

**Comprehensive Program Review (CPR)
Department of Geosciences
Georgia State University
May 2021**

The following programs are critical to the institutional mission and thus MEET the institution's criteria for retention.


The Department offers a B.A. in Geosciences with concentrations in Geography and Urban Studies; a B.S. in Geosciences with concentrations in Geography, Urban Studies, Environmental Geosciences, and Geology. The number of majors in Geosciences has averaged 114 between fall 2016 and fall 2019; During those same years, on average, 10 students graduated with a B.A. in Geosciences, and 23 students graduated with a B.S. in Geosciences. Action item 2 is devoted to enhancing our recruitment efforts of undergraduates, and all action items aim to support enhancing the health of the Department, including its undergraduate majors.

The Department offers an M.S. in Geosciences with concentrations in Geography, Geology, and Water Science. Between FY2017 and FY2019, the Department averaged 46 graduate students in the M.S. program, and during those years averaged 20 graduates per year. Action item 3 explicitly addresses expanding support to the graduate students and carefully assessing the graduate curriculum, and all action items aim to support enhancing the health of the Department, including its graduate students.

Provost/VPAA Signature and Date _____

---OR---

Provost/VPAA's Designee Signature and Date

 5/13/21

Appendix
2020 Action Plan
Department of Geosciences
Georgia State University

Status of the Action Items from Prior Review

The Department has been partially successful in completing the steps outlined in the 2011 Action Plan:

1. Change significantly the degree structure. Completed. In 2011, the Department had a B.S. in Geology, a B.A. in Geography; an M.S. in Geology, an M.A. in Geography; and a postgraduate GIS certificate. In 2020, the Department has a B.A. in Geosciences with concentrations in Geography and Urban Studies; a B.S. in Geosciences with concentrations in Geography, Urban Studies, Environmental Geosciences, and Geology; undergraduate certificates in Water Science, Sustainability, and GIS; an M.S. in Geosciences with concentrations in Geography, Geology, and Water Science; and the postgraduate certificate in GIS.
2. Increase the number of majors and degrees conferred. Incomplete. Remains a priority. The average number of majors has declined since the last self-study; however, the number of Bachelors and Masters degrees awarded increased by 10% and 75%, respectively, from FY2011 to FY2019.
3. Increase the amount of external funding. Completed and ongoing. The mean annual external funding from FY2008-2010 was \$138K, whereas the mean annual external funding for FY2011-2020 was \$640K. In both FY18 and FY19, the department secured over \$1 million.
4. Maintain and increase the number of graduate faculty. Ongoing. The total number of faculty members in 2011 was 15 (12 TT and 3 NTT); and as of August 2020, the total number of faculty members is 17 (13 TT and 4 NTT) with the plan of hiring an additional one or two NTT positions in January of 2021 to fill critical teaching needs.
5. Improve student-assessment procedures. Incomplete and ongoing. The graduate program had regular assessment and yet no action plans were developed from this assessment given its focus on milestones rather than SLOs; the undergraduate program developed a comprehensive assessment plan in 2019, and an action plan was identified to improve the program and the assessment process.
6. Improve the department's physical space. Completed. The faculty offices moved out of Kell and Sparks to the 730 suite of Langdale; graduate-student offices and the research labs moved to renovated wings on the fourth floor of Sparks Hall; and most Geosciences classrooms are on the first floor of Sparks Hall. While these are nicely-renovated (yet non-contiguous) spaces, the Department suffered the loss of a classroom and an undergraduate common room, which had been the hub of undergraduate life in the Department.
7. Increase faculty salaries. Incomplete. A significant cohort of faculty members in the Department endured five years with no raises, and thus the salaries of the majority of faculty members in the Department are well below that of colleagues at peer institutions. Three faculty members have been promoted to full professor as of 2020, but compression adjustments are not complete.

Major findings in the current review

As demonstrated in the Department's self-study and confirmed by the external reviewers and the CAP report, the Department contributes significantly to each of the University's and College's strategic initiatives. External reviewers noted our "strong and engaged faculty that is committed to delivering a quality education to the students and maintaining high levels of research activity," which has included "very impressive" funding rates for research proposals and a strong record in publications, particularly when compared to peer and aspirational institutions. Furthermore, the external reviewers highlight the "extremely diverse and impressive" students who are committed to their Geosciences degrees, which include "a unique curriculum addressing both social and physical dimensions of environment and resources." On the whole, the external reviewers' report reinforced the Department's self-study:

1. **Enhanced faculty productivity.** As the only unit at GSU that has faculty members addressing complex environmental challenges through both social- and physical-science lenses, the Department is uniquely situated to contribute to cutting-edge interdisciplinary research. The recent grants and publications success with collaborative, interdisciplinary teams in the Department has revealed the value of research-active faculty in our multidisciplinary unit. At the same time, the self-study and external reviewers expressed the Department's need for a Ph.D. program. The external review committee noted that "the lack of a strong PhD program" makes it particularly challenging for the faculty to operate research labs and maintain strong scholarly trajectories.
2. **Enhanced quality yet decrease in the size of the undergraduate program.** While important changes have been made in the undergraduate degree programs in the Department since the last review, the number of majors has been steadily declining in recent years. As the external reviewers noted, students interested in the environmental subjects that the department offers often do not find the courses or the majors. For those who do major in Geosciences, satisfaction with the degree is above the university mean in all measures except for the variety of course offerings, and one student captured sentiments expressed by a number of majors: the strengths of the department include "community feeling, strong encouragement and support from department professors and involvement in student success" (p 91).
3. **Innovative yet underfunded graduate program.** The M.S. degree with concentrations in Geography, Geology, and Water Sciences has maintained steady enrollment in recent years, over 90% of students are funded with an assistantship, and graduates are typically very pleased with their graduate education. In addition, the Department recently initiated an increasingly popular dual degree program, where students complete a B.S./M.S. in five years. As reflected in the self-study, just over a third of students complete their degree in two years, in part due to the low stipends, which average just over \$3000 per semester and do not include ~\$1000 in fees, which often require students to seek outside employment during their graduate studies. The low stipends make recruitment of highly-qualified students to the program exceptionally difficult.
4. **One of the most diverse Geosciences programs in the country.** The self-study and external report assert that majors and graduate students in the Department of Geosciences are collectively some of the most diverse students in terms of gender, race, and ethnicity pursuing Geosciences degrees in the country. In 2019, the majority of Geosciences majors and graduate students were from under-represented groups in the sciences.

Action Steps

1. Support research-active faculty and maintain high-quality research.
 - a. Faculty members will continue to publish in high-quality journals, with the goal of tenure-track faculty members publishing on average at least two peer-reviewed publications per year (per disciplinary norms) and maintaining (and expanding, where applicable) grant activity (every semester).
 - b. Faculty members will meet at least once per year to identify future hiring priorities to fill research gaps in the department, which will be reflected in the hiring priorities submitted annually to the dean (yearly).
 - c. The department chair will establish an ad hoc committee to explore the possibility of developing an interdisciplinary Ph.D. program. The committee will pay close attention to the disciplines that will be the focus of the program, how the focus will enhance the department, college, and university missions, and the committee will work with OIE and consultants as needed to document the market demand for such a Ph.D. program (2021-2022).
2. Increase the number of undergraduate majors to 170 by 2025.
 - d. The Chair will establish an ad hoc committee to examine the possibility of changing the name of the department to servestudents' interests in environmental issues across campus (2020-2021).
 - e. The Chair will establish an ad hoc committee to develop a detailed recruitment plan (2020-2023).
 - f. The Chair will apply for new environmentally-focused introductory courses (Geol 2002 and Geog 1125) and a newly-created introductory GIS/mapping course to be placed in the core (2020-2021).
 - g. The Department will shift teaching assignments from other introductory physical science courses to offer ENVS 1401K: Environmental Science and ENVS 1402K: Plant Resources in the Environment, which are eminently popular course offerings at Perimeter (2021-2022).
 - h. Faculty members will continue participating in the Lab Innovation Plan to devise creative recruitment strategies in the introductory lab-science courses (2021-2022).
 - i. The Department will continue to publish student research highlights on social media and on the new website (every semester).
 - j. The Undergraduate committee will evaluate the viability of reducing the B.A. degree from 39 credit hours, per the external reviewers' suggestion (2020-2021).
3. Support and expand the graduate program.
 - k. The Chair will work with the Dean to examine the feasibility of revenue-sharing for the Professional GIS certificate, which could enhance stipends of graduate assistants (2020-2022).
 - l. The Department will launch an online Professional GIS certificate (pending final technological support and/or partial revenue-sharing) (spring 2021).
 - m. The Graduate Committee will develop effective assessment protocols for the M.S. degree that examine Student Learning Outcomes in the degree concentrations (2020-2021).

4. Enhance and support the department's diverse student body.

- n. The Department's Diversity, Equity, and Inclusion Committee will provide recommendations for more inclusive professional and pedagogical practices and programming, including diversity training for faculty members (starting in fall 2020).
- o. The Department will continue to develop its relationship with the American Geophysical Union (AGU) Bridge Program, which is designed to support under-represented minorities in graduate programs (2020-2023).
- p. The Department hiring committees will engage in best practices to hire faculty members who enhance the diversity of the existing faculty (when hiring).

