New Engineering Class to Debut for 2006-07 School Year

Engineering: it might be the career of the future. At St. Francis, it will be the course of the present for the 2006-2007 school year when students can enroll in an Introduction to Engineering course. It will be a semester course that meets at SFS during “Early Bird” hours, with several instructional focuses. Students will learn:

- what engineers do
- why engineers love their job
- how interesting the work is
- how much engineers affect society
- how much money and prestige go along with being an engineer
- how much time and effort it takes to be an engineer
- what a student needs in order to succeed in engineering
- how a student can succeed in an engineering program, even if he or she is not a math or science whiz.

The course will be taught by Dr. Steven N. Kramer, Professor and Director of Undergraduate Studies in Industrial Engineering in the Mechanical, Industrial, and Manufacturing Engineering Department at the University of Toledo. He has been teaching at UT for many years, and is the only person in the history of UT to have received the university’s Outstanding Teaching Award, the Outstanding Advisor Award, and the Professor of the Year Award. He earned his Ph.D. at Rensselaer Polytechnic Institute. He notes, “Several engineering schools in the United States have classes for high school students either at a high school or at the college. The motivation is to get students interested and informed about what engineering is, and why the career is so exciting.”

The course will include five educational components:

- Material in the textbook
- Learning how to solve engineering design and analysis problems that engineers face
- Tours of different engineering departments at the University of Toledo, as well as tours of manufacturing plants in Toledo
- Matlab computer programming, which, Dr. Kramer notes, “is quickly becoming THE computing language in engineering.”
- A design project where students will work in groups to build something to achieve a goal.

Students will meet Mondays and Fridays in a classroom at St. Francis, and in the SFS computer lab on Wednesdays for the Matlab classes. They will receive college credit, according to the Transfer Applicability Guidelines from the Ohio Board of Regents, and it will apply to their plan of study if they enter engineering in college. There will be approximately 25 students, including nine from St. Ursula Academy.

Ms. Ann Martin, Dean of Academics at SUA, is eager to see how the girls like the course. She said, “I think this is a wonderful opportunity for the girls to experience a college level class and explore a career at the same time. The girls will be taking an AP Calculus course at the same time, so they’ll be ready for the math part of the class.”

Eileen Bingle agrees. She will be a senior at St. Ursula, and says she likes the opportunity to give engineering a try before college. “I like math and science, and I do pretty well in those classes, so I think I’ll like engineering. It will be challenging, and it will be fun to take a class with guys in it.”

Brittany Rosenthal is looking forward to finding out about careers in biomedical engineering. “I am really interested in the fields of science and medicine. I know it sounds geeky, but I love science, especially physics, and I like the idea of taking some harder classes than usual.”

SFS Academic Dean Mr. Christopher Steingass notes that the SFS students registered for the class were math students of Father John Extej; they have completed the necessary math courses. “They will take this as a kind of Post-Secondary Option course, but it will be in addition to a full regular schedule for them.”

The idea for the course came in a conversation between Mr. Steingass and Brian Randolph, undergraduate Dean in Engineering at the University of Toledo. Steingass remembers, “I told him we’d like to add something like an engineering course to our curriculum, and he thought a faculty member from UT would be able to teach the course. That makes our course different from others in the area, since the course is taught entirely by the UT faculty member, not our own faculty members. The UT staff worked out the credit arrangements with the Ohio Board of Regents, and we’re ready to go.”

Mr. Michael Blochowski, computer teacher at SFS, will assist Dr. Kramer and serve as the liaison between UT and SFS.