

Program Performance Review: Culmination Meeting Memo Environmental Engineering, MS

The 2017-2018 Program Performance Review (PPR) process for Environmental Engineering, MS programs concluded with a culmination meeting on December 7, 2018.

The following people attended the meeting: Kari Knutson Miller (Provost), Susamma Barua (Dean, ECS), Sang June Oh (Associate Dean, ECS), Garrett Struckhoff (Program Coordinator), Binod Tiwari (Faculty), Phoolendra Mishra (Faculty), and Su Swarat (Asst. VP for Institutional Effectiveness).

This is the first PPR for the program. The Provost commended the impressive achievement the program has accomplished, particularly the national rankings. Specifically, the program is ranked the 16th nationally by the 2017 US News and World Report, and ranked the 3rd in terms of faculty credentials among all online engineering graduate programs. The Program Coordinator commented that while the program is not ABET accredited, the students can be considered as graduating from an ABET institution since the undergraduate programs are accredited by ABET. The significant growth in the number of applications to the program reflects the high quality of the program. The Program Coordinator indicated that the program is disseminated only through the program website and “word of mouth”, without extra outreach effort.

The Provost also praised the program for the full dedication of the tenure/tenure-track faculty to teaching, mentoring, and supporting the students.

Major recommendations and concerns raised through the PPR process were discussed as follows:

1. Curriculum review and update:

- The External Reviewers commended the program curriculum for its alignment with industry needs, but recommended constant review and updating of the courses, software and hands-on experiences incorporated in the curriculum.
- The Dean stated that the US News and World Report ranking is based heavily on curriculum-specific criteria, which motivates the program to constantly calibrate the curriculum against national and industrial standards.
- The Program Coordinator and the Dean both commented that the program is exploring the possibility of offering more electives, but the challenge is how to do so within a cohort-based program.

2. Class size:

- The External Reviewers made the observation that some classes in the program were of large size, and thus recommended limiting class size to 30.
- The Dean stated that the observation was limited to one course, which had difficulty securing qualified instructors in the past. But the instructor who taught the large class

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was compensated equitably by receiving additional teaching units. This issue has been resolved since then.

- The Dean further commented that the college established class size policy last year, limiting the class size to 40-45 for undergraduate lecture classes and 25-30 for graduate classes. The college constantly monitors class size to ensure policy implementation.

3. Addressing student curricular deficiency prior to matriculation:

- The Program Coordinator acknowledged that some students needed “bridge” courses before matriculation to address areas of deficiency (e.g. chemistry, physics, math). He typically recommends students to take these courses at community colleges. The program is interested in collaborating with other colleges such as NSM to develop online courses in these areas (since the students are online).
- The faculty stated that while students with areas of deficiency are admitted “conditionally”, the program does not complete the “study plan” with them until the deficiencies are met. By doing so, the program ensures the quality of its graduates.
- The Dean commented that the small cohort size (30-40) allows for high level of one-on-one interaction between the program coordinator and the students, which further ensures that the students meet all requirements before graduating.
- The Provost recommended the program to explore cross-college collaboration opportunities, and to develop partnership with community colleges that specialize in online offerings (e.g. Coastline College).

4. Alumni engagement and faculty pool expansion:

- The External Reviewers recommended the program to connect with alumni for enhancing learning experiences and increasing potential faculty pool.
- The Dean responded that the college is working on alumni engagement. She also recommended the program to build up the pool of faculty by engaging recent graduates and incentivizing them to teach online.
- The faculty stated that there is sufficient support to faculty who are interested in teaching online. These faculty participate in the Quality Matters program offered on campus, as well as other FDC professional development activities on online teaching.

5. College-initiated support to the program:

- The External Reviewers recommended additional administrative and technical support to the program. The Dean stated that the college has added a half position to provide administrative support to the program.

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- The Dean indicated that the college now requires a “spending plan” from all programs at the beginning of the year to prioritize strategic investment. This approach has led to better planning and utilization of resources. For example, part of the online student fee funds the “spending plan” of the program, as well as the administrative support position.
- The Dean also commented that the college is coping with declining international student enrollment with plans to increase online program enrollment. The college’s new online MS in Engineering Management program is pending approval, which can admit 30 students per year; the online MS program in Computer Science has agreed to open spring admission by accepting 50 students; the Environmental Engineering online program is also considering adding spring admission.
- The Dean emphasized the college’s commitment to creating a positive and supportive environment for the faculty. The Dean is working very hard to build up capacity through the college development team. The Program Coordinator concurred with this statement, adding that the program faculty are able to balance commitment to this program and to their home department, and are compensated fairly (e.g. the Program Coordinator receives 6 units release per semester).

The Provost concluded the meeting by thanking the program for its contribution to the college and the university, and commended again its high quality and excellent reputation.