



Chair's Response to PPR External Review Report

Department of Civil and Environmental Engineering is thankful to the external review team for their time and effort in reading the self-study report, conducting a day-long on-campus visit on April 11, 2022, and preparing the review report. The review team was impressed with the “level of dedication and hard work from the faculty and students.” Below is a summary of the review team’s assessment of the strengths of the program and a list of recommendations to help enhance the program further.

Strengths

The review team noted the following strengths in the program:

1. The graduate program has experienced significant growth in the period since the last PPR, with a maximum enrollment of 107 students in 2017.
2. The program is sensitive to the needs of its community and students, as demonstrated through the expansion of relevant course offerings in different areas.
3. Department faculty appear to be broadly satisfied with the curriculum structures.
4. From conversation with students, it was clear that a large number had employment opportunities to move into directly from their degree programs. This is an excellent reflection on the quality of the program.
5. The existing structural tutoring program is very popular and has been very effective.
6. The department has maintained the lab space and it comprises of several focused areas.
7. The flexibility and culture of helpfulness within the department were noted.
8. Class sizes are well managed, and the curriculum is well rounded.
9. The department has well-established focus areas that are appropriate to service the needs of its community: structural, water resources, environmental, geotechnical, and construction management.
10. Pathways for non-engineering student to enroll to the civil grad program are well thought out and successful.
11. Part time faculty are experienced, qualified and most of them are renowned in the industry.

Recommendations

The PPR committee also provided 8 recommendations for further enhancement of the program. Below are itemize responses to each of the recommendations. Recommendations are numbered and given in bold- font, our responses follow the recommendations in italics-font.

1. **A 30% increase in enrollment would support the department’s desired flexibility in course offerings. Support for outreach and recruitment efforts from administration would be helpful here.**

Response: Outreach and recruitment efforts are critical to maintaining healthy enrollment in our program. The department would work with the administration to find resources that will support developing sustainable outreach and recruitment activities.



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- 2. Develop graduate level courses in the area of Transportation Engineering. An immediate faculty hire is currently required to support the development of a transportation engineering focus area.**

Response: Transportation Engineering as a focus area in our graduate program is critical to meeting the community's needs. Currently, the department has one full-time tenured faculty member who focuses on transportation engineering. Subject to enrollment growth, the department will prepare new transportation courses that will be initially taught by part-time faculty (practicing engineers), and then eventually the department will hire an additional tenure track faculty member in transportation engineering.

- 3. Faculty very strongly noted that their ability to engage graduate students as research mentors is limited by demands on their time**
 - a. This was echoed by the students, who specifically noted that finding research opportunities was difficult.**
 - b. Support from the administration that explicitly recognizes graduate research mentorship as a factor in faculty's total workload (e.g. assigning workload credits for 597/598 supervision) would significantly enhance the program's ability to offer graduate research**

Response: Graduate research is critical to supporting the scientific inquiry expected of graduate students in the program. The department recognizes the current limitation on how faculty workload is assigned for our graduate project and graduate thesis courses. The department will work with the administration to develop a better model that encourages graduate research in the program.

- 4. It was further noted that the ability to engage graduate students in research is limited by lack of a dedicated space for graduate students to work in. The department and administration should collaborate with the university to find ways to develop a dedicated graduate student workspace.**

Response: Graduate students who work on the lab equipment for their research are currently provided limited access to the laboratory when the lab is not being used for teaching purposes. Creating graduate student workspaces within the department is beneficial and supports student success, but space availability in the college is limited.

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- 5. Several department faculty noted that more formalized graduate advising structures, in particular to aid support for URM students, would be valuable. In addition:**
- a. Allocation of resources specifically for underrepresented student advising is encouraged**
 - b. Possibilities for developing additional Graduate Assistant (i.e. Teaching Assistant or Research Assistant) positions should be explored**
 - c. The existing graduate student tuition waiver program supports a very small number of students. Investigate resources to expand this program to more students, which will further develop enrollment numbers to the desired level.**

Response: Currently, select graduate students are provided with the opportunity for Teaching Associate positions. A few URM students from the program have received scholarships from university-level programs. The department welcomes the recommendations and will work with the university administration to find resources to the extent possible to implement them.

- 6. The department has recently seen significant turnover in support personnel, in particular lab technicians.**
- a. The lack of suitably qualified technical support is currently limiting the department's ability to offer graduate level laboratory/technical courses, and to maintain/upgrade existing lab technology**
 - b. Minimally, a replacement lab tech is urgently required.**
 - c. Allocation of additional resources to support retention of department's technical staff should be considered**
 - d. Department lab improvement should be included into the department's strategic plan. This may require resources from the administration in support.**

Response: Our laboratory technician recently left for another career opportunity outside of the university. The department is currently in the process of hiring a laboratory technician. Recently, laboratory technicians have been supported with student assistants, given the wide range of laboratories they need to manage. The department welcomes the recommendation on retention efforts and planned laboratory upgrades. The department has upgraded some equipment over the past few years and will work with the university administration to find resources for further maintenance and upgrades.

- 7. Enhance of existing flexibility in course offerings for Friday / Saturday course modules and hybrid courses. This appears to already be under consideration by the department.**

Response: The department appreciates the recommendation on flexibility in class offerings. The department is currently exploring the possibility of various class modalities. The department plans to offer hybrid courses as special courses and make changes in the curriculum as the needs of our graduate students are better understood.

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- 8. Establish graduate student scholarship funds by exploring various department supporters and donors. Develop a platform to connect current students with department alumni to expand graduate students' professional network.**

Response: The department has offered a few scholarships that were funded through philanthropic donations. With the support of the ECS development team, the department will explore the possibility of creating more such scholarships. Faculty in several graduate courses invite industry professionals as guest speakers who share their industry experiences related to the course. As part of outreach efforts, the department plans to enhance student interactions with industry professionals further.

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