

Academic Fact Sheet

Wayne State
College

PRE-ENGINEERING

The Pre-Professional Engineering program is administered by the
Physical Sciences and Mathematics Department.

Facts about the Program

Degrees Offered:

Transfer program only

Coordinator:

Jeffrey Bauer, Ed.D.
Adam Davis Ph.D.

Wayne State College offers a two-year program of study in Pre-Engineering built around a strong core of mathematics and science, and with a good grounding in communication, the humanities, and the social sciences.

Program Description

Pre-Engineering provides the student with courses designed to meet the introductory, prerequisite science and mathematics training and the transfer requirements, as well as the general education, needed for any of several engineering disciplines, including agricultural, architectural, bio-systems, chemical, civil, computer, electrical, industrial, mechanical, and metallurgical engineering. The program comprises two years of study at WSC that is intended to articulate with the engineering curricula of various regional engineering schools such as:

South Dakota State Univ.

*Successful completion of the program is determined by receiving schools. The student is advised to contact the receiving school to discuss the program.

Opportunities

"It is an enormously exciting time to be an engineer--a dynamic career that builds on the rigors of science and mathematics to invent new technology, solve critical problems, and create wealth for society. The scope of this profession encompasses nearly every level of human imagination--from nano-machinery to citywide structures, from operation of living cells to global climate modeling, from vehicles that will take us across town to vehicles that will take us to Mars." -Terry King, Dean of Engineering, Kansas State University

You can start your journey toward this future at WSC. Upon completing the program at WSC and finishing the remaining course work at an engineering college, students can anticipate a challenging career in any of several engineering fields, including agricultural, architectural, bio-systems, chemical, civil, computer, electrical, industrial, mechanical, and metallurgical engineering.

Scholarships and Financial Aid

Wayne State College is committed to providing a quality, affordable education for its students. There are several types of financial assistance available for Wayne State students, including grants, loans, work-study and scholarships. The aid packages are composed of money from Pell grants, SEOG grants, SSIG grants, Perkins loans, Stafford student loans, PLUS loans and a variety of scholarships. Contact the Financial Aid Office at (402) 375-7230 for further information.

For more information contact:

Physical Sciences and Mathematics Department
Wayne State College
Wayne, NE 68787
(402) 375-7329 or 1-800-228-9972
preeng@wsc.edu
<http://wsc.edu/eng>

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The actual program make-up will vary according to the particular discipline or school. Most programs will consist of engineering science courses, mathematics courses in calculus and differential equations, science courses in physics and chemistry, communication courses in composition, speech, and graphic communication, and courses in the humanities and social sciences. Wayne State College collaborated with South Dakota School of Mines and Technology (SDSM&T) to develop an engineering science concentration. **If the students knows which engineering discipline they are interested in, they should contact the coordinator of the programs noted on the reverse of this sheet for a specific program of study. The program below is only for student uncertain of which engineering discipline interests them.**

1st Semester

ENG 102	Composition Skills I	3
MAT 140	Calculus I	5
PHY 115	Professionalism in Science	2
PHY 301	University Physics I	4
PHY 321	Physics Lab I	<u>1</u>
		15

2nd Semester

CNA 100	Principles of Human Communication	3
MAT 240	Calculus II	5
*PED 103	Lifestyle Assessment	2
PHY 302	University Physics II	4
PHY 322	Physics Lab II	1
**Elective	General Education	<u>3</u>
		18

3rd Semester

CHE 106	General Chemistry I	4
CSC 150	Programming Fundamentals I	3
MAT 250	Differential Equations	3
PHY 214	Applied Statics	3
** Elective	General Education	<u>3</u>
		16

4th Semester

CHE 107	General Chemistry II	4
MAT 340	Calculus III	4
PHY 215	Applied Dynamics	3
***Elective	Natural Science	3
Electives	General Education	<u>3</u>
		17

*Most institutions have a "wellness" requirement of 2 to 3 credits. Some institutions either require or allow physical education classes to meet this requirement but in many, if not most, cases PED 103 is the transferable class.

**Studies in the humanities and social sciences serve not only to meet the objectives of a broad education but also to meet the objectives of the engineering profession. Therefore, studies in the humanities and social sciences must be planned to reflect a rationale or fulfill an objective appropriate to the engineering profession as well as Wayne State College's and the receiving engineering college's objectives. To satisfy this requirement, the courses selected must provide both breadth and depth and not be limited to a selection of unrelated introductory courses. Such course work must meet the generally accepted definitions that humanities are the branches of knowledge concerned with man and his culture, while social sciences are the studies of individual relationships in and to society. Examples of qualifying subjects are philosophy, religion, history, literature, fine arts, sociology, psychology, political science, anthropology, economics, and foreign languages other than English or a student's native language. Subjects such as accounting, management, finance, personnel administration, personal economics and military training do not fulfill the objectives desired of the humanities and social sciences content.

***Engineers will take a fair amount of science courses but this science elective should reflect the receiving engineering college's requirement for citizenship of the engineer to the environment or humanity and not just the science directly and specifically pursuant to the engineer's field.

For more information about a suggested program of student or about engineering at Wayne State College, visit <http://academic.wsc.edu/nss/pscm/preeng/>, or contact Dr. Adam Davis, at 402-375-7339, e-mail adavis1@wsc.edu or

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