### BS Chemistry (ACS Approved Chemical-Physics Option): 77 credits in Major

#### Suggested Plan of Study

**Department of Chemistry & Biochemistry: Phone 320-308-3031  E-mail: chemistry@stcloudstate.edu**

**Chemistry Major Advisors**

| Dr. Christina Cama 308-3989 ccama@stcloudstate.edu | Dr. Mark Mechelke 308-2030 mfmechelke@stcloudstate.edu |
| Dr. Nathan Bruender 308-2080 nabruender@stcloudstate.edu | Dr. Sarah Petitto 308-5420 scpetitto@stcloudstate.edu |
| Dr. Michael Dvorak 308-2015 madvorak@stcloudstate.edu | Dr. Kannan Sivaprakasam 308-1692 ksivaprakasam@stcloudstate.edu |
| Dr. Michael Jeannot 308-2046 mjeannot@stcloudstate.edu | Dr. Nathan Winter 308-6035 nwinter@stcloudstate.edu |
| Dr. Tamara Leenay 308-3948 tleenay@stcloudstate.edu | Dr. Kannan Sivaprakasam 308-1692 ksivaprakasam@stcloudstate.edu |

**Transfer Advisors**

| Dr. Michael Jeannot 308-2046 mjeannot@stcloudstate.edu | Dr. Kannan Sivaprakasam 308-1692 ksivaprakasam@stcloudstate.edu |

#### First Semester

- Chemistry 210 (4 cr.)
- Math 221 (4 cr.)
- Physics 234 (5 cr.)

**Total semester credits = 13**

#### Second Semester

- Chemistry 211 (4 cr.)
- Math 222 (4 cr.)
- Physics 235 (5 cr.)
- Liberal Education Goal Area (3 cr.)

**Total semester credits = 16**

#### Third Semester

- Chemistry 310 (5 cr.)
- Chemistry 350 (4 cr.)
- Physics 328 (3 cr.)
- Liberal Education Goal Area (3 cr.)

**Total semester credits = 15**

#### Fourth Semester

- Chemistry 311 (4 cr.)
- Physics 329 (3 cr.)
- Liberal Education Goal Area (8 cr.)

**Total semester credits = 15**

#### Fifth Semester

- Chemistry 420 (4 cr.)
- Chemistry 422 (1 cr.)
- Chemistry 480 (4 cr.)
- Liberal Education Goal Area (6 cr.)

**Total semester credits = 15**

#### Sixth Semester

- Chemistry 421 (4 cr.)
- Chemistry 423 (1 cr.)
- Chemistry 450 (4 cr.)
- Chemistry 391 (1 cr.)
- Liberal Education Goal Area (3 cr.)

**Total semester credits = 13**

#### Seventh Semester

- Chemistry 430 (4 cr.)
- Chemistry 489 or 444 (1 cr.)
- Physics 346 (3 cr.)
- Liberal Education Goal Area (3 cr.)

**Total semester credits = 11 ++**

#### Eighth Semester

- Chemistry 431 (2 cr.)
- Chemistry 489 or 444 (1 cr.)
- Chemistry 491 (2 cr.)
- Liberal Education Goal Area (5 cr.)

**Total semester credits = 5 ++**

**Notes:**

1. The prereq for Chem 210: Must have an ACT math subscore of 22 or higher; or completed CHEM 160 with a C or better; or have completed Math 072 with a C- or better; or a score of 50 or higher on the ACCUPLACER CLM exam (College Level Math) or a score of 60 or higher on the ACCUPLACER Intermediate Algebra exam—CAT. Higher level acceptable MATH classes: Math 112, 113, 115, 193, 196, 211, 212, 221, 222 and 325.
2. Contact the Math Department at 320-308-3001 regarding placement into MATH 221. Note that MATH 221 is an acceptable substitute for MATH 193 in the Liberal Education Program. MATH 221 and 222 also allow for a waiver of goal area 4.
3. The Liberal Education Program (LEP) incorporates the ten goals of the Minnesota Transfer Curriculum. LEP must be satisfied by completion of all ten goals and achieve a total of at least 40 credits. Each student must complete three courses designated as Diversity courses. Students may take no more than one course from any one department. It is strongly recommended and encouraged that one Diversity course be an approved Racial Issues (RIS) course. See Goal 7 for approved Racial Issues courses. Completion of major courses allows for a waiver of 9 credits from goal area 3 and 5 credits from goal area 4. Note that there are 1 and 2 credits classes in some goal areas.
4. Upper level chemistry courses are not offered every semester. Odd semesters above correspond to fall offerings, and even semesters correspond to spring offerings.
5. A minimum of 2 credits of undergraduate research (CHEM 489) or pre-approved internship (CHEM 444) are required.
6. A minimum of 120 credits must be earned to graduate. The 45 upper-level credit requirement is completely met by completion of this major.

NOTE: The following courses are normally offered in the summer: CHEM 210, 211. Consult departments after February 1 to determine expected summer course offerings.

1/10/18S