

Institutional Description

The University of Pittsburgh is a large, state affiliated research institutions located in the Oakland neighborhood of Pittsburgh, Pennsylvania. The university services 25,000 undergraduate students and 10,000 graduate students. Within the university is the Swanson School of Engineering (SSOE). One of the oldest engineering schools in the country, the SSOE houses 2,800 undergraduate students across nine engineering majors. Through its programs, the SSOE emphasizes cutting-edge research, innovative industrial partnerships, and international opportunities.

Program Development

The Transfer Peer Mentoring program evolved out of a period of enrollment growth in the Swanson School of Engineering (SSOE). Since 2000, freshman engineering applications rose 268%, from 1,460 to 5,369. This rise in applications generated a larger, yet more selective freshmen engineering course each year. Freshman engineering enrollment rose 157% in that time (from 355 to 559), yet was continually outpaced by the rise in applications. As the number of applicants who were not offered admission grew, the Office of Admissions and Financial Aid began offering students an “engineering option”, where students not admitted directly to engineering could have the option to start at a regional branch campus or in the College of Arts & Sciences and then transfer into the SSOE after their freshmen year. Due to this new “engineering option” program, transfer enrollment boomed. From 2010 to 2015, the transfer population increased 244% (from 121 to 296).

Prior to 2009, a transfer peer advisor program existed, however the structure of this program was informal. Transfer peer advisors were recruited from the sophomore, junior, and senior classes to lead “Transfer Friday” events where peer advisors talked to new transfer students about transitional issues over lunch. These “Transfer Friday” events were optional for all students and attendance was low. As enrollment grew, there was a greater need for structure in the transfer advising program.

Practical problems needed to be addressed in the creation of a Transfer Peer Mentoring program. First and foremost, the structure of the course and program needed to be created. The framework for the Engineering Transfer Seminar course would come from the Swanson School of Engineering’s freshman seminar course. In this course, students meet twice weekly; first in a “Big Seminar” where all the students are together and, second, a “Little Seminar” where students would be broken out into smaller cohorts and the course is led by an undergraduate mentor. The Engineering Transfer Seminar followed this model as it allowed students weekly, small group contact with a Transfer Peer Mentor. Once the framework of the course was set, the course needed to be approved by the Provost’s office. The course was given the catalog name ENGR 0087 – Engineering Transfer Seminar and would be a zero credit pass/fail course. Next, transfer peer mentors needed to be hired and an incentive had to be allotted to recruit undergraduate students to apply for a mentoring position. \$1700 was budgeted to help pay for the salary of the Transfer Peer Mentors, \$500 in salary for three mentors and \$200 for supplies or food if the mentors wanted additional funds to pay for class activities. Students were recruited by the Coordinator for Transfer Student Services through email advertisements to each engineering department.

With the framework of the Engineering Transfer Seminar course in place, other practical concerns needed to be addressed in creating the course. The course needed to be offered at a time when transfer students would be on campus, possibly between classes, would help to draw the maximum amount of students in the course. The Engineering Transfer Seminar course would be offered in conjunction with the Engineering Analysis and Computing sequence of courses. This sequence was a set of computer courses that all engineers needed for graduation, but were difficult to transfer in. Since most external

transfer students needed the course in their first semesters at Pitt, working around the sections of these classes offered to transfer students provided the best opportunity to reach the most students.

The transfer sections of Engineering Analysis and Computing are taught in the evening, typically 6:30pm -8:30pm. By offering the Engineering Transfer Seminar course from 5-5:50pm, two major accomplishments were made. First, the course is around the transfer student schedule, allowing them to take the class with minimal interference with any travel schedule, since the students will already be on campus for a later course. Secondly, there is an added community feel to the climate of the transfer class. The forty minute break between their seminar and engineering class allows students to eat dinner together, fostering a level of comradery that is essential to help students support each other in their first semester in engineering.

Another concern in the creation of this class was getting students to register for a zero credit course that was not made mandatory by their engineering department. Thus, the focus was on what students got out of the class, not the class structure itself. Transfer Student Services staff visit our regional campuses to talk with students about different opportunities they would have in engineering, like the Cooperative Education program or Study Abroad programs for Engineers. Once interested, students are told they would receive more information about the program and network with personnel from the office once in the Transfer Seminar class. With external transfer students whom our office registered, advising staff would talk to them about the importance of meeting new people within their majors, and that a successful way to do that was through the seminar. The Transfer Peer Mentors are also responsible for contacting newly admitted students to encourage them to enroll in the course as it would help in their transition to the SSOE, whether they knew it would be a struggle or not. TPMs also advertise the course at Transfer Orientation, which is held the day before classes begin. TPMs would talk with the students about the importance of the class and why understanding the culture of the SSOE was so important to their success.

Goals and Objectives

The goals of the Transfer Peer Mentoring program and the transfer seminar course that they taught were to:

1. Provide students with an opportunity to network with an upper-class engineering major who previously transferred into the SSOE through a formal peer mentoring program.
2. Provide students with an awareness of academic difficulties that transfer students commonly face and the resources on campus to address those difficulties
3. Provide information on academic and non-academic resources on campus, both for the general population and those specifically targeted for engineering students.

Program Description

To provide transitional support to new engineering transfer students, Engineering Transfer Seminar (ENGR 0087) is a zero credit course offered to new transfer students in their first semester in the Swanson School of Engineering. The course is co-facilitated by the Coordinator of Transfer Student Services and a group of Transfer Peer Mentors. The ENGR 0087 course is a pass/fail course, where student attendance determines the satisfactory completion of the course.

Transfer Peer Mentors are current undergraduate engineering students who previously transferred into the SSOE. TPMs apply for the position in the spring semester and are trained in both SSOE resources and transitional student development issues in two separate training sessions. The first of these training dates is in the late spring and allows the TPMs to help construct the framework of the fall syllabus. The

second training time is one day prior to the start of the fall semester. TPMs must to maintain a 2.75 cumulative GPA. Transfer Peer Mentors are compensated as teaching assistants with a \$500 stipend for the semester.

The Engineering Transfer Seminar course runs for the first ten weeks of the semester, meeting two days a week. One class meeting is a “big seminar”; at this time, all students enrolled in the course participate in presentations led by campus faculty and staff pertaining to resources and opportunities for engineering students. The course is capped at sixty students. Guest speakers interact with the transfer students to discuss opportunities such as our Cooperative Education, Career Development, Study Abroad, and Library Services offices. In addition to advising and resource staff, engineering faculty are brought in to the course to talk about class expectations, how do get involved in research, how best to interact with engineering faculty, and what to do if the student encounters academic difficulty. The big seminar is facilitated by the Coordinator for Transfer Student Services who worked primarily with transfer students.

The second class meeting is a “little seminar”; the class is divided into smaller sections (twenty student maximum) and is led by a Transfer Peer Mentor. Transfer Peer Mentors supplement big seminar topics in their little seminar course by delivering the material from the undergraduate student’s point of view. For example, if the weekly topic in big seminar is about the Cooperative Education program and their upcoming job fair, the TPMs will facilitate a class about resume review and provide hints and tips to prepare for a job fair as well as interview skills. Through their “little seminar”, TPMs present about the academic and personal skills needed to be a successful engineering student, such as time management, academic planning, and how to prepare for academically stressful situations such as studying for three STEM exams in one week. The Transfer Peer Mentors teach what advising staff cannot; how to adapt to and thrive in the culture of a highly-rigorous engineering school.

The TPMs will also use class time to orient their students to campus and point out offices students need to be aware of as well as hidden study areas that might not be as populated. This particular class week has been unofficially called “The Tour They Don’t Give You” to reference the fact that these are essential places and offices students will not know about until they are immersed in the Swanson School of Engineering. TPMS are also given two class periods during the semester as “student choice”. The mentors have the flexibility in these courses to tailor the course to the needs and interest areas of their mentees. Previous sections of the class have taken their entire class out to dinner at a local eatery, held a board game night, or held a Chinese New Year party for the international students enrolled in the course.

Transfer Peer Mentors are also responsible for meeting one on one with each of the students in their small seminar class twice per semester. These meetings allow the TPM to get to know each student on an individual level, their aspirations in engineering, and allows the mentees to ask questions they may not feel comfortable asking in a larger group setting. The first of these one on one meetings is within the first month of the semester, allowing TPMs to make sure any academic course issues are dealt with proactively. The second of these one on one meetings will take place after midterms. This second meeting allows for TPMs to advise each mentee on their academic progress. TPMs often act as the first friendly face that transfer students will interact with on campus and provide students with a continual and valuable personal resource on a large, often intimidating campus.

Transfer Peer Mentors have five job responsibilities:

1. Facilitate one weekly little seminar section of Engineering Transfer Seminar.

2. Hold one office hour per week for their mentees.
3. Attend a weekly Transfer Peer Mentor staff meeting.
4. Assist in New Engineering Student Orientation (for incoming freshmen and transfer students).
5. Meet one on one with each student enrolled in their ENGR 0087 section twice during the semester.

The Transfer Peer Mentors also host an annual excursion to help new students get adjusted to the city of Pittsburgh, which is five minutes from campus. On the first or second Friday of the semester, the entire class is invited to attend a Pittsburgh Pirates game in downtown Pittsburgh. The tickets are paid for by the Transfer Student Services office; the only rule for the night is that students must use public transportation to travel to and from the game. Pitt students receive free public transportation as part of their University ID, so this activity forces students to use a service they might feel intimidated using by themselves for the first time. By meeting as a group and going with their TPM, students feel comfortable finding their way around downtown and are able to socialize with each other in a non-academic setting.

Procedures Used in Program Evaluation

The Transfer Peer Mentors and the Engineering Transfer Seminar course is evaluated in two quantitative ways. First, students who completed the course would complete two separate satisfaction surveys. Students have the opportunity to critique both big and little seminars anonymously on a 1 to 5 scale. Second, the Coordinator of Transfer Students Services audits term GPAs for the students who are and are not enrolled in the course to compare whether or not the Engineering Transfer Seminar class had any impact on student academic performance.

Results and Outcomes

Both quantitative and anecdotal data help to support the existence of the transfer seminar course. Over the last 4 years, transfer students have entered the Swanson School of Engineering with a cumulative GPA of 3.39. In their first term in the SSOE, these same transfer students have averaged a first term GPA of 2.90. Transfer students who have taken transfer seminar, however, have a first term GPA of 2.98. While the .08 differential appears analytically insignificant, the overall GPA number includes students who internally transferred from the College of Arts & Sciences and had lesser transitional issues. Given that the student population who is encouraged to get involved with the TPM program are students at a greater risk of transfer shock (external and regional transfer students versus students transferring internally), the evidence that these students are succeeding on par or at a greater level is a significant achievement.

Students who have worked with the TPM program have been satisfied with the support provided. Students have maintained contact with their TPMs long after class as commenced. In student satisfaction surveys of the course, students from 2010-2015 have graded their TPM on average 4.83 out of 5. The students' comments about their TPM say that they are consistently "knowledgeable", "easy to talk to" and "supportive".

Potential for Adaptation by Other Institutions

The Swanson School of Engineering Transfer Peer Mentoring program is adaptable to other institutions, no matter the size or concentration, based upon the mentors themselves. Any major, school, or university that receives transfer students is able to use former transfer students as mentors or ambassadors to new students. At certain schools, transfer mentors can also be used in the recruitments of transfer students. While our program pays the mentors a stipend for their work, other programs or institutions might be able to use students in a volunteer capacity if service hours are needed as part of their program. Additionally, the structure of the TPM program currently resides within an academic

course, but could be modified by programs to reside strictly within academic advising or residence life situations.