

CHEMISTRY AND PHYSICS

JCJC CURRICULUM SHEET

The sample program of study leads to a Bachelor of Science in a preprofessional track in chemistry or physics. A Bachelor of Arts degree in Chemistry and Physics may be followed and used for preparation for teacher certification or for satisfying premedical and predoctoral requirements when two courses in Biology are added.

FRESHMAN YEAR

ENGLISH COMPOSITION (6 HRS)

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

HISTORY (6 HRS)

HIS 1113 Western Civ. I 3
 HIS 1123 Western Civ. II 3

SOCIAL SCIENCE (Select 6 HRS)

Take 2 courses in one subject for UM.

See notes over.

PSY 1513 General Psychology 3
 (EPY 2533 Human Growth & Dev) 3
 SOC 2113 Sociology 3
 (SOC 2143 Marriage & Family) 3

MATH (5-11 HRS)

MAT 1313 College Algebra+ 3
 MAT 1323 Trigonometry+ 3
 MAT 1815 Calculus I 5
 + *Preparatory for calculus.*

PHYSICAL LAB SCIENCE (8 HRS)

CHE 1214 General Chemistry I 4
 CHE 1224 General Chemistry II 4
 + See science note over

HEALTH (3 HRS) USM

HPR 1213 Health 3

HUMANITIES ELECTIVE (3 HRS) UM

PHI 2113 Philosophy 3

FOREIGN LANGUAGE UM/MSU

UM recommends German or French or Russian

Foreign Lang. (French I) 3
 Foreign Lang. (French II) 3

SOPHOMORE YEAR

LITERATURE (3-6 HRS)

ENG 2413 World Literature USM 3
 ENG 2323 English Literature I 3
 ENG 2333 English Literature II 3

SOCIAL SCIENCE (6 HRS)

Take 2 courses in one subject for UM.

See notes over.

PSC 1113 Am. Nat. Government 3
 (PSC 1123 State & Local Gov) 3
 ECO 2113 Economics I 3
 (ECO 2123 Economics II) 3

FINE ARTS (3 HRS)

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

MATH (5-13 HRS)

MAT 1825 Calculus II 5
 MAT 2813 Calculus III 3
 MAT 2913 Diff. Equa. 3

COMPUTER SCIENCE (3-6 HRS)

CSC 1113 Computer Concepts 3
 CSC 1613 Computer Program. I 3

PHYSICAL LAB SCIENCE (10-18 HRS)

CHE 2424 Organic Chemistry I+ 4
 CHE 2434 Organic Chemistry II+ 4
 PHY 2515 Physics IA 5
 PHY 2525 Physics IIA 5
 + *Physics Majors: Chem. is not required for some certified programs.*

SPEECH (3 HRS)

SPT 1113 Speech 3

FOREIGN LANGUAGE UM/MSU

UM recommends German or French or Russian.

Foreign Lang. (French I) 3
 Foreign Lang. (French II) 3

6/06

CHEMISTRY AND PHYSICS -- NOTES:

If the curriculum leading to American Chemical Society (ACS) certified major in Chemistry is followed, differential equations and calculus based physics are required. The ACS program is appropriate for those who will do graduate work in Chemistry or who will enter a career in basic research. For those needing a more flexible curriculum, the non-ACS major is available. The non-ACS is frequently chosen by premedical and pre dental students as well as those planning to teach or select chemical sales.

The B.A. degree has a stronger liberal arts emphasis, permitting the student to include a greater number of courses in the humanities, fine arts, and social sciences. (Another check sheet for premed and pre dent, with Biology added, more closely fits the B.A. core courses for chemistry majors.

The B.S. degree is the professional degree, but there are variations among senior institutions. Their programs in chemistry and physics may be designed for teachers, for example, without the more stringent requirements characteristic of professional degree plans. The catalog will direct the inquiring student to select the appropriate curriculum.

Students should consult closely with their advisor and the catalog of the senior institution concerning details of the chemistry/physics curriculum.

Chemistry Note. Calculus based physics is specified for the B.S. degree.

Math Note. MAT 2813 Calculus III, 3 hrs credit, is not required by all senior institutions. The student should check the senior college catalog for guidance in planning the math sequence. Differential equations, MAT 2913, is most often listed as a junior-level course (Elementary Differential Equations) at the senior institutions, as illustrated on the reverse.

Biology Note. With the addition of BIO 1134 Biology I and BIO 1144 Biology II, the sample curriculum fulfills core requirements of a premedical and pre dental curriculum. Students who plan to follow the Chemistry or Physics Licensure plan at USM are required to take Biology 1134 and 1144.

Literature Note. USM requires only one course in literature, while UM and MSU require a total of 6 hours.

Social Science Note. UM requires in the B.S. program two 6 hour sequences in each of two social sciences. MSU and USM require two courses, one each from two disciplines.

Foreign Language is not required in both chemistry and physics in some senior institutions. When required, many students may postpone the entire sequence until they transfer to ensure continuity between the first and second year courses. German may also be elected for Chemistry majors at UM.

Students should plan to complete no more than half of the hours required for a bachelor's degree prior to transferring to the senior 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.