Description/Objective:

The Department of Engineering, located within the Miller Brothers School of Engineering, offers the Bachelor of Science degree in Composite Materials Engineering. Composites represent a new group of manufactured materials. These lightweight materials with high strength and stiffness are formed by combining reinforcing fibers in a polymer, ceramic or metal matrix. Over the past two decades, the use of composites has grown significantly in the following industries: aerospace, automotive, biotechnology, construction, electronics, marine, and sporting goods. The future demand will be great for people educated in the engineering of composite materials.

The Composite Materials Engineering Program at WSU has been developed to meet the engineering needs of the composites industry and is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). Graduates from this program will be prepared to practice engineering at a professional level and enter the composites industry directly into positions that provide opportunities for professional growth. Graduates also will be prepared to enter graduate level programs in composite materials and other related engineering disciplines.

The CME Program is the first and only accredited undergraduate program in the United States that offers a Bachelor of Science degree in composite materials engineering. Majors in the program may choose to focus on the design, analysis, and manufacture of composite structures (mechanical focus); or on the development, processing, and chemistry of the materials used in composites including fibers, matrices and fiber/matrix systems (chemical focus).
Career Opportunities:
—— Graduates from this program will be prepared for careers in a number of industries including aerospace and aircraft, automotive, biotechnology, construction, energy, marines, materials, and sporting goods. Graduates also will be prepared to enter graduate-level programs in composite materials and other related engineering disciplines.

High School Background:
—— Recommended high school preparation includes two years of algebra, one year of geometry, one-half year of trigonometry, one-half year of college algebra, as well as one year each of physics and chemistry. Without this background, it is unlikely a student will complete the degree requirements in four years.

Department Programs:
B.S. Major: Composite Materials Engineering — no minor required

Declaring an Engineering Major:
—— Declaration of an Engineering major can be done by completing the Declaration of Major form at anytime. However, admission to the Composite Materials Engineering Program is granted to students by the Engineering Admissions Committee only upon completion of required lower division courses and achievement of certain academic standards.

ENGINEERING Continued

First-Year Sample Program:
Fall Semester
ENGR 102 Introduction to Engineering 2 cr.
MATH 160 Calculus I 4 cr.
CHEM 212    Principles of Chemistry I    4 cr.
ENG 111    College Reading & Writing    4 cr.
University Studies Requirements    3 cr.

Spring Semester
CHEM 213    Principles of Chemistry II    4 cr.
ENGR 182    Engineering Graphics & Design    2 cr.
MATH 165    Calculus II    4 cr.
PHYS 221    University Physics I    4 cr.
CMST 191    Fundamentals of Speech Communication    3 cr.