

# **<sup>1</sup>BS Chemistry Education Grades 9-12**

## **Suggested Plan of Study**

**Chemistry: Phone 320-308-3031 E-mail chemistry@stcloudstate.edu**

### **Chemistry Teaching Advisors:**

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<b>First Semester</b>	<b>Second Semester</b>
<sup>3</sup> Math 211 (3 cr.) <sup>4</sup> Chemistry 210 (4 cr.) <sup>2</sup> RIS Liberal Education from Goal 7 (3 cr.) PESS 122 (1 cr.) <sup>2</sup> ENGL 191 (3 cr.) <b>Total semester credits = 14</b>	Math 212 (3 cr.) Chemistry 211 (4 cr.) <sup>2</sup> Liberal Education/Diversity Course TH 270 (3 cr.) <sup>2</sup> CEEP 262 (3 cr.) <sup>2</sup> PHIL 194 (3 cr.) <b>Total semester credits = 16</b>
<b>Third Semester</b>	<b>Fourth Semester</b>
Physics 231 (4 cr.) <sup>5</sup> Chemistry 310 (5 cr.) Chemistry 350 (4 cr.) <sup>6</sup> ED 300 (3 cr.) <b>Total semester credits = 16</b>	Physics 232 (4 cr.) Chemistry 311 (4 cr.) HLTH 301 (2 cr.) <sup>2</sup> Liberal Education/Diversity Course MUSM 125(3 cr.) CEEP 361 (3 cr.) <b>Total semester credits = 16</b>
<b>Fifth Semester</b>	<b>Sixth Semester</b>
Chemistry 420 (4 cr.) Chemistry 480 (4 cr.) Chemistry Elective (4 cr.) <sup>7</sup> Science 420 (4 cr.) <b>Total semester credits = 16</b>	HURL 497/498 (4 cr.) Chemistry 489 (1 cr.) Chemistry Electives (8 cr.) ED 451 (2 cr.) <b>Total semester credits = 15</b>
<b>Seventh Semester</b>	<b>Eighth Semester</b>
<sup>8</sup> Science 430 (4 cr.) ENGL/ED 460 (2 cr.) SPED 425 (2 cr.) <sup>9</sup> ED 421/431/441 (6 cr.) <sup>10</sup> IM 422 (2 cr.) <b>Total semester credits = 16</b>	<sup>11</sup> Science 440 (3 cr.) ED 466 (9 cr.) <b>Total semester credits = 12</b>

### **Notes:**

<sup>1</sup> This program meets Minnesota Board of Teaching licensure requirements for beginning teachers of chemistry at the 9-12 grade level. If students in this major intend to graduate in four years they must:

- NOT complete the core or general education in the first two years--they need to take the introductory science classes.
- Take CHEM 350, CHEM 420 and EAS 205 as indicated above—CHEM 350 and CHEM 420 are only offered during Fall semester and EAS 205 only during Spring semester.
- Be admitted to this major before the second semester of their sophomore year.
- Not need remedial work in high school math or chemistry (i.e. need MATH 070, MATH 072 or CHEM 160).

Taking some courses during summer session makes finishing the program in four years easier and may improve a student's GPA.

<sup>2</sup> 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. Students must complete 3 diversity courses. The diversity courses must come from 3 different rubrics or academic areas. One diversity course must be an approved Racial Issues course. See Goal 7 for approved Racial Issues courses. Completion of major courses allows for a waiver of 8 credits from goal area 3 and 3 credits from goal area 4. CEEP 262 can be used as one of the goal area 5 courses. Note that there are 1 and 2 credits classes in some goal areas. All students must complete PESS 122.

<sup>3</sup> Contact the Math Department at 320-308-3001 regarding placement into MATH 211. Note that MATH 211 is an acceptable substitute for MATH 193 in the LEP.

<sup>4</sup> The prerequisites for Chemistry 210 are completion of CHEM 160 (prior to Fall 2008 in was Chem 140) with a C or better; or an ACT math subscore of 23 or higher; or completion of 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 16 or higher on the Calculus Readiness test. Higher level acceptable MATH classes: Math 112, 113, 115, 211, 212, 221, 222 and 325.

<sup>5</sup> Upper level chemistry courses are not offered every semester. Odd semesters above correspond to fall offerings, and even semesters correspond to spring offerings.

<sup>6</sup> Advising and admission to the professional education sequence is done by the Department of Teacher Development. After admission to the major department (Chemistry), students should immediately seek an advisor in the Dept. of Teacher Development. Completion of the PPST and admission to the major are required before a student can enroll in any of these courses except ED 300.

<sup>7</sup> Must complete ED 300 prior to enrolling in SCI 420.

<sup>8</sup> Registration should be concurrent with Professional Practice Semester (ED 421/431/441, ENGL/ED 460, SPED 425).

<sup>9</sup> CPR/first aid certification required prior to ED 421/431/441.

<sup>10</sup> A computer competency test must be passed to enroll in IM 422 (see Department of Information Media).

<sup>11</sup> Registration must be concurrent with Student Teaching (ED 466).