clinical and Community Students

8014  Research Methods in Community Psychology
8200  Introduction to Community Psychology
8220  Community Interventions and Social Change
8230  Program Evaluation
9900  Prevention
9940B  Specialized Seminar in Psychology (3 x 1)
9960C  Practicum in Community Psychology (9 hours)
Two of the following:

8240  Psychology and Public Policy

8260  Clinical and Community Psychological Consultation

9900  Ecological Theory and Assessment

9900  Community Organizing

Note. In addition, joint students satisfy all Clinical Program requirements. They will probably take 8260 because that course also satisfies Clinical Program requirements. For joint students, 8060 is satisfied with 8050 and 9960C may be satisfied with related clinical practica, upon approval from the Community faculty.
DEVELOPMENTAL CURRICULUM

Students in the Developmental Psychology Program must meet all departmental and college requirements.

Courses Required for Developmental Students

8012 Developmental Methods
8430 Psychological Statistics III
8551 Cognitive, Perceptual and Linguistic Development
8552 Social and Emotional Development
9940A Developmental Seminar.

There are no other required courses as such. Instead, in consultation with their advisor, students propose a course of study to the Developmental Program faculty, typically during their first semester in the program. They specify the courses they plan to take and provide a rationale for their choice. Once approved by the program faculty, this becomes a binding course of study for the student, although requests for subsequent modifications can be made. Courses that might be specified include, but are not limited to:

6130 Sensation and Perception
6400 Psychology of the Atypical Child
8060 Issue of Human Diversity in Psychology
8200 Introduction to Community Psychology
8510 Advanced Social Psychology
8540 Advanced Cognitive Psychology
8610 Advanced Behavioral Neuroscience
8662 Adolescence
9900 Special Topics in Developmental Psychology
9660 Infancy

Comm 6400 Development of Communication and Language

Minor in Developmental Psychology

A minor in developmental psychology consists of 12 semester hours of coursework that has been approved by the Developmental Program faculty. Students apply to the Developmental Program faculty for the minor either before or after taking either of the
two foundation developmental courses (8551 Cognitive and Linguistic Developmental, 8552 Social and Emotional Development) and under most circumstances before taking other coursework for the minor. For example, a minor might consist of one or both of the foundation courses (i.e., Cognitive and Linguistic Development, Social and Emotional Development;), Developmental Methods, or any of the content courses appropriate for developmental psychology offered in the department.
NBN CURRICULUM

All students in the Neuropsychology and Behavioral Neuroscience Program must fulfill all requirements of the Graduate School of Arts and Sciences and the Department of Psychology. In addition to course work, practica, and other academic/research pursuits available at the university, students are encouraged to take advantage of research and professional experiences, conferences, workshops and seminars related to neuropsychology and behavioral neurosciences nation- and world-wide.

Courses Required for NBN Students

(Track 2: Specialization in Behavioral Neuroscience)

8010  Research Methods in Psychology
8615  Functional Human Neuroanatomy
8616  Neurobiology I: Cellular Neurobiology
8617  Neurobiology II: Integrative Neurobiology
8618  Advanced Behavioral Neuroscience
8620  Introduction to Clinical Neuropsychology

In addition, each Track 2 student proposes an integrated plan of study that meets all departmental requirements and provides a clear focus that can be met by the faculty in the program and department. This plan of study can include courses listed in Track 1 below, those courses listed as program electives below (that can be taken as Psyc 9920 – Advanced Directed Readings), and additional courses available in other departments of the college.

Examples of other relevant courses include:
Physiological Basis of Motivated Behaviors
Behavioral Endocrinology
Mammalian Reproduction: An Ecological Perspective
Neural and Humoral Basis of Feeding
Circadian Rhythms
Reproduction
Aggression, Hormones, and Behavior
Neurobiology of Learning and Memory
Psychopharmacology
Survival Skills in Academia

Courses Required for Joint Clinical and NBN Students

(Track 1: Specialization in Clinical Neuropsychology)

8010  Research Methods in Psychology
8610  Behavioral Neuroscience or 8618 Advanced Behavioral Neuroscience
8615  Functional Human Neuroanatomy
8620  Introduction to Clinical Neuropsychology

8640  Psychopharmacology

9140  Neuropsychological Assessment

9900  Topics in Cognitive Neuroscience
9900  Efficacy of Neuropsychological Intervention
9950M Practicum: Specialized Skills

9 hours of clinical practica in neuropsychological assessment and intervention

Note. In addition, joint students satisfy all Clinical Program requirements (which includes 8610). This course of study is consistent with the guidelines proposed by the Houston Conference on Specialty Education and Training in Clinical Neuropsychology.

**Elective Courses for NBN or Joint Clinical/NBN Students**

6130  Sensation and Perception
6140  Introduction to Psychophysiology

8540  Advanced Cognitive Psychology

8630  Developmental Neuropsychology
9900  Seminar: Professional Development
SOCIAL/COGNITIVE CURRICULUM

Students in the Social/Cognitive Psychology Program must meet all departmental and college requirements.

Courses Required for Social/Cognitive Students

8010  Research Methods in Psychology (or another methods course endorsed by one’s advisor

8430  Psychological Statistics III

8510  Advanced Social Psychology

8540  Advanced Cognitive Psychology

One of the following:

6140  Introduction to Psychophysiology

8610  Behavioral Neuroscience

In addition, each student must complete:

Two Special Topics courses in Social Psychology

Two Special Topics courses in Cognitive Psychology

Courses for Primary and Secondary Emphases

By the end of the first semester, each student must select a primary emphasis, with 9 additional hours required from the list of courses below. The other topic becomes the student’s secondary emphasis by default.

For primary emphasis in social:

8060  Issues of Human Diversity in Psychology

8200  Introduction to Community Psychology

8552  Social and Emotional Development

9900  Special Topics in Social Psychology (in addition to the two required courses noted above)

For primary emphasis in cognitive:

6130  Sensation and Perception

8551  Social and Emotional Development

8560  Animal Learning and Cognition
9900  Special Topics in Cognitive Psychology (in additional to the two required courses noted above)

**Elective Courses**

Four are required. The 12 elective hours come from courses above or from other courses inside or outside the department. Special topics courses and research hours may be repeated as elective hours.

Students are expected to be involved in research throughout their graduate training. Their research projects include theses, dissertations, and other activities. Students are encouraged to initiate projects, carry them through to completion, and present their work at professional meetings and in journal articles. In addition, they are expected to attend departmental colloquia and meetings of the Hard Data Café, a biweekly Social/Cognitive research colloquium.

**Social/Cognitive Minor**

The Social/Cognitive program offers a minor that consists of 12 semester hours of coursework. These hours include four required courses – Advanced Social Psychology, Advanced Cognitive Psychology, Special Topics in Social Psychology, and Special Topics in Cognitive Psychology. Students from other program areas should apply to the Social/Cognitive program for minor status, either before or after taking one of the required courses.
WAIVING REQUIRED COURSES

The preceding sections detailed courses required by the departmental core or by specific programs. However, students may occasionally petition that a required course be waived in their case.

**Departmental Core Courses**

Requests that a departmental core course be waived are made in writing to the Director of Graduate Studies. Typically such requests are made when a student has taken a similar graduate course elsewhere. Students must make such requests in writing during their first semester of graduate study at GSU and should supply syllabi and other relevant information concerning the course they took previously. The Director of Graduate Studies, in consultation with faculty members who teach similar courses, then decides whether such requests should be granted.

**Courses Required by Programs**

Requests that courses required by the various programs be waived are made to the chair of the appropriate program. Typically such requests are made when a student has taken a similar graduate course elsewhere or has otherwise demonstrated competence, or thinks that a course other than one that satisfies a program requirement would better serve his or her education. As a general rule, students should make such requests during their first semester of graduate study at GSU and should supply any information or documentation relevant to their request. If the request is granted, the chair of the program should send a memo to the Director of Graduate Studies detailing which requirements have been waived for that student.
DEGREE REQUIREMENTS

All students in the program are considered doctoral students because only students who plan to earn the PhD are admitted. This section of the handbook describes requirements for the PhD, including requirements for the Master of Arts and the General Examination and, for clinical students, the pre-doctoral internship, all of which are prerequisites for the PhD.

MASTER OF ARTS DEGREE

Master’s Coursework

For the MA degree students must complete a minimum of 33 semester hours of graduate coursework, which includes

- 15 semester hours of departmental core courses,
- 12 semester hours of other psychology courses, and
- 6 semester hours of Master’s Thesis Research (Psyc 8999).

Master’s Thesis and Committee

The thesis is completed under the direction of a committee consisting of a chair (the thesis advisor) and at least two additional members. The chair must be a faculty member in the Psychology Department who is a member of the Graduate Faculty. At least one of the other members must be a faculty member from the Department of Psychology. The third member may be a person who has a faculty appointment in another department at Georgia State University or another university or research institution. A student who wishes to have someone serve on his or her committee who does not meet these criteria may add that person as a fourth member.

When working on their theses, students enroll for at least six semester hours of Psyc 8999, Master’s Thesis Research. The thesis must be defended satisfactorily in an oral examination. It is expected that the thesis will be successfully defended within 2½ years of entering the program (see Progress Guidelines later in this handbook).

It is the student’s responsibility to let the Assistant Director or Director of Graduate Studies know when the MA committee is formed, when the committee accepts the thesis proposal, and when the thesis is successfully defended (see Updating the Student’s Master Record later in this handbook).

Transfer of a Master’s Degree from Another University

Students who enter Georgia State University with a master’s degree from another institution may be allowed to waive the 33 semester hours required for a MA. To do so, they must ask the Director of Graduate Studies to evaluate their master’s degree before the end of their first semester at GSU, providing appropriate information and documentation. Three outcomes are possible.

1. If the Director of Graduate Studies, in consultation with the Graduate Program Committee, finds that the course work and the written thesis are essentially equivalent to those required at GSU, then GSU master’s requirements are waived. The student need only satisfy the hours required for the PhD.
2. If the Director of Graduate Studies, in consultation with the Graduate Program Committee, finds that the course work is essentially equivalent to that required at GSU but the master’s thesis is not, then the hours required for an MA are waived except for the six thesis research hours, and the student must complete a master’s thesis equivalent. The same standards apply as for a master’s thesis (including registering for six hours of Psyc 8999), except that the final copy does not need to be bound or submitted to the Office of Graduate Studies, College of Arts and Sciences. Instead, one copy of the thesis equivalent must be submitted to the Director of Graduate Studies.

3. If the Director of Graduate Studies, in consultation with the Graduate Program Committee, finds that the course work and the written thesis are not essentially equivalent to those required at GSU, then the student must satisfy GSU master’s requirements.
DOCTORAL GENERAL EXAMINATION

Students are required to take and pass a doctoral general examination stressing psychological knowledge and conceptual and integrative skills. The exam may take different forms across programs, as described below, but in each case is intended to be an independent demonstration of integration and competence.

General Examination Committee

Doctoral general examination committees comprise at least three members, at least two of whom must be faculty members in the Psychology Department. The chair of the committee must be a member of the Graduate Faculty. Committees of students who are jointly enrolled in both clinical and community or clinical and NBN programs must have representatives of both programs on their committees; at least two must be members of the clinical program. Similarly, students who elect to have a minor should have members of both major and minor programs represented on their committee.

When preparing for their general exam, students enroll for at least nine semester hours of Psyc 9980, Readings for General Examination. Before students can enroll, a chair must be named and the Assistant Director or Director of Graduate Studies informed.

Students may not sit for the Doctoral General Examination until the Audit for the Doctoral Exam has been completed. At least one semester before students plan to sit for their exam, they should ask the Assistant Director of Graduate Studies to initiate the audit. Students must have completed all departmental and program requirements before they request the audit. Exceptions for up to two program requirements may be made by the chair of the student’s program, although the student will remain obligated to complete these requirements before graduation. For students in the Clinical program, the two required advanced electives, as well as the required course in either Consultation or Supervision, are also not required before sitting for the general exam.

Note: Clinical students who are jointly enrolled in the Community Program may be required by the Community program curriculum to complete the course in Consultation prior to sitting for the general exam.

It is expected that the general exam will be passed within five years of entering the program (see Progress Guidelines later in this handbook). According to College of Arts and Sciences Policy, a student who fails the general examination the first time may retake the examination once following a minimum interval of six months; a second failure results in a dismissal action being initiated. The exam must be passed at least one academic year prior to conferral of degree.

It is the student’s responsibility to let the Assistant Director or Director of Graduate Studies know when the chair of the committee is named, when the audit is requested, and the outcome when the General Exam is taken (pass or failure; see Updating the Student’s Master Record later in this handbook).
General Exam for Clinical Students

The doctoral examination is designed to offer students the opportunity to demonstrate their ability to analyze and synthesize what they have learned through their coursework, practicum, and research experiences in the clinical program. To prepare for the exam, students should rely upon the syllabi, readings, notes, and related materials from the courses that they have taken, as well as on their clinical and research experiences. A list of expected core competencies in the areas addressed in the exam, theory, research design, clinical applications, ethics, and diversity issues, will be made available to students to assist them in preparing for the exam. Students are expected to take the exam at the end of their third or the beginning of their fourth year after completion of their thesis and required coursework. Each student must select a chair for his or her examination from among the clinical faculty. The questions are written by the clinical faculty who function as the doctoral examination committee. The questions will be the same for all students sitting for the exam in a given semester. Typically, the exam will be offered twice during the academic year, during the 10th week of the fall and spring semesters; however, at least two students must commit to take the exam in order for the exam to be offered in a given semester. Students wishing to sit for the exam in the fall semester must inform the Director of Clinical Training in writing by the middle of preceding semester. Students are cautioned to take the required nine hours of Psychology 9880 across two or more semesters in order to not create a registration overload.

The exam is composed of written and oral elements. In the written portion students respond to one of two alternative questions in each of four domains (theory, clinical applications, research methods, and ethics). Multicultural issues will be explicitly addressed in two of the four domains. Students are allotted eight hours to complete the written portion. Clinical faculty members will grade the written exam on a scale of one to five; a score of three is passing. Students must pass three of the four domains of the written exam in order to take the oral portion of the exam. The oral portion of the exam typically occurs two to three weeks after the written exam and is administered by the student’s chair and two other clinical faculty members. This examination allows the student to elaborate and remediate those questions, or parts of questions, that were not answered satisfactorily, and also may include an elaboration of answers that were satisfactory as well as an overall exploration of the breadth of the student’s knowledge and ability to integrate answers. At the conclusion of the oral portion of the examination, the committee meets and determines whether or not the student has passed the examination.

General Exam for Community Students

Prior to the general examination, and during the fourth year of the student’s career, the student will submit a paper entitled, “The Making of a Community Psychologist,” otherwise known as the fourth year paper. This paper will allow students a chance to identify scholarly and personal influences that have contributed to their identity and self-definition as community psychologists. Rather than assessing knowledge, competency and ability to complete doctoral work, this paper is a process and product designed to help students reflect on their identities at a critical juncture in their careers, as well as a means for the faculty to better understand the students, including their past, present and
future selves. On rare occasions, students may be asked to revise or clarify this statement, but it is not an examination per se.

The general examination will occur over a one week period. On the first two days, students will respond to a series of integrated questions focused around a specific issue or situation. Students will discuss theoretical, practical, political, methodological (research), and ethical aspects of the situation. The entire set of questions will be presented the first day. The ethical issues raised will be briefly listed, but not discussed in the examination. The student will be on the honor system and may not consult either written materials or colleagues during the exam.

One week later students will engage in a discussion with her or his committee regarding the written examination. Again, students should not discuss their examination with others prior to this part of the examination, nor should they consult written materials. The exception to this prohibition will be the ethics questions and issues, for which students may use any resources to prepare for a discussion during the oral portion of the exam. During the oral portion, faculty will be given the opportunity to ask for clarification and students will have the opportunity to elaborate or expand their answers to the questions. The ethics question will be given more complete attention during the oral exam. Faculty may also ask related questions regarding the student’s knowledge and competencies.

The student will earn one grade (pass-fail) for the entire written and oral examination. If the student does not pass the test, he or she will be given a second opportunity to complete the entire examination. A second failure would result in a dismissal action being initiated.

**General Exam for Joint Clinical and Community Students**

The structure and domains of the written and oral portions of the general examination are the same as that of the general exam for clinical students (see preceding section on General Exam for Clinical Students). The joint clinical and community students are responsible for the same core competencies addressed in the clinical general exam and for a reading list in the area of Community Psychology. In addition, readings that address the integration of Clinical and Community Psychology will be provided. The student’s general exam committee is co-chaired by a faculty member from the Clinical and from the Community Psychology Programs, and two other faculty, one from each program also serve on the committee. Faculty from both programs prepare a set of questions for the jointly-enrolled students that allow them to demonstrate their competence in both fields and their understanding of the differences and the points of convergence between the two areas.

**General Exam for Developmental Students**

The student and general exam committee together develop and agree to a list of readings on which, in large part, the examination will be based. Once the examination is scheduled, committee members submit questions to the chair, who then, in consultation with committee members, prepares an examination. To provide choice, questions may be asked in groups, with the student required to answer only some questions from each group. The examination will cover developmental theory, methods, contemporary
empirical work in a specified area, and ethics. The examination itself occurs across an eight hour period. One to two weeks after the student has completed the written examination, a two-hour oral defense of the examination is given. This examination allows the student to elaborate and remedy those questions, or parts of questions, that were not answered satisfactorily, and also may include an elaboration of answers that were satisfactory as well as an overall exploration of the breadth of the student’s knowledge and ability to integrate answers. At the conclusion of the oral portion of the examination, the General Examination Committee meets and determines whether or not the student has passed.

**General Exam for NBN Students**

Behavioral neuroscience (Track II) students, in concert with their general exam committee, must select one of the following options for satisfying the written component of the general exam:

1. **Area exam**
   
The student will delineate a major topic area and prepare an extensive reading list which will be approved by the committee. The chair of the committee will generate an exam from a list of questions submitted by each of the members of the committee, and the student will have one day to answer those questions.

2. **Area paper**
   
The student will write a publication-quality review of the major area. This paper can be used as the introduction to the dissertation proposal, if appropriate.

3. **NRSA (or other grant) application**
   
The student will write a predoctoral grant proposal. This proposal may or may not actually be submitted to the appropriate granting agency, depending on the assessment of the committee, but it should be prepared as if it is to be submitted.

Each of the above options is followed by an oral exam scheduled by the committee. The purpose of the oral exam is to give the committee a chance to address potential shortcomings in the written component of the exam. In the case of the predoctoral grant application, the committee may generate a reading list with which the student is expected to be familiar. In all cases, the committee shall assess the depth and breadth of the student’s knowledge of behavioral neuroscience and psychology as it relates to the major area.

**General Exam for Joint Clinical and NBN Students**

The general exam for clinical neuropsychology (Track I) students will be the standard general exam for clinical students. The relevant basic neuroscience and neuropsychology knowledge of these students will be assessed separately during the oral defense of the dissertation proposal.
General Exam for Social/Cognitive Students

The doctoral examination is designed to offer students the opportunity to demonstrate their ability to analyze and synthesize what they have learned through their coursework, directed readings, and research experiences in the social-cognitive program. To prepare for the exam, students should rely upon the syllabi, readings, notes, and related materials from the courses that they have taken, as well as on their research experiences. In addition, the examination committee may provide a more specific reading list. Students are expected to take the exam at the end of their third or the beginning of their fourth year after completion of their thesis and required coursework. From among the Social-Cognitive faculty, each student must select a chair and at least two members of his or her examination committee. Typically, the exam will be offered twice during the academic year, during the 10th week of the fall and spring semesters. Students wishing to sit for the exam must inform the Chair of the Social-Cognitive program in writing by the middle of preceding semester. Students are cautioned to take the required nine hours of Psychology 9880 across two or more semesters to avoid a registration overload.

The exam is composed of written and oral elements. In the written portion students respond to five questions from a subset of questions across three domains—cognitive psychology, social psychology, and research and quantitative methods (including ethics). Three of the questions will come from the student’s major concentration (i.e., social or cognitive psychology), one question will come from the student’s minor concentration (i.e., social or cognitive psychology), and one will come from research and quantitative methods. Students are allotted eight hours to complete the written portion. Committee members will grade the written exam on a scale of one to five; a score of three is passing. Students must pass four of the five questions of the written exam in order to take the oral portion of the exam. The oral portion of the exam typically occurs two to three weeks after the written exam and is administered by the student's chair and two other social-cognitive faculty members. This examination allows the student to elaborate and remediate those questions, or parts of questions, that were not answered satisfactorily, and also may include an elaboration of answers that were satisfactory as well as an overall exploration of the breadth of the student's knowledge and ability to integrate answers. At the conclusion of the oral portion of the examination, the committee meets and determines whether or not the student has passed the examination.
DOCTOR OF PHILOSOPHY DEGREE

Doctoral Coursework

For the PhD degree students must complete a minimum of 62 semester hours of graduate coursework beyond the MA, which includes

- 33 semester hours of program requirements and electives,
- 9 semester hours of Reading for the General Exam (Psyc 9980),
- 20 semester hours of Doctoral Dissertation Research (Psyc 9999).

Dissertation Committee

The dissertation is completed under the direction of a committee consisting of a chair (the dissertation advisor) and at least three additional members. The chair and at least two of the other members must be faculty members in the Psychology Department who are members of the Graduate Faculty. The fourth member may be a person who has a faculty appointment in another department at Georgia State University or another university or research institution. At least one member of the dissertation committee must be someone who has not previously served on either the student's master's thesis committee or general examination committee. A student who wishes to have someone serve on his or her committee who does not meet these criteria may add that person as a fifth committee member.

When nominating the members of the dissertation committee, the student, in consultation with his or her committee chair, will submit a Nomination of Dissertation Committee form (see Updating the Student’s Master Record later in this handbook) specifying the manner in which the members will satisfy the department’s intent that committees include: (a) expertise in content areas relevant to the dissertation topic, (b) expertise in methodology relevant to the research plan, and (c) a range of philosophical or theoretical orientations. The form should be accompanied with a current curriculum vitae for any person not holding a regular appointment in the Department of Psychology. The Graduate Program Committee will review the composition of each dissertation committee to ensure that it complies with the requirements of those guidelines.

When working on their dissertation, students enroll for at least 20 semester hours of Psyc 9999, Doctoral Dissertation Research, 3 hours of which may be taken before the dissertation committee is approved.

Dissertation Proposal

A written dissertation proposal is required and must be formally approved by the committee meeting as a whole. The proposal often assumes the proportions of a major paper and details the rationale, methods, and procedures for the proposed work.

Dissertation and Defense

Each dissertation committee will insure that the dissertation, in whole or in part, be presented in publishable form. Two formats are endorsed by the department (see Departmental Dissertation Guidelines) but typically dissertations contain a review of the
literature in a format that is endorsed by the dissertation committee. In addition
theses must follow all guidelines specified by the College of Arts and Sciences (see
College of Arts and Sciences Dissertation Guidelines).

The student’s oral defense of their dissertation is scheduled by the Assistant Director or
Graduate Studies. Dates and times for dissertation defenses are designated the semester
before the defense is to occur and students are asked to indicate their choices of the
available dates and times; this must be done no later than the first week of the semester
involved. A schedule of a semester’s dissertation defenses is posted early each semester.

The dissertation oral defense is open to all faculty, students, and other interested
individuals. The defense begins with a formal presentation of the dissertation. After
members of the dissertation committee have asked their questions, questions are sought
from members of the audience. At the close of the orals, the committee will confer in
private to consider approval of the dissertation and its defense.

It is the student’s responsibility to let the Assistant Director or Director of Graduate
Studies know when the PhD committee is formed, when the committee accepts the
dissertation proposal, and when the dissertation is successfully defended (see Updating
the Student’s Master Record later in this handbook).
THESIS AND DISSERTATION GUIDELINES

General Guidelines for Theses and Dissertations

The College of Arts and Sciences Office of Graduate Studies requires that each student assume full responsibility for the correctness in content and form of the thesis or dissertation (see College of Arts and Sciences Dissertation Guidelines). These guidelines specify standards with respect to composition, typography, and certain Graduate Board policies and requirements. For form and style, students are also required to follow the current edition of the APA Publication Manual.

Currently, the department accepts two different styles of dissertations (see Departmental Dissertation Guidelines). Theses and dissertations of previous graduate students are available in the university library for study and present good models of acceptable work as well as the standards of the department, the university, and the profession.

To complete the process, students must submit copies of their thesis or dissertation to the College of Arts and Sciences Office of Graduate Studies ONLY in digital .pdf format. All electronic files submitted for partial fulfillment requirements must conform to the university and Library of Congress national standards before final approval is granted by the Graduate Office. Students should also inform themselves as to the dates by which acceptable copies must be provided in order to graduate a given semester.

Policy on the Use of Consultants for Dissertations and Theses

Doctoral dissertations must be the product of the student to whom the degree is awarded. A doctoral committee’s approval of a student’s dissertation is not only an approval of the manuscript and of the research described in it but also a certification that the student is qualified to conduct research in the areas examined. Basic to that certification is the knowledge that the student was primarily responsible for designing the study, analyzing the data, and discussing the results, with minor help from his or her advisor, committee members, and others.

Hiring someone to conceptualize, design, analyze, or write up a dissertation or thesis undermines the purpose of a dissertation and is inconsistent with the mission of a research university. With regard to the use of consultants, no student is allowed to obtain help with the design and analysis of his or her thesis or dissertation without prior approval from his/her committee. Paid assistance for any aspect of the preparation of the thesis or dissertation (e.g., data collection or editing) should be agreed upon in advance in writing by the student’s committee. Violation of this policy may result in the student’s dismissal from the department and revocation of the degree, if already received. The student’s committee should ensure that the student is capable of conducting the research and carrying out the analyses described in the research proposal. At the very least, this will mean that the student has taken the necessary coursework or obtained adequate training to carry out the research appropriately.
Publication of Theses and Dissertations

Theses and dissertations are expected to provide important contributions to knowledge, which is one of the purposes of a PhD program. The department affirms the importance of submitting these contributions to peer evaluation for possible sharing with the scholarly community at large. To this end students are strongly encouraged to submit papers based upon thesis and dissertation research to scholarly journals for possible publication.

Students should collaborate with their committee chairs to submit their work for publication. If a student does not make the effort to publish and if the committee chair has a strong investment in the research effort and its findings, the chair may prepare articles based on the research. Students and faculty should be mindful of APA guidelines pertaining to authorship and other credits as prescribed in the APA Publication Manual.
Appendix D4. List of course offered by the department for the past three years.

Table D-1
Departmental Course Offerings by Year, Term, Level, # of Sections, # of Students and Average # of Students
Fall 2002

<table>
<thead>
<tr>
<th>Course Name AND NUMBER</th>
<th>Term/Year</th>
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Appendix D5: Summary Results of Surveys

Surveys were administered by the Office of Institutional Research (OIR) at Georgia State. Five groups were surveyed: faculty members, current graduate students, graduate students who received degrees recently, current undergraduate psychology majors, and undergraduate majors who received degrees recently. Surveys were either made available on-line (faculty and current students) or mailed (recent students) during February 2005. Here we report descriptive statistics made available to us by OIR and compare item statistics (using percentile scores) with other departments available in the OIR database. The departments are diverse, but percentile scores, especially for attitude items, provide a level of meaning that raw item means do not. The names of the departments used for comparison, their number of faculty members, and the percentage of those who are tenure-track are given in Table 1. Not all departments had all surveys available, so the number of departments used for comparison was 23, 22, 21, 20, and 19 for faculty, current graduate students, recent graduate students, undergraduates, and recent undergraduates, respectively.

Departments Used to Compute Percentile Scores

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<td>55</td>
</tr>
<tr>
<td>School of Nursing</td>
<td>28</td>
<td>46</td>
</tr>
<tr>
<td>Gerontology</td>
<td>4</td>
<td>25</td>
</tr>
</tbody>
</table>
Current Graduate Students

Requests to complete on-line surveys were sent to 96 currently-enrolled graduate students: 77 returned surveys (80%; Georgia State average is 47%). Two sets of questions were asked; one concerned the quality of the faculty and the department’s programs and the other concerned experiences as a graduate student (see Tables 6 and 7). Current graduate students rated the availability of faculty highly but not their teaching or the course offerings. Mean rating in most other departments were higher than Psychology’s for procedures used to evaluate student performance, the variety and frequency of course offerings, and the effectiveness of teaching methods used by the faculty. Graduate students found the program academically challenging, faculty members interested in their academic development, class sizes suitable for effective learning, but they did not feel there was open communication between faculty and graduate students about student concerns.

Table 6  
Quality of Faculty and Programs Per Current Graduate Students

<table>
<thead>
<tr>
<th>Item (1 = poor, 5 = excellent)</th>
<th>% Excellent</th>
<th>Mean rating</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Univ. Dept.</td>
<td>Univ. Dept.</td>
<td></td>
</tr>
<tr>
<td>Academic advisement available in the department</td>
<td>24</td>
<td>3.6</td>
<td>68</td>
</tr>
<tr>
<td>Career advisement available in the department</td>
<td>14</td>
<td>3.2</td>
<td>55</td>
</tr>
<tr>
<td>Availability of faculty to students outside the classroom</td>
<td>32</td>
<td>3.9</td>
<td>93</td>
</tr>
<tr>
<td>Effectiveness of teaching methods used by faculty</td>
<td>26</td>
<td>4.0</td>
<td>93</td>
</tr>
<tr>
<td>Procedures used to evaluate student performance</td>
<td>24</td>
<td>3.9</td>
<td>9</td>
</tr>
<tr>
<td>Frequency of graduate course offerings</td>
<td>14</td>
<td>3.3</td>
<td>14</td>
</tr>
<tr>
<td>Variety of graduate course offerings</td>
<td>18</td>
<td>3.5</td>
<td>9</td>
</tr>
<tr>
<td>Clarity of degree requirements</td>
<td>35</td>
<td>4.0</td>
<td>27</td>
</tr>
</tbody>
</table>

*Note. N = 1649 for university, 77 for department; percentiles are based on 21 other departments.*

Table 7  
Experience as a Current Graduate Student

<table>
<thead>
<tr>
<th>Item (1 = strongly disagree, 5 = strongly agree)</th>
<th>% St. agree</th>
<th>Mean rating</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Univ. Dept.</td>
<td>Univ. Dept.</td>
<td></td>
</tr>
<tr>
<td>Faculty members in the department are interested in the academic development of graduate majors.</td>
<td>44</td>
<td>4.1</td>
<td>82</td>
</tr>
<tr>
<td>The graduate program of study is academically challenging.</td>
<td>39</td>
<td>4.0</td>
<td>82</td>
</tr>
<tr>
<td>Faculty in the department are appropriately prepared for their courses.</td>
<td>41</td>
<td>4.1</td>
<td>39</td>
</tr>
<tr>
<td>I feel the graduate program is preparing me for my professional career and/or further study.</td>
<td>41</td>
<td>4.1</td>
<td>71</td>
</tr>
<tr>
<td>There is open communication between faculty and graduate students about student concerns.</td>
<td>36</td>
<td>3.8</td>
<td>11</td>
</tr>
<tr>
<td>Class size is suitable for effective learning.</td>
<td>50</td>
<td>4.2</td>
<td>91</td>
</tr>
</tbody>
</table>

*Note. N = 1649 for university, 77 for department; percentiles are based on 21 other departments.*
Twenty-five of the 77 responding graduate students currently enrolled in the psychology department provided written evaluative comments. The comments were constructive and detailed, with the average written response containing over 100 words. Eight students were positive in their evaluation of the department (e.g., “The psyc dept inspired me as a student and allowed me to attain all my goals in my graduate life.”), and highlighted the strength of the faculty members. A consistent recommendation, made by 7 of the respondents, was in regard to the clarity of the academic requirements. Specifically, students requested clearer and more detailed expectations in regard to theses, dissertations, coursework, and other milestones (e.g., “A clear roadmap of graduate requirements…and processes would be helpful.”), especially for first-year students. Eleven of the respondents suggested that courses could be expanded, improved, offered more consistently, or made more practical with hands-on professional content. Four students indicated that faculty mentoring could be improved, especially in regard to advising students on their professional careers (e.g., “Would like to have the ability to get more academic/career advisement.”). There were a number of more specific comments made by one or two students each, including too heavy of a student workload, overemphasis on academic professional trajectories, heavy academic load of joint-program relative to non-joint program students, students difficulties with poor administrative staff, and the late onset of therapy practica for clinical students. Although many students expressed overall satisfaction with the department, several comments suggested improvements such as clarification of student requirements, improved class offerings and course content, and enhanced faculty mentoring of students.

Recent Graduate Students

Requests to complete surveys were mailed in February 2005 to 39 students who had received graduate degrees within the past three years; 14 returned surveys (36%; Georgia State average is 46%). Names and addresses were obtained by OIR from the university, not the department. As a result, names included currently enrolled graduate students who had recently received an MA, several of whom informed us that they did not return this survey but responded instead to the survey intended for current graduate students. This may account, in part, for the low response rate.

The same two sets of questions were asked of both current and recent graduate students. Graduate students who had recently received a degree were generally more positive than current graduate students with respect to quality concerns. Still, for both, the items with the lowest ratings and percentile scores were procedures used to evaluate student performance and the variety of graduate course offerings (see Table 8). With respect to their experiences, ratings of current and recent graduate students were fairly similar; the lowest item for both concerned open communication between faculty and graduate students about student concerns (see Table 9).
Table 8  
Quality of Faculty and Programs Per Recent Graduate Students

<table>
<thead>
<tr>
<th>Item (1 = poor, 5 = excellent)</th>
<th>% Rating excellent</th>
<th>Mean rating</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Dept.</td>
<td>University Dept.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic advisement available in the department</td>
<td>28 36</td>
<td>3.6 3.6</td>
<td>45</td>
</tr>
<tr>
<td>Career advisement available in the department</td>
<td>18 14</td>
<td>3.2 3.1</td>
<td>43</td>
</tr>
<tr>
<td>Availability of faculty to students outside the classroom</td>
<td>37 43</td>
<td>4.0 4.0</td>
<td>45</td>
</tr>
<tr>
<td>Effectiveness of teaching methods used by faculty</td>
<td>34 29</td>
<td>4.1 4.1</td>
<td>43</td>
</tr>
<tr>
<td>Procedures used to evaluate student performance</td>
<td>31 21</td>
<td>4.0 3.8</td>
<td>33</td>
</tr>
<tr>
<td>Frequency of graduate course offerings</td>
<td>22 21</td>
<td>3.6 3.6</td>
<td>48</td>
</tr>
<tr>
<td>Variety of graduate course offerings</td>
<td>22 21</td>
<td>3.7 3.4</td>
<td>33</td>
</tr>
<tr>
<td>Clarity of degree requirements</td>
<td>45 50</td>
<td>4.2 4.3</td>
<td>67</td>
</tr>
</tbody>
</table>

Note.  N = 958 for university, 14 for department; percentiles are based on 20 other departments.

Table 9  
Experience as a Recent Graduate Student

<table>
<thead>
<tr>
<th>Item (1 = strongly disagree, 5 = strongly agree)</th>
<th>% St. agree</th>
<th>Mean rating</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Dept.</td>
<td>University Dept.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty members in the department were interested in the academic development of graduate majors.</td>
<td>49 43</td>
<td>4.2 4.1</td>
<td>33</td>
</tr>
<tr>
<td>The graduate program of study was academically challenging.</td>
<td>37 64</td>
<td>4.0 4.3</td>
<td>91</td>
</tr>
<tr>
<td>Faculty in the department were appropriately prepared for their courses.</td>
<td>49 50</td>
<td>4.2 4.3</td>
<td>57</td>
</tr>
<tr>
<td>I feel the graduate program prepared me for my professional career and/or further study.</td>
<td>43 57</td>
<td>4.0 4.1</td>
<td>62</td>
</tr>
<tr>
<td>There was open communication between faculty and graduate students about student concerns.</td>
<td>44 36</td>
<td>4.0 3.8</td>
<td>38</td>
</tr>
<tr>
<td>Class size was suitable for effective learning.</td>
<td>60 64</td>
<td>4.4 4.3</td>
<td>41</td>
</tr>
</tbody>
</table>

Note.  N = 958 for university, 14 for department; percentiles are based on 20 other departments.
Current Undergraduate Students

Requests to complete on-line surveys were sent to 1159 currently-enrolled undergraduate psychology majors: 415 returned surveys (36%; Georgia State average is 42%). One set of questions concerned the quality of the faculty and the department’s programs and the other concerned experiences as an undergraduate student.

Current undergraduates were reasonably satisfied with the frequency and variety of course offerings, more so than students in other departments (see Table 10), but reported generally less satisfactory experiences than students in other departments (see Table 11). Compared to students in other departments, psychology undergraduates gave lower rating to such items as: class size is suitable for effective learning, the undergraduate program is prepared me for career and/or study, and faculty members are interested in the academic development of their undergraduate majors.

Table 10
Quality of Faculty and Programs Per Current Undergraduate Student

<table>
<thead>
<tr>
<th>Item (1 = poor, 5 = excellent)</th>
<th>% Excellent</th>
<th>Mean rating</th>
<th>Per- centile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Univ. Dept.</td>
<td>Univ. Dept.</td>
<td></td>
</tr>
<tr>
<td>Academic advisement available in the department</td>
<td>24</td>
<td>17</td>
<td>3.5</td>
</tr>
<tr>
<td>Career advisement available in the department</td>
<td>17</td>
<td>10</td>
<td>3.2</td>
</tr>
<tr>
<td>Availability of faculty to students outside the classroom</td>
<td>24</td>
<td>20</td>
<td>3.7</td>
</tr>
<tr>
<td>Effectiveness of teaching methods used by faculty</td>
<td>25</td>
<td>20</td>
<td>3.8</td>
</tr>
<tr>
<td>Procedures used to evaluate student performance</td>
<td>20</td>
<td>15</td>
<td>3.7</td>
</tr>
<tr>
<td>Frequency of graduate course offerings</td>
<td>12</td>
<td>13</td>
<td>3.0</td>
</tr>
<tr>
<td>Variety of graduate course offerings</td>
<td>17</td>
<td>20</td>
<td>3.4</td>
</tr>
<tr>
<td>Clarity of degree requirements</td>
<td>28</td>
<td>25</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Note. N = 2400 for university, 415 for department; percentiles are based on 19 other departments.

Table 11
Experience as a Current Undergraduate Student

<table>
<thead>
<tr>
<th>Item (1 = strongly disagree, 5 = strongly agree)</th>
<th>% St. agree</th>
<th>Mean rating</th>
<th>Per- centile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Univ. Dept.</td>
<td>Univ. Dept.</td>
<td></td>
</tr>
<tr>
<td>Faculty members in the department are interested in the academic development of undergraduate majors.</td>
<td>35</td>
<td>25</td>
<td>3.9</td>
</tr>
<tr>
<td>The undergraduate program of study is academically challenging.</td>
<td>46</td>
<td>36</td>
<td>4.1</td>
</tr>
<tr>
<td>Faculty in the department are appropriately prepared for their courses.</td>
<td>40</td>
<td>36</td>
<td>4.0</td>
</tr>
<tr>
<td>I feel the undergraduate program is preparing me for my professional career and/or further study.</td>
<td>36</td>
<td>28</td>
<td>3.9</td>
</tr>
<tr>
<td>There is open communication between faculty and undergraduate students about student concerns.</td>
<td>31</td>
<td>26</td>
<td>3.7</td>
</tr>
<tr>
<td>Class size is suitable for effective learning.</td>
<td>35</td>
<td>23</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Note. N = 2400 for university, 415 for department; percentiles are based on 19 other departments.
Recent Undergraduate Students

Requests to complete surveys were mailed in February 2005 to 685 psychology undergraduates majors who had graduated within the past three years; 181 returned surveys (26%; Georgia State average is 34%). The same two sets of questions were asked of both current and recent undergraduate students, and in general their responses did not seem markedly different. With respect to quality, compared to current undergraduates, recent undergraduates tended to gave somewhat higher ratings but then their percentile scores were similar or somewhat lower (see Table 12). This was true, for example, for frequency and variety of course offerings. With respect to experiences, the responses of current and recently graduated psychology majors were essentially the same (see Table 13).

Table 12  
*Quality of Faculty and Programs Per Recent Undergraduate Students*

<table>
<thead>
<tr>
<th>Item (1 = poor, 5 = excellent)</th>
<th>% Excellent</th>
<th>Mean rating</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Univ.</td>
<td>Dept.</td>
<td></td>
</tr>
<tr>
<td>Academic advisement available in the department</td>
<td>31</td>
<td>16</td>
<td>3.7</td>
</tr>
<tr>
<td>Career advisement available in the department</td>
<td>13</td>
<td>6</td>
<td>3.1</td>
</tr>
<tr>
<td>Availability of faculty to students outside the classroom</td>
<td>33</td>
<td>21</td>
<td>3.9</td>
</tr>
<tr>
<td>Effectiveness of teaching methods used by faculty</td>
<td>32</td>
<td>25</td>
<td>4.0</td>
</tr>
<tr>
<td>Procedures used to evaluate student performance</td>
<td>22</td>
<td>15</td>
<td>3.8</td>
</tr>
<tr>
<td>Frequency of graduate course offerings</td>
<td>21</td>
<td>22</td>
<td>3.5</td>
</tr>
<tr>
<td>Variety of graduate course offerings</td>
<td>23</td>
<td>21</td>
<td>3.6</td>
</tr>
<tr>
<td>Clarity of degree requirements</td>
<td>38</td>
<td>34</td>
<td>4.0</td>
</tr>
</tbody>
</table>

*Note. N = 960 for university, 181 for department; percentiles are based on 18 other departments.*

Table 13  
*Experience as Recent Undergraduate Student*

<table>
<thead>
<tr>
<th>Item (1 = strongly disagree, 5 = strongly agree)</th>
<th>% St. agree</th>
<th>Mean rating</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Univ.</td>
<td>Dept.</td>
<td></td>
</tr>
<tr>
<td>Faculty members in the department were interested in the academic development of undergraduate majors.</td>
<td>44</td>
<td>24</td>
<td>4.1</td>
</tr>
<tr>
<td>The undergraduate program of study was academically challenging.</td>
<td>37</td>
<td>26</td>
<td>4.0</td>
</tr>
<tr>
<td>Faculty in the department were appropriately prepared for their courses.</td>
<td>48</td>
<td>40</td>
<td>4.2</td>
</tr>
<tr>
<td>I feel the undergraduate program prepared me for my professional career and/or further study.</td>
<td>32</td>
<td>23</td>
<td>3.7</td>
</tr>
<tr>
<td>There was open communication between faculty and undergraduate students about student concerns.</td>
<td>35</td>
<td>24</td>
<td>3.8</td>
</tr>
<tr>
<td>Class size was suitable for effective learning.</td>
<td>47</td>
<td>27</td>
<td>4.1</td>
</tr>
</tbody>
</table>

*Note. N = 960 for university, 181 for department; percentiles are based on 18 other departments.*
Undergraduate Student Plans

Of responding undergraduates, 79% reported that they planned to enroll in a psychology-related graduate program. Of responding undergraduate alumni, 15% reported that they were enrolled in a psychology-related graduate, 47% that they planned to enroll in a psychology-related graduate program, and 38% that they did not plan to enroll in a psychology-related graduate program.

Undergraduate Student Comments

Current Student Comments. Twenty-seven percent of responding students provided one or more comments. Themes that five more students commented on included expressions of general satisfaction with the quality of the department and faculty as well as the need to increase the diversity in nature of courses, the times and days courses are offered, and the frequency with which these courses are offered, reduce section size, provide additional career counseling, and improve student advising. Fewer than five students provided negative comments regarding the quality of the faculty or department, interactions with faculty, staff, or dissatisfaction with graduate student teaching assistants or departmental policies.

Alumni Comments. Thirty percent of responding students provided one or more comments. Themes that five or more students commented on included appreciation for the faculty, the program, and experience of GSU and the need to provide additional career counseling, improve quality and extent of student advising, increase the diversity in nature of courses and the times and days courses are offered, and encourage students to enroll in practicum opportunities as career or graduate school preparation. Fewer than five students offered comments on themes related to the quality of instruction by faculty or graduate student teaching assistants, dissatisfaction with interactions with departmental faculty and staff, communication about learning opportunities outside the classroom, and the need for better parking options.
Appendix D6. Undergraduate and Graduate Advisement Procedures

(Advisement procedures for undergraduate students)

ADVICEMENT

MAJORS ARE GIVEN BOTH ACADEMIC ADVISEMENT AND CAREER ADVISEMENT FROM THE OFFICE OF ACADEMIC ASSISTANCE IN THE COLLEGE OF ARTS AND SCIENCES AND FROM THE DEPARTMENT OF PSYCHOLOGY. THE OFFICE OF ACADEMIC ASSISTANCE IS LOCATED IN 724 GENERAL CLASSROOM BUILDING AND MAY BE REACHED AT (404) 651-2291. AN APPOINTMENT MAY BE MADE WITH A PSYCHOLOGY DEPARTMENT ADVISOR OFFICE BY CALLING (404) 651-2283.

Becoming a major. Students wishing to major in psychology must be first advised by the Office of Academic Assistance where they will receive a PACE form for the psychology major and will receive academic advisement. The Office of Academic Assistance has primary responsibility for all curriculum areas not directly related to the major, that is, all areas other than courses appropriate to the major (Area F) and major requirements (Area G).

The Department of Psychology offers advisement through its faculty, advisors, and the undergraduate web site. The web site contains information on both academic advisement and career advisement including information regarding the problems and implications of transition to the semester system. In addition, questions may be sent to the Advisor and to the Undergraduate Advisement Coordinator via e-mail through the web site. These questions are answered promptly. Frequently the web site is the fastest way to get an answer to a question.

Appointments with an advisor may be made in person in the Psychology office (Urban Life Bldg, 11th floor) or by phone. Advisors are also available by appointment and on a walk-in basis (subject to availability). During the semester, weekly times are scheduled where students may go to the Psychology Advisement Office (Urban Life Bldg, 11th floor) and receive assistance from an advisor on accessing the career information available through the World Wide Web using the computers in the laboratory.

Faculty members are available for advisement through individual appointments and during their office hours. All faculty have at least two scheduled office hours weekly during the semester. Detailed questions on academic requirements should be answered by the Office of Academic Assistance or a Psychology advisor. Faculty members are available for advisement about career opportunities and career preparation in their area of specialization. If needed, the advisor can assist in selecting a faculty member knowledgeable in the individual student’s area of interest.

PSYCHOLOGY ADVISORS DO NOT GIVE EXEMPTIONS TO ANY REQUIREMENT. All students are required to satisfy the academic requirements of the university, college and department, INCLUDING PREREQUISITES. If a student believes that an advisor has given an exemption to some rule or policy then the student should ask for clarification.
It is important for the student to realize that we offer advice. The student must fully understand the degree requirements and the implications of different career paths in order to make the best decisions. Only the student can make the best decisions for her or his life. The general catalog states, "It is the responsibility of the student to know and to satisfy the degree requirements of his or her academic program." Advisement by the departmental advisor will assist your planning. We are most knowledgeable about Area F (courses appropriate to the major), Area G (major requirements), and the minor section of Area H. The other core areas are the primary responsibility of the Arts & Sciences Office of Academic Assistance in 724 General Classroom Building.

Problems with the advisement system should be addressed to the Undergraduate Advisement Coordinator.

RE-ENTER

Students seeking re-entry must first contact the Registrar’s Office. After gaining re-entry, if the student was not a Psychology major previously, he or she will be placed in the College of Arts & Sciences as an undeclared major. If a student wishes to change his or her major to Psychology, the student must see a Psychology Department advisor before initiating a change of major with the Office of Academic Assistance. If the student was a Psychology major previously, the Registrar’s Office will place the student in the College of Arts & Sciences as a Psychology Major.

CHANGE OF MAJOR/MINOR

Students should go to the Office of Academic Assistance for the college in which they are currently enrolled and fill out a "change of major" form. To declare a major or minor in psychology the student should go to the Office of Academic Assistance for Arts and Sciences, 724 General Classroom Bldg. Students should then make an appointment with the psychology advisement office by calling (404) 651-2283. The student should bring both the change of major form, as well as a PACE form to that appointment. An advisor will then review the pace form and approve the change.

GRADUATION AUDIT

Students must apply for graduation THREE (3) semesters prior to the planned completion of their degree requirements. An application can be obtained through the Office of Academic Assistance, 724 General Classroom Building or from the Graduation Office in 231 Sparks Hall. A graduation audit will be sent to the student indicating the remaining requirements. The student will then need to set up an appointment with the psychology advisor by calling (404) 651-2283. The advisor reviews and signs the PACE form during the advisement session. The student has the responsibility for returning it to the Office of Academic Assistance promptly. The student must meet with the advisor and CANNOT simply leave the audit to be signed. The advisor IS NOT responsible for sending the audit to Academic Assistance.
MISSED APPOINTMENTS

Students who miss their advisement appointment may not schedule another regular advisement appointment that semester. They may receive advisement by attending the walk-in advisement period.

COURSE PETITIONS

The course number assigned indicates the classification of courses: 1000 level is freshman, 2000 is sophomore, 3000 is junior, and 4000 is senior level. Upon entry to GSU the Academic Assistance office, using criteria established by the University/College/Department, evaluates all transferred courses. Occasionally, when Academic Assistance denies equivalence, the student appeals to the department. The student has the responsibility of making the case for the requested conversion. The course transferred must be equivalent to or exceed the GSU course claimed as an equivalent. Students must attach a syllabus, course description and any relevant documents with the appeals form. _A catalog description alone will not be sufficient in lieu of a syllabus._

TIPS FOR NEW PSYCHOLOGY MAJORS

1. **What courses are required for the psychology major?** These questions can be answered by referring to your PACE form. The PACE form lists all of the classes you have taken, your grade in each course, areas left to fulfill for your degree, etc. We encourage you to make regular appointments with the Office of Undergraduate Advisement to go over the PACE form in order to stay on track with your coursework.

2. **Are there prerequisites for psychology courses?** Yes, in the major courses. The 1000-2000 level courses do not have prerequisites. However, most of the 3000-4000 level courses require that you have taken Psyc 1101 (Intro to General Psychology). _NO COURSE CAN BE TAKEN CONCURRENTLY WITH ITS PREREQUISITE._ Also, many of the other courses require that you have taken Psyc 3010 (Psychological Statistics) and/or Psyc 3030 (Principles and Methods of Psychological Investigation). We recommend that you first take Psyc 1101, then when you are ready to take your upper-level courses, take Psyc 3010 in one semester, then Psyc 3030 in the following semester, then 4000 level courses that require both Psyc 3010 & 3030, in the following semester. _NOT ALL COURSES ARE OFFERED EACH SEMESTER, SO IT IS IMPORTANT THAT YOU PLAN AHEAD, TO AVOID DELAYING YOUR GRADUATION._ Students who wish to take Applied Practica (Psyc 4770) must have taken Psyc 3110 as a prerequisite and should plan to take Psyc 3110 NO LATER THAN THE FIRST SEMESTER JUNIOR YEAR. _Note: All Community Concentrations are required to take Psyc 4770 Applied Practica (Psyc 4760 will NOT fulfill this requirement for the Community concentration) and MUST HAVE Psyc 3110 AS A PREREQUISITE._ Enrollment in Research and Applied Practica is _NOT AUTOMATIC_ for Community concentration majors (See Chapter 5 for application information). Attend advisement regularly to stay on top of your coursework, and remember that you are ultimately responsible for the completion of all required courses. See Chapter 3 for Degree Program requirements, course planning and for further prerequisites regarding 4760/4770 and other courses._ ALL 1000-2000 LEVEL COURSES MUST BE COMPLETED WITH A GRADE OF “D” OR BETTER TO COUNT TOWARD YOUR DEGREE AND FOR PREREQUISITES. ALL 3000-4000 LEVEL COURSES MUST BE COMPLETED WITH_
A GRADE OF “C” OR BETTER TO COUNT TOWARDS YOUR DEGREE AND FOR PREREQUISITES.

3. What kinds of opportunities exist for the graduate with a Bachelor’s degree in psychology? The graduate with a psychology degree acquires a variety of useful skills for today’s working world. Many of your questions can be answered by consulting the GSU website for psychology. Go to: www.gsu.edu/psychology to take you to the psychology page. Click “Undergraduate,” and look under the heading titled “Careers/Other Resources,” and click “in Psychology.” There you will find various topics to help you plan your career goals. Especially useful is the link titled “Careers in Psychology.” You may also schedule an appointment with the Office of Advisement to discuss career and post-graduate options. Another good website is Psych Web located at www.psywww.com. Scroll down and look for the link “Tip sheets for Psych Majors.” This link has information about graduate programs in psychology.

4. What about graduation? All degree candidates must submit an application for graduation at least THREE (3) SEMESTERS PRIOR TO the expected graduation date. To find out the exact deadline for graduation applications, consult the most recent schedule of classes, and look under the heading “Graduation Information.” Applications are located on the wall at the Graduation Office, Sparks 231. Remember, you must have a cumulative GPA of 2.0 to graduate, and all required major courses in psychology must be complete with a grade of C or better.
PERFORMANCE EXPECTATIONS

Students must adhere to the progress guidelines and performance standards of both the College of Arts and Sciences and the Department of Psychology. This section of the handbook describes these guidelines and standards, describes circumstances that may lead to a dismissal action being initiated, and summarizes appeal procedures.

EXPECTED PROGRESS GUIDELINES

Graduate students in the Department of Psychology are expected to make timely progress in their program of study. Specifically, they are expected to achieve critical milestones within the time limits defined by the progress guidelines below. Failure to do so is regarded as a failure to maintain the levels of academic performance required by the department and, as such, is considered grounds for scholastic termination by the College of Arts and Sciences.

Critical milestones are assessed in years since the student entered the program. For example, students are expected to have their MA proposal accepted after being in the program for a year and a half. They are placed on probation if their MA proposal has not been accepted after two years (which would be the beginning of their third year), and a dismissal action may be initiated if they have not had their MA proposal accepted by the end of their third year (which would be the beginning of their fourth year). Years are adjusted for time spent on program-required pre-doctoral internships, for approved leaves of absence, and for other circumstances such as approved medical leave or disability as detailed elsewhere in departmental, college, and university policies.

For each milestone, the number of years expected, the number of years after which the student is placed on probation, and the number of years after which a dismissal action may be initiated are given in the table below.

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Expected within</th>
<th>Probation after</th>
<th>Dismissal after</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA proposal accepted</td>
<td>1½</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>MA defense passed</td>
<td>2½</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Dept. Core completed</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>GE Committee formed</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>General Exam passed</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>PhD proposal accepted</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>PhD defense passed</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

Milestones for the MA do not apply to students who entered with an approved MA, but students who entered with an approved MA, significant graduate coursework credited
from previous programs, or both, would be expected to reach further milestones at appropriately earlier points in time. Timelines will be determined individually at the time credit is given.

If a student’s progress indicates probation, the student will receive notice of this from the Director of Graduate Studies (this is termed a scholastic warning by the College of Arts and Sciences). At this point, the student should submit a memo to the Director of Graduate Studies documenting how he or she intends to achieve the relevant milestone before reaching the criterion for initiating a dismissal action.

If a student’s progress indicates initiation of a dismissal action, the student will receive notice of this from the Director of Graduate Studies. Students may appeal the pending dismissal action by petitioning the Graduate Program Committee but they must do so before the end of the semester in which their progress first indicated initiation of a dismissal action. If they appeal, students should submit to the Director of Graduate Studies an individualized plan, supported by their advisor, detailing dates by which they intend to meet any milestones yet unachieved.

**ANNUAL STUDENT REPORTS AND REVIEW OF STUDENTS**

Students are evaluated annually by their advisors in consultation with other faculty members in their program and the department, as appropriate. Beginning the student’s second year in the program, these evaluations occur each fall semester. They emphasize the previous academic year but may also consider the current year, up to the time the evaluation is written. All aspects of a student’s activities and performance are reviewed, including progress, academic performance, professionalism, and ethical orientation. Evaluation of clinical students also involves the assessment of their clinical skill.

The goal of the review is to assess each student’s performance and progress in his or her program in order to better assist and guide them as part of the advisement process. The annual review summarizes and reflects the faculty’s judgment regarding each student’s ability to complete more advanced academic work, to function successfully as a service provider if required by the student’s program, and to master all aspects of professional training relevant to the student’s program area.

At the beginning of fall semester, students submit to the chair of their program an annual report describing their research and academic activities and accomplishments during the previous academic year and their plans for the remainder of the current academic year. In addition, clinical students detail their clinical activities. This report is considered during the annual review of students.

Students are provided written feedback on the results of the review during the semester in which the review takes place and are afforded the opportunity to discuss these results with their advisor. The annual review also serves as the basis for the development of a corrective action plan if significant problems or weaknesses are identified. In those instances when a student’s performance is judged to be unsatisfactory, the letter of evaluation will include notice of probationary status (i.e., scholastic warning). This is
independent of any scholastic warning that may be occasioned by failure to meet progress guidelines.

Students receiving such a warning from their program will be evaluated again at the end of the spring semester of that academic year. If at that time the faculty judges that the circumstances have not changed and the student’s performance is again rated as unsatisfactory, a dismissal action will be initiated. As with appeals for failure to meet progress guidelines, students may appeal their pending dismissal; see Appeal Procedures later in this handbook.

PROFESSIONAL BEHAVIOR AND CONTINUANCE IN THE PROGRAM

All Students

All students are bound by standards of professional conduct as specified by the American Psychological Association (see Ethical Principles of Psychologists and Code of Conduct). Violations may result in initiation of a dismissal action.

Clinical Students

The clinical committee utilizes the following criteria to govern its decisions concerning students’ continuance. Students found to be in violation of one or more of the following criteria are subject to dismissal from the Clinical Program by majority vote of the clinical faculty. The committee’s judgments are made within the context of students’ expected levels of performance and accomplishment given their seniority in the program.

1. The student must complete the required and elective program and departmental course work, and other departmental, college, and university graduate degree requirements appropriate to their status in the department in a competent and timely manner.

2. The student must demonstrate the ability to develop, conceptualize, and complete major research projects in an independent manner, and to describe and explicate, both orally and in writing, the significance of such research as demonstrated in thesis and dissertation work, additional research projects, and research courses.

3. The student must demonstrate the ability to analyze, integrate, and make use of psychological knowledge gained from courses and independent reading in a unified, meaningful way as demonstrated by the student in course work, practicum and internship activities, the doctoral general examination, and thesis, dissertation, and other research work.

4. The student must display sensitivity and respect for the cultural, racial, and individual diversity of their clients, research participants, staff, and other professionals. The student must relate to clients, research professionals, staff, and other professionals in a mature, responsible, cooperative, and professional interpersonal manner.

5. The student must practice the levels of clinical judgment and skill appropriate to their level of training. The student must show the ability to use psychological knowledge to
competently and adequately develop and carry out appropriate clinical treatments with a range of actual clients.

6. The student must recognize the limits of his or her professional skills and abilities and work within these limits. The student must recognize when supervision from a more experienced clinician is needed.

7. The student must work well under supervision while in the program and show the potential to function independently as a scientist-practitioner upon completion of the PhD.

8. The student will not present or describe himself or herself as a “psychologist” until licensed as such or employed in a state or federal government position that carries the psychologist job title.

9. The student must be free of personality or behavior problems that would prevent the student from functioning effectively as a clinical psychologist.

10. The student must adhere to generally accepted scientific, professional, and ethical standards of behavior and judgment that include refraining from any behaviors which would be subject to sanctions by the American Psychological Association.

Students who wish to appeal a decision of the Committee should review the procedures described later in this handbook (see Dismissals and Appeals).

**GRADES AND GRADE POINT AVERAGE**

**Letter Grades**

The College of Arts and Sciences and the Department of Psychology expect students to maintain superior performance in course work. The College of Arts and Sciences requires that a grade point average (GPA) of 3.0 be maintained and stipulates that a graduate student is subject to dismissal for failure to achieve a 3.0 cumulative GPA by the end of the next 18 semester hours of enrollment in letter-graded courses after the GPA has fallen below 3.0.

The department requires a GPA of 3.0 across all departmental courses. A student whose Psychology GPA falls below 3.0 is subject to dismissal for failure to achieve a 3.0 cumulative Psychology GPA by the end of the next 18 semester hours of enrollment in letter graded courses after the GPA has fallen below a 3.0. It is important to note that courses taken outside the Psychology Department are not used to compute this GPA, although these courses are computed in the overall GPA monitored by the college.

Letter-graded courses used to satisfy degree requirements (i.e., courses required by the department, the program, or both, including electives whose hours are required for the MA or PhD) must be passed with a grade of B or better. When the student earns a C or F in one of these courses, it must be retaken until a B or better is earned. Only the most recent attempt is computed in the Psychology GPA. All course attempts are included in
the GPA calculated by the Registrar’s Office. When there exist various courses that meet the same requirement, the student is allowed to take another course in that set. In this case, both grades are computed in the GPA. Although there is no formal limit to the number of times a course may be repeated, taking a course repeatedly with continued poor grades could adversely affect the GPA criterion, the progress guidelines, or both.

Satisfactory and Unsatisfactory Grades

Certain courses in the department are graded only as satisfactory (S) or unsatisfactory (U). These include thesis hours, doctoral general exam hours, and dissertation hours, as well as practicum hours. Although these hours are not included in the student’s GPA, unsatisfactory performance is considered a serious matter.

Theses, exams, and dissertations.

Thesis, exam, and dissertation hours earn grades of in progress (IP) while they are being taken. When a defense or exam is passed, these grades are changed to satisfactory (S). However, when a defense or exam is failed, these grades are changed to unsatisfactory (U). The student has 8 months to correct the deficit by passing the defense or examination. If this does not occur, the Director of Graduate Studies will initiate a dismissal action.

Practica.

Like thesis, dissertation, and exam hours, practica are graded as S or U. Satisfactory performance implies that the following questions, where applicable, have all received affirmative responses from both departmental and on-site supervisors.

1. Did the student demonstrate the ability to analyze, integrate, and make use of psychological knowledge gained from courses and independent reading?

2. Did the student display sensitivity and respect for the cultural, racial, and individual diversity of their clients and research participants?

3. Did the student practice levels of judgment and skill appropriate to his/her level of training?

4. Did the student recognize the limits of his/her professional skills and abilities and work within these limits? Did the student recognize when supervision from a more experienced practitioner was needed? Did the student respond to the supervisor’s input and feedback in a conscientious and responsible manner?

5. Did the student relate to clients, staff, and other professionals in a mature, responsible, cooperative, and a professional interpersonal manner?

6. Did the student adhere to generally accepted scientific, professional, and ethical standards of behavior and judgment? Did he or she refrain from any behaviors which would be subject to sanctions by the American Psychological Association?
A student who receives a U in practicum should anticipate remedial action as recommended by the student’s advisor and program chair. Any student receiving a U in practicum will receive a letter of scholastic warning from the Director of Graduate Studies. If an additional U in practicum is earned, the Director of Graduate Studies will initiate a dismissal action. Students who wish to appeal should review the procedures described later in this handbook (see Dismissals and Appeals).

Grade Appeals

The department follows the current procedures and policies of the College of Arts and Sciences regarding grade appeals and complaints. See the College of Arts and Sciences Student Grievance Policy.

DEPARTMENTAL POLICY ON CHEATING

The Faculty of the Department of Psychology strongly affirm the following principles:

1. Work presented by students in fulfillment of class requirements or other requirements of an academic program should be that student’s own work, and not that performed by someone else.

2. Granting of credit for such work implies that the piece of work has been accomplished for a particular course or requirement.

3. The same piece of work should not be presented for credit for two different courses or requirements without special arrangements being made with relevant faculty.

4. Falsification of any kind of data, including clinical work samples, is a violation of academic and ethical principles.

The department follows the University’s Policy on Academic Honesty described in the General Catalog for Georgia State University and the College of Arts and Sciences Graduate Bulletin.
DISMISSEALS AND APPEALS

Dismissal Procedures

The Department of Psychology is committed to supporting students in their progress through the program in every way consistent with the maintenance of acceptable academic and professional standards. There are, however, occasions when the standards of the College of Arts and Sciences or the Department of Psychology are not met and dismissal (called scholastic termination by the College of Arts and Sciences) must be considered.

It is the College of Arts and Sciences that ultimately assumes responsibility for both the admission of students and, in rare cases, their dismissal. Nonetheless, a psychology student is subject to program, department, and college standards. The procedure for dismissal and appeal differs somewhat when a program standard (e.g., practica performance), a departmental standard (e.g., progress guidelines), or a college standard (e.g., cumulative GPA) is violated.

When a program standard is violated, the student will first be required to meet with his or her advisor and program chair. If the student does not resolve the deficiency to the satisfaction of the program, the program chair will forward a recommendation to initiate a dismissal action to the Director of Graduate Studies, who will inform the student. Information on appeal procedures is provided below.

When a departmental standard is violated, the dismissal action will be initiated by the Director of Graduate Studies. This will occur only after the student has failed to address or correct the deficiency during any specified probationary period.

When a college standard is violated, the dismissal action is taken by the Associate Dean for the Social and Behavioral Sciences. As is true at the departmental level, this will occur only after the student has failed to correct the deficiency during any specified probationary period.

Appeal Procedures

**Reasons for initiating dismissal at the program level include:**
1. two unsatisfactory practica performances (6 hours total of U),
2. an unsatisfactory annual evaluation spring semester after an unsatisfactory annual evaluation the previous fall semester, and
3. Violation of professional ethical principles endorsed by the American Psychological Association.

**Reasons for initiating dismissal at the departmental level include:**
1. failure to present an acceptable individualized plan to the Graduate Program Committee within the semester the student’s progress met the criterion for dismissal,
2. failure to pass a thesis or dissertation defense within eight months after a failed defense, and
2. failure to maintain a Psychology GPA of 3.0 after the probationary period of 18 semester-hours.

In either case (program or departmental level reason), the student will receive notice from the Director of Graduate Studies that dismissal is being considered. The student may appeal this, in writing, to the Director of Graduate Studies, although such an appeal must be received no later than 20 business days after notice was given. The appeal will be considered by the Graduate Program Committee. At the meeting called for this purpose, the student has the opportunity to present evidence, including any testimony from faculty with whom he or she has worked, that he or she is capable of successful completion of the graduate program and that the conditions leading to the dismissal action represent atypical behavior or the presence of temporary, mitigating circumstances. The committee will inform the student of their decision within 30 business days of receiving the appeal.

Actions of the Graduate Program Committee may include, but are not limited to: (a) Let the dismissal action stand, in which case the student may not continue in the program. (b) Place the student on probation and specify remedial actions which must be taken before the student may continue in the program. Such actions are at the discretion of the Graduate Program Committee as informed by faculty who are familiar with the student’s work. Retaking courses with low grades is one possible action. A deadline for completing such remedial action must be specified. (c) Allow the student to complete requirements for a terminal master’s degree.

If an appeal is granted and the student is placed on probation, the student’s advisor and Director of Graduate Studies will monitor whether the student has met the specified requirements by the specified deadline. If the student has not done so, the Director of Graduate Studies will again initiate a dismissal action. The student may again appeal the action to the Graduate Program Committee.

If the student believes that a decision by the Graduate Program Committee has been arbitrary, capricious, or discriminatory, he or she may appeal its decision in writing to the chair of the department. This action must be taken within 20 business days of the date of the Graduate Program Committee’s decision.

If the student does not appeal the decision or if the appeal is denied at the Departmental level, the Director of Graduate Studies will forward the recommendation for dismissal to the Associate Dean for Social and Behavioral Sciences in the College of Arts and Sciences. The Associate Dean will notify the student that this has occurred. The student may then appeal the decision through normal channels within the College of Arts and Sciences.

**Reasons for initiating dismissal at the college level include:**
1. a second failure of the doctoral general exam, and
2. failure to maintain a cumulative GPA of 3.0 after the probationary period of 18 semester-hours.
In such cases, the Graduate Program Committee is not empowered to consider an appeal. The student may, however, request support from the Graduate Program Committee for an appeal to the appropriate college committee. The student should refer to the College Graduate Bulletin for instructions on appeal procedures at this level.

**Grievance Procedures**

The department follows the current procedures and policies of the College of Arts and Sciences regarding grade appeals and other complaints. Students who believe that they have been treated in an unethical, unprofessional, or unfair manner by university faculty, staff, administrators, or fellow students should act to correct the situation. Several procedures are available to do so. First, students may bring the situation to the attention of their advisor, the chair of their graduate program, the Director of Graduate Studies, or the chair of the department. At the college level, students may bring their complaint to the attention of the Associate Dean. Students may also discuss the situation with the University’s ombudsperson (404-651-2220). Finally, students may follow formal grievance procedures. See the College of Arts and Sciences Student Grievance Policy.
ADMINISTRATIVE PROCEDURES

A variety of university, college, and departmental administrative matters are described in this section. Students should also be familiar with college policies as described in the Graduate Bulletin.

UNIVERSITY AND COLLEGE MATTERS

Registration for Courses

There are two opportunities to register for courses each semester. Early registration is held during the middle of the preceding semester. Regular registration is held immediately before the beginning of the semester. Typically students register via the internet. Computer registration is available on campus at times and locations listed on the following URL: https://www.gosolar.gsu.edu/webforstudent.htm

Student appointment times are valid beginning at your assigned time and continuing through the last day for each registration phase. Early registration appointments are assigned with priority to students scheduled to graduate and, then to continuing students according to the total credit hours earned. Regular appointments are randomly assigned regardless of total credit hours earned.

Students needing a particular course should register and pay for it during early registration since it cannot be assumed that spaces will remain in the course through regular registration.

Special Authorization

Many courses, designated by an asterisk in the Schedule of Classes, require special authorization because there are specific prerequisites for the courses. Students must obtain authorization at least one day before their registration appointment time. Authorization for thesis or doctoral exam hours is granted by the Assistant Director of Graduate Studies in advance of registration for all students with an approved chair. Authorization for dissertation hours is granted in advance for all students with an approved committee. Authorization for independent studies and directed research is obtained by submitting a form signed by the supervisor to the Assistant Director of Graduate Studies. When a course requires permission of instructor, authorization is obtained from the instructor. Authorization for clinical practica is granted by the Practicum Coordinators of the Clinical or Community Programs.

Forms that should be filed with the Assistant Director of Graduate Studies, if appropriate:
Register for 9910, Advanced Directed Readings
Register for 9920, Advanced Research in Psychology
Register for 9960C, Practicum in Psychology, Community

Overloads
Approval is required to register for more than 18 hours of credit for any semester. Students who wish to enroll for more than 18 hours should complete the overload form and submit the form to the Director of Graduate Studies a week before registration and must be prepared to supply a strong and compelling justification. Such requests must also be approved by the Associate Dean for Social and Behavioral Sciences in the College of Arts and Science.

The form that should be filed with the Assistant Director of Graduate Studies is:
Overload Request form

Application for Graduation

Students must apply for graduation two semesters in advance of their expected date of graduation. This applies to both the MA degree and PhD degree. Applications are available in the Graduation Office (355 Sparks Hall) or in the Registrar’s Office (227 Sparks Hall). If a student is unable to finish by the semester originally specified, it is the student’s responsibility to change the date by contacting the Graduation Office. Once a student has applied to graduate, an audit of the student’s records will be completed by the Office of Graduate Studies, College of Arts and Sciences (8th floor Haas-Howell Bldg). It is the student’s responsibility to discuss any discrepancies with the Assistant Director of Graduate Studies in Psychology.

Residency Requirements

Four semesters of enrollment of at least six hours each, two of which must be consecutive, excluding summer semester, are required to meet the College’s residency requirement.

Inactive Status

Students who have not registered for course work at GSU for one year (i.e., three consecutive semesters, including summer semester) will be placed on Inactive Status by the Registrar’s Office of the University. Such students, if they wish to resume their studies, must file a reentry application with the Office of the Registrar. Such reentry applications are automatically approved when students have been on a program-required internship or when they have been granted a department-approved leave of absence. Whether other applications for reentry are accepted or denied will be decided on a case by case basis and require the approval of the program chair, the Graduate Program Committee, and the chair of the department.

Time Limits on Coursework Presented for Degrees

All credits presented for the master’s degree must have been earned within seven calendar years of the date of the degree. All credits for the doctoral degree must have been earned within ten years of the date of the degree. Courses taken earlier must be retaken or, alternatively, students may file a Petition for Deviation from Graduate Bulletin Regulations with the Office of Graduate Studies. Before filing such a petition, students should consult with the Director of Graduate Studies.
DEPARTMENTAL MATTERS

Updating the Student’s Master Record

The Director of Graduate Studies is responsible for maintaining records relating to students’ progress in the program. This database contains dates when students met milestones, names of their advisor, names of chairs and members of their committees, etc. No committee is regarded as officially formed, nor no defense is regarded as officially passed, until appropriate notice has been given to the Assistant Director or Director of Graduate Studies and until the information is recorded in the database.

When students enter the program, they are provided a signature booklet. Each time a progress milestone is met (thesis committee formed, thesis proposal accepted, thesis successfully defended, general exam committee chair named, etc.), students gather the appropriate signatures, note the correct dates, and turn in the relevant page from the signature booklet to the Assistant Director of Graduate Studies, thereby officially recording the relevant event. The signature booklet contains a page for each event that needs to be recorded and notes the signatures required for each.

Authorization to register for thesis research (Psyc 8999), readings for the general examination (Psyc 9980), and dissertation research (Psyc 9999) will be granted only after the signature of the respective committee chair has been filed. In addition, authorization for more than three hours of Psyc 9999 will be granted only after a dissertation committee has been approved by the Graduate Program Committee.

Current Student Addresses

For a variety of reasons, both the university and the department need to have each student’s current mailing address and telephone number on file (e.g., otherwise you may not receive registration information). If your mailing address or telephone number changes, please let the Assistant Director of Graduate Studies know immediately (an email message is fine). You must also notify the Registrar’s Office of any change in address. Likewise, if your wish to change your name of record, you must inform both the department and the Registrar.

Much of the communication in the department takes place electronically. Thus all graduate students are required to have an e-mail address and to check their messages frequently (the university provides email accounts to any student who does not already have one). It is your responsibility to let the Assistant Director of Graduate Studies know your preferred email address. Similarly, if your preferred email address changes, please let the Assistant Director know immediately, preferably via email (rmjackson@gsu.edu, ). Otherwise you may miss vital communication.

Faculty Advisor

Faculty advisors provide academic, professional, and practical guidance to students during their graduate studies. Students are expected to meet with their advisors during their first semester to discuss their interests and begin planning their program of study.
All students are assigned advisors when they enter the department but they may change their advisors at any time. Clinical students, including those enrolled in the joint Clinical/Community or Clinical/NBN programs, are required to have an advisor who is a member of the clinical faculty. Students enrolled in a joint program or those pursuing minors may have a second advisor in their other or minor program of study.

Forms that should be filed with the Assistant Director of Graduate Studies:
Form to Change Advisor for Students in Single Programs or
Form to Change Advisor for Students in Joint Programs.

Leaves of Absence

Students who wish to take a leave of absence for personal or medical reasons should submit such requests in writing to the chair of their program. The chair will then forward the program’s recommendation to the Director of Graduate Studies for consideration by the Graduate Program Committee. Such requests must specify the intended duration of the leave of absence, usually specified in semesters (e.g., from a specified fall semester through the next summer semester). A maximum of one year may be requested at a given time although extensions may be requested by following the same procedure.

Occasionally, students are advised by their program to take a leave of absence. Such a leave must be documented by a letter from the chair of the program to the department’s Director of Graduate Studies. The duration of the leave and conditions for readmission should be specified in the letter.

Although departmental progress guidelines are adjusted for departmentally approved leaves of absence, any time limitations for completing degrees as specified by Georgia State University or the College of Arts and Sciences are unaffected.

Changing Programs

Students are accepted for graduate study in one of the five programs in the department (Clinical, Community, Developmental, Neuropsychology and Behavioral Neuroscience, or Social/Cognitive) or in one of the two joint programs (Clinical and Community or Clinical and NBN). A letter of support from each program will be required in order for the request to be approved.

Minor Programs

Students wishing to acquire additional breadth of content and a second area of competence may, in consultation with their advisor, select a minor from a program other than their major program. A minor requires the completion of 12 semester hours in the minor program. The specific requirements for each minor are described along with the program’s curriculum earlier in this handbook. A request for a minor program may be made after acceptance to the major program. A student’s minor program will be incorporated in their general examination.
Forms

There are several forms with which students should be familiar. All are available from the Assistant Director of Graduate Studies, most can be downloaded from the departmental web page, and most have been referenced earlier in this handbook in the appropriate context. These include:

1. **Nomination of thesis committee.** This form must be submitted to the Director of Graduate Studies for approval. This form will not need to be reviewed by the Graduate Program Committee unless a deviation from department policy is being requested.

2. **Nomination of general exam committee.** This coupon must be submitted to the Director of Graduate Studies for approval. This form will not need to be reviewed by the Graduate Program Committee unless a deviation from department policy is being requested.

3. **Audit for doctoral general exam.** This coupon must be submitted to the Assistant Director or Director of Graduate Studies at least one semester before the student intends to sit for their exam.

4. **Nomination of dissertation committee.** This form must be submitted to the Assistant Director or Director of Graduate Studies for approval by the Graduate Program Committee.

5. **Authorization for Psyc 9910, Advanced Directed Readings.**

6. **Authorization for Psyc 9920, Advanced Research in Psychology.**

7. **Authorization for Psyc 9960C, Practicum in Psychology, Community.**

8. Overload Authorization

9. **Change your advisor** (single program).

10. **Change your advisor** (joint program).
Appendix F1. Definition of graduate faculty and criteria for selecting graduate faculty

The definition of graduate faculty and the criteria for selection are provided in Article XI of the departmental bylaws.

Section 1. The Graduate Faculty shall consist of the Chair and those members of the faculty who, on recommendation of the Promotion and Tenure committee and nomination by the Chair, are appointed by the dean.

Section 2. In accord with the bylaws of the College, the Department shall establish criteria for graduate faculty membership and a procedure for periodic review of those criteria. The proposed criteria and review procedure must be approved by the Dean.
Appendix F2. List of graduate faculty

<table>
<thead>
<tr>
<th>Faculty Member</th>
<th>Co-Advisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lauren B. Adamson</td>
<td>Erin B. McClure</td>
</tr>
<tr>
<td>Elliott Albers</td>
<td>Mary K. Morris</td>
</tr>
<tr>
<td>Page Anderson</td>
<td>Robin D. Morris</td>
</tr>
<tr>
<td>Lisa Armistead</td>
<td>Marise B. Parent</td>
</tr>
<tr>
<td>Roger Bakeman</td>
<td>Dominic J. Parrott</td>
</tr>
<tr>
<td>Marsha Clarkson</td>
<td>Julia Perilla</td>
</tr>
<tr>
<td>Lindsey Cohen</td>
<td>John L. Peterson</td>
</tr>
<tr>
<td>Sarah Cook</td>
<td>Aras Petrulis</td>
</tr>
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<td>Marci Culley</td>
<td>Lawrence Riso</td>
</tr>
<tr>
<td>Jim Emshoff</td>
<td>Diana Robins</td>
</tr>
<tr>
<td>Frank Floyd</td>
<td>Mary Ann Romski</td>
</tr>
<tr>
<td>Chris Henrich</td>
<td>Rose Sevcik</td>
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<tr>
<td>Kim Huhman</td>
<td>Tracie Stewart</td>
</tr>
<tr>
<td>Gregory Jurkovic</td>
<td>Eric Vanman</td>
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<td>Tricia Z. King</td>
<td>David A. Washburn</td>
</tr>
<tr>
<td>Heather Kleider</td>
<td>Roderick Watts</td>
</tr>
<tr>
<td>Gabriel Kuperminc</td>
<td>Walt Wilezynski</td>
</tr>
<tr>
<td>Lisa Lilenfeld</td>
<td></td>
</tr>
</tbody>
</table>
Appendix F3: Faculty CVs

Faculty CVs have been collected from each faculty member and are available by name in the Faculty CVs directory of the CD attached to this report.
Appendix F4. How the unit’s faculty members were involved in the process of developing and approving this self study

- A self-study committee was appointed from faculty to represent the range of program areas and academic ranks.
- Faculty input was solicited through a survey that was distributed by the college self-study office.
- Results of the survey were distributed to the faculty for review and as a basis for initial discussion.
- Individual or small groups of faculty members were interviewed by the self-study committee members about the survey and, more generally, their issues for the self-study.
- The self-study committee reviewed interview and survey results, and collaborated to produce an initial draft of this document.
- The self-study document was distributed to the faculty for written comments and, in addition, committee members met with faculty members to discuss the draft of the document.
- A faculty meeting was held for discussion of the document and, specifically, the goals and objectives.
- A revised draft, based on comments from the faculty meeting and solicited thereafter was prepared and circulated to faculty members.
- A final draft was prepared, based on faculty members’ comments on the revised draft.
Appendix G1. Summary Data on Student/Faculty Ratios and Credit Hour Generation from the Office of Institutional Research

See Table B-4.
Appendix G2. University Library Report

PSYCHOLOGY DEPARTMENT REVIEW: LIBRARY RESOURCES

SUMMARY: STRENGTHS AND WEAKNESSES OF THE UNIVERSITY LIBRARY COLLECTION and Services

In general, the University Library’s collection of monographs, serials, and databases supports the Psychology Department’s programs through the doctoral level in the areas of clinical psychology, community psychology, developmental psychology, social/cognitive psychology, and neuropsychology/behavioral neuroscience. In FY05, the firm order allocation for Psychology was $11,979, while approximately $15,000 of the library’s allocation of $150,400 for social sciences titles received on the approval plan went toward psychology-related titles. The table below reflects the percentage of the approval plan universe in various call number ranges that our library received in FY05. The percentages range from 32% in RJ (where many of the nonselected titles pertain to pediatric medicine) to 100% in HM (social psychology). For the areas in which percentages range from 41% to 52%, titles that were not selected are generally textbooks, popular titles, or highly specialized works. The number of monograph titles supporting the program, especially in the area of general psychology (over 15,000 titles) and clinical psychology (almost 13,000 titles) is appropriate to a program granting doctoral degrees. Given that psychology is a strongly journal-focused discipline, these allocations appear sufficient to maintain a strong basic book collection to support both graduate and undergraduate programs.

In order to provide quantitative data on the strength of our monograph collection, our approval order acquisitions in FY05 were compared to those of a peer institution, the University of Illinois/Chicago, in several relevant call number ranges. In particular, titles acquired by Illinois but not by Georgia State were examined. In the areas of neuropsychology, child psychology, and social psychology, no titles were acquired by Illinois that Georgia State did not also acquire. In the general psychology classification (Library of Congress BF), Illinois acquired 37 titles that Georgia State did not, but these were mostly in areas, such as school psychology and psychoanalysis, that are not stressed by the GSU Psychology Department. Similarly, the 18 titles unique to Illinois in the area of clinical psychology (Library of Congress RC) pertained to psychoanalysis or had a popular or highly specialized focus. Thus, it can be concluded that our current monograph collection compares favorably to that of an academically respected peer institution.

In 2004 and 2005, several major databases of full-text journals were added to our collection. These were the Elsevier, Springer, and Wiley collections, each of which contains numerous psychology titles. Of perhaps greatest importance was the addition of the database PsycARTICLES, which contains the full text of APA journals, as well as several other important journals, from 1985 to the present. The acquisition of this costly database was made possible through allocations from the Public Health and Brains and Behavior Areas of Focus. Several significant journal titles were also acquired through the Brains and Behavior Area of Focus, including Neuroinformatics, Journal of Molecular Neuroscience, and Adaptive Behavior. Because of the major emphasis on neurosciences in several departments, the influx of grant money, and the approval of the Brains and Behavior Area of Focus, neuropsychology and behavioral neuroscience is an especially strong area of the collection.

There are few identified weaknesses to the collection. The proposed purchase of the PsycEXTRA database through Public Health Area of Focus funds should provide researchers
with access to the large body of gray literature, including newsletters, magazines, newspapers, technical and annual reports, government reports, consumer brochures, and conference papers. Several important community psychology journals have been requested and may also be purchased with these funds.

**Relevant Library Statistics**

<table>
<thead>
<tr>
<th>MEASUREMENT</th>
<th>STATISTIC</th>
<th>COMMENTS/NOTES</th>
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</thead>
<tbody>
<tr>
<td><strong>Resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of journal titles supporting program</td>
<td>418</td>
<td>Brains and Behavior Area of Focus: 13 titles</td>
</tr>
<tr>
<td>Number of related journal titles added in last three fiscal years</td>
<td></td>
<td>Electronic access through online databases:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Science Direct/Elsevier: 92 titles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Springer: 67 titles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PsycARTICLES: 52 titles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wiley: 48 titles</td>
</tr>
<tr>
<td>Number of related journal titles cancelled in last three fiscal years</td>
<td>0</td>
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</tr>
<tr>
<td>Number of related databases added in last three years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of related databases cancelled in last three years</td>
<td></td>
<td>One. Social Sciences Index was cancelled by GALILEO.</td>
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<tr>
<td>Number of monograph titles supporting program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of monograph titles in key call number ranges</td>
<td></td>
<td>BF1-839.5 (General psychology): 15,008</td>
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<tr>
<td>added in last two fiscal years (07/01/03-06/30/05)</td>
<td>2,486</td>
<td>RC321-571 (Neurology and psychiatry): 12,820</td>
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<tr>
<td></td>
<td></td>
<td>RJ1-570 (Pediatrics, including child psychology): 4,508</td>
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<tr>
<td></td>
<td></td>
<td>HM251-291 (Social psychology): 1,885</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HQ503-1064 (Marriage and family): 7,832</td>
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<tr>
<td></td>
<td></td>
<td>QP341-495 (Neurophysiology and Neuropsychology): 2,486</td>
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<td></td>
<td></td>
<td>BF1-839.5: 597</td>
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<td></td>
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<td>RC321-571: 771</td>
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<td></td>
<td></td>
<td>RJ1-570: 185</td>
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<td></td>
<td></td>
<td>HM251-291: 4</td>
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<tr>
<td></td>
<td></td>
<td>HQ503-1064: 329</td>
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<tr>
<td></td>
<td></td>
<td>QP: 341-495: 119</td>
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<tr>
<td>Percentage of available universe of related monograph titles purchased through approval plan during past 12 months (10/04-10/05)</td>
<td>43%</td>
<td>BF1-839.5: 41%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RC321-571: 47%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RJ1-570: 32%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HM251-291: 100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HQ503-1064: 43%</td>
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</tbody>
</table>
Services
Number of library instruction courses taught for department during previous fiscal year
Number of library consultations held with students from department during previous fiscal year

Electronic Resources

Students and faculty in the Department of Psychology rely heavily on journals, major reference works, and databases to conduct research and complete assignments. The following section provides an overview of some of the major electronic resources available for psychological research. The majority of the most relevant databases are purchased through library allocations rather than made available through the GALILEO collaborative initiative.

<table>
<thead>
<tr>
<th>GSU Library Subscription Databases</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PsycARTICLES</td>
<td>Provides full text of APA journals and eight additional journals from 1985 to the present.</td>
</tr>
<tr>
<td>Web of Science</td>
<td>Indexes and abstracts 8,000+ peer-reviewed journals in the sciences, social sciences and humanities.</td>
</tr>
<tr>
<td>Current Contents Connect</td>
<td>Indexes and abstracts articles and books in numerous disciplines, including the medical and natural sciences.</td>
</tr>
<tr>
<td>Linguistics and Language Behavior Abstracts</td>
<td>Citations and abstracts from over 2,000 serials on subjects such as reading, literacy, and linguistics.</td>
</tr>
<tr>
<td>Biological Abstracts</td>
<td>Indexes and abstracts journal articles on all aspects of the biological sciences, including neuropsychology.</td>
</tr>
<tr>
<td>Science Direct</td>
<td>Provides full text of 1,000+ Elsevier journals in the life, physical, medical, technical, and social sciences</td>
</tr>
<tr>
<td>Wiley InterScience</td>
<td>Full text of 400+ scientific, technical, medical, and professional journals.</td>
</tr>
</tbody>
</table>
### GALILEO Databases

<table>
<thead>
<tr>
<th>Database</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PsycINFO</td>
<td>Indexes and abstracts journals, dissertations, book chapters, and reports in all areas of psychology.</td>
</tr>
<tr>
<td>Medline</td>
<td>Indexes and abstracts journals related to medicine, nursing, the health care system, and preclinical sciences from the National Library of Medicine's bibliographic database.</td>
</tr>
<tr>
<td>CSA Neuroscience Abstracts</td>
<td>Provides citations on all aspects of vertebrate and invertebrate neuroscience</td>
</tr>
<tr>
<td>ERIC</td>
<td>Indexes and abstracts education scholarly and practitioner journals, curriculum materials, technical reports, research reports and conference papers.</td>
</tr>
</tbody>
</table>

### Collection Overview

The University Library contains more than 1.4 million volumes, including approximately 4,800 active serials (newspapers, journals, magazines, etc.), 20,000 media materials, and over 293 electronic databases, many of which include full-text. The University Library is also a Federal Document Depository and has more than 800,000 government documents.

### Other Library Services

For resources not available at the University Library, patrons can request materials through the library’s ILLiad service. The Interlibrary Services Office can obtain most types of materials, including books, microfilmed newspapers, dissertations, theses, and periodical articles. Audiovisual materials may be requested, but are sometimes difficult to obtain on loan. This service is free of charge to Georgia State University faculty, staff and students. Books available at other University System libraries may be obtained through GIL Express.

### University Library Contact

Lyn Thaxton, Behavioral Sciences Liaison: 404-463-9946 / lthaxton@gsu.edu