

ENGINEERING - MSU/UM

JCJC CURRICULUM SHEET

The program of study illustrated is designed to prepare students to enter the junior year of a 4-5 year engineering program. See the listing of Engineering majors on the back and other important notes. Core courses are marked with an asterisk (*); however, not all curricula specify the same courses for the areas of Social Sciences/Humanities or the math and sciences.

FRESHMAN YEAR

ENGLISH COMPOSITION (6 HRS)

ENG 1113 English Comp. I* 3
ENG 1123 English Comp. II* 3

HUMANITIES : * History, Literature, Foreign Language Select 6 HRS in one group) + See note over.

HIS 1113 Western Civ. I 3
HIS 1123 Western Civ. II 3
HIS 2213 American History I 3
HIS 2223 American History II 3
OR, Other Humanities Electives 6

+Must be 2 related courses.

SOCIAL SCIENCE* PSY, SOC, PSC, or ECO (Select 6-9 HRS) See Note over.

PSY 1513 General Psychology 3
SOC 2113 Sociology 3
PSC 1113 Am. Nat. Government 3
ECO 2113 Economics I 3

MATH (6-11 HRS)

MAT 1313 College Algebra+ 3
MAT 1323 Trigonometry+ 3
MAT 1815 Calculus I* 5

+Fall term with Calculus in spring

BIOLOGICAL LAB SCI. (4-8 HRS)

Needed only for Bio. Engr. & Comp. Sci. (MSU)

BIO 1134 Biology I (Comp Sci E) 4
BIO 2414 Zoology I (Bio E) 4
BIO 2424 Zoology II (Bio E) 4

PHYSICAL LAB SCIENCE (8 HRS)

CHE 1214 General Chemistry I*+ 4
CHE 1224 General Chemistry II 4
+See Physical Lab Science Note over.

*Core courses

SOPHOMORE YEAR

FINE ARTS* (3 HRS)

ART 1113 Art Appreciation **or**
MUS 1113 Music Appreciation 3

SOCIAL SCIENCE* (Select 3-6 HRS)

**See Note over.*

EPY 2533 Human Growth & Dev. 3
SOC 2133-43 Sociology Elective 3
PSC 1123 Am. Nat. Gov. Elect. 3
ECO 2123 Economics II Elective 3

MATH (5-13 HRS)

MAT 1825 Calculus II* 5
MAT 2813 Calculus III* 5
MAT 2913 Differential Equations* 3

COMPUTER SCIENCE (3 HRS)

CSC 2133 Programming I with "C++" *(only for Biological Engineering)* 3

PHYSICAL LAB SCIENCE (8-18 HRS)

PHY 2515 Physics IA* 5
PHY 2525 Physics IIA* 5
CHE 2424 Organic Chemistry I+ 4
CHE 2434 Organic Chemistry II+ 4

+Needed only for Chemical Engineering (MSU)

SPEECH (3 HRS)

SPT 1113 Speech* 3
+ see Speech note over

ENGINEERING COURSES (3-6 HRS)

EGR 2413 Mechanics (statics)*+ 3
GRA 1143 Graphics++ 3

+Not required in Computer Science or Computer Engineering

++Required for Civil and Industrial Engineering

* Core courses

6/06

ENGINEERING -- NOTES:

Those planning to pursue an engineering program should possess good aptitude in mathematics and have a standard composite score on the American College Test (ACT) of at least 20.

In addition to the different engineering majors, the departments of engineering at UM and MSU offer a degree in Computer Science. The program on the reverse includes computer science along with the engineering majors. It is general and can be applied to engineering programs offered at Mississippi State University and the University of Mississippi as well as other senior institutions.

Aerospace Engineering
Industrial Engineering
Mechanical Engineering
Computer Engineering
Geological Engineering

Electrical Engineering
Chemical Engineering
Civil Engineering
Biological Engineering
Bachelor of Engineering UM

Social Science Requirement at MSU. Take minimum of 6 semester hours for all areas. Two related Social Science courses needed; ECO 2123, and SOC 2113 or PSY 1513. **Industrial Engineering** majors should take ECO 2123 (Economics II) and PSY 1513.

Speech: Speech is not required for Chemical or Civil Engineering at MSU. However, Speech is required for graduation from Jones County Junior College.

Physical Lab Science. Chemistry I. General Chemistry is usually required for all majors in Schools of Engineering. General Chemistry II is required only for Biological, Chemical, Civil, Industrial, and Mechanical Engineering.

Humanities. Students must take two related courses for engineering majors and one literature and one American History course for computer science majors.

Students preparing to enter **Chemical Engineering** should substitute Organic Chemistry (CHE 2424 and CHE 2434) for two non science courses. For **Biological Engineering**, Biology 1134 and Zoology 2414 are a requirement at MSU.

Transfer students to UM should attempt to complete a course in Electric Circuit Theory prior to the fall of the junior year since this course is a prerequisite to all EE courses at UM. Additionally, UM requires Graphics only in **Civil, Geological and Mechanical Engineering**.

A minimum of one course in Fine Arts must be included prior to graduation.

Only grades of C or better are transferable to MSU. Other programs may have identical standards.

Students should consult the senior institution catalog and, with the assistance of an advisor, tailor the sample curriculum illustrated to match the particular targeted engineering major and institution. The student should consult the catalog of the senior institution for specific admissions procedures and other details concerning the program of study.

This CHECK SHEET should be used to keep a careful record of grades for each of the courses and should be presented to the student's advisor for planning the schedule of courses each semester at JCJC.