

Build Your Schedule

Concentration: Traditional B.S in Chemistry

Freshman Year

| Fall | Spring | Summer |
|--|---|--------|
| Course | | |
| CHEM 1211K (4) Principles of Chemistry I | CHEM 1212K (4) Principles of Chemistry II | |
| MATH 1113 (3) Pre-Calculus | MATH 2211 or 2201(4) Calculus of One Variable I <u>or</u> Calculus for the Life Sciences I | |
| | | |
| | | |
| CHEM Hours: 7 | CHEM Hours: 8 | |

Sophomore Year

| Fall | Spring | Summer |
|--|--|--------|
| Course | | |
| CHEM 2400 (4) Organic Chemistry I | CHEM 3410 (4) Organic Chemistry II | |
| CHEM 3100 (2) Organic Chemistry I Lab | CHEM 3110 (2) Organic Chemistry II Lab | |
| MATH 2212 or 2202 (4) Calculus of One Variable II <u>or</u> Calculus for the Life Sciences II | PHYS 2212 (4) Principles of Physics II | |
| PHYS 2211 (4) Principles of Physics I | | |
| CHEM Hours: 14 | CHEM Hours: 10 | |

Junior Year

| Fall | Spring | Summer |
|--|---|--------|
| Course | | |
| CHEM 4600 (5)* Biochemistry I | CHEM 4120 (3) Physical Chemistry II | |
| CHEM 4110 (3) Physical Chemistry I | CHEM 4000 (3) Fund of Chemical Analysis-CTW | |
| CHEM 4330 (3)* Advanced Synthesis | CHEM 4160 (3) Chemistry Laboratory IVA-CTW | |
| | | |
| CHEM Hours: 11 | CHEM Hours: 9 | |

Senior Year

| Fall | Spring | Summer |
|---|---|--------|
| Course | | |
| CHEM 4190 (3) Instr Methds III: Spectroscopy | CHEM 4210 (3)* Chemistry Laboratory IVB | |
| CHEM 2010 (2) OR SUB Quantitative Analysis | CHEM 4010 (3) | |
| CHEM 4170 (4)* Chemistry Laboratory IVB | | |
| CHEM Hours: 9 | CHEM Hours: 6 | |

Not interested in ACS Certification: Skip CHEM 4330, CHEM 4170, CHEM 4210. You may also choose to skip CHEM 4600 but you must make up the hours in chemistry or cross-listed biology courses to equal 5 semester hours.

You may replace CHEM 2010 with 2 hours of 2950 (Chemical Research) or 2000 level course in Math, Computer Science, Physics or Biology.

University Required Core-Curriculum Units

Area A1: Written Communication (6 Semesters Hours)

- English 1101- English Composition I (3)
- English 1102- English Composition II (3)

Area A2: Mathematics (3-4 Semester Hours)

- Math 1113- Precalculus
- Math 2211- Calculus of One Variable I (4)
- Math 2212 Calculus of One Variable II (4)
- Math 2215 Multivariate Calculus (4)

- *Three of the following Math courses above are required for the chemistry major. (**Refer to Area D**)

Area B: Institutional Foundations (4 Semester Hours)

Select two courses from the list below

- Phil 1010- Critical Thinking (2)
- Spch 1000- Human Communication (2)
- Pers 2001- Perspectives on Comparative Culture (2)
- Pers 2002- Scientific Perspectives on Global Problems (2)

Area C: Group 1 (Humanities)

Select two courses from groups 1, 2, or 3.
Two courses may not come from same group.

- Engl 2110- World Literature (3)
- Engl 2120 - British Literature (3)
- Engl 2130- American Literature (3)
- Phil 2010- Introduction to Philosophy (3)
- Rels 2001- Introduction to World Religions (3)
- Spch 2050- Media, Culture, and Society (3)

Area C: Group 2 (Fine Arts)

Select two courses from groups 1, 2, or 3.
Two courses may not come from same group.

- AH 1700- Survey of Art I (3)
- AH 1750- Survey of Art II (3)
- AH 1850- Survey of Art III (3)
- Film 2700- History of the Motion Picture (3)
- MuA1500- Jazz: It's Origin, Styles, and Influence
- MuA1900- Dramatic Music from the Renaissance through the Twentieth Century (3)
- Thea 2040- Introduction to Theatre (3)

Area C: Group 3 (Foreign Language)

Select two courses from groups 1, 2, or 3.
Two courses may not come from same group.

- The University offers a variety of foreign language courses. Please review the course catalog for ALL foreign language offerings.

University Required Curriculum Units

Area D: Science & Mathematics (11 Semester Hours)

- Chem 1211K- Principles of Chemistry I (4) **and**
- Chem 1212K- Principles of Chemistry II (4)

- Math 2211- Calculus of One Variable I (4) **or**
- Math 2212- Calculus of One Variable II (4)

Area E: Social Sciences (12 Semester Hours) US Politics & History

- Hist 2110- Survey of United States History (3)
- Pols 1101- American Government (3)

•****Both courses listed are mandatory***

Area E: Social Sciences (3 Semester Hours) Select one course

- Econ 2100- The Global Economy (3)
- Hist 1111- Survey of World History to 1500 (3)
- Hist 1112- Survey of World History since 1500 (3)
- Pols 2401- Global Issues (3)

Area E: Social Science (3 Semester Hours) Select one course

- AAS 2010- Intro to African American Studies (3)
- Anth 1102- Introduction to Anthropology (3)
- CrJu 2200- Social Science and the American Crime Problem (3)
- Econ 2105- Principles of Macroeconomics (3)
- Econ 2106- Principles of Microeconomics (3)
- Geog 1101- Intro to Human Geography (3)
- AAS/Hist 1140- African and African Amer Hist (3)
- Psyc 1101- Introduction to Sociology (3)
- Soci 1160- Introduction to Social Problems (3)
- WSt 2010- Introduction to Women's Studies (3)

Area F: Lower Division Chemistry Major (18 Semester Hours-Mandatory Requirements)

- Chem 1211K-Principles of Chemistry I (4)
- Chem 1212K-Principles of Chemistry II (4)

- Physics 2211K- Principles of Physics I (4)
- Physics 2212K- Principles of Physics II (4)

- Chem 2010- Quantitative Analysis (2)

- Chem 2400- Organic Chemistry I (4)

- Chem 2212- Calculus of One Variable II (4)

Area G: Chemistry Major Courses 31 Semester Hours-Mandatory Courses

- Chem 3100- Organic Chemistry I Lab (2)
- Chem 3110- Organic Chemistry II Lab (2)
- Chem 3410- Organic Chemistry II (4)
- Chem 4000- Fund of Chemical Analysis-CTW (3)
- Chem 4010- Instrument Meth I: Chromatography (3)
- Chem 4110- Physical Chemistry I (3)
- Chem 4120- Physical Chemistry II (3)
- Chem 4160- Fund of Chemical Analysis (3)
- Chem 4190- Instrumental Meth III: spectroscopy (3)
- 5 credits of 3000/4000 level CHEM courses (5)

Traditional Chemistry Degree Schedule of Courses

| Course Number | Course Name | Pre-Requisite | Offered |
|----------------|--------------------------------|-----------------------------------|----------------------|
| CHEM 1211K (4) | PRINCIPLES OF CHEMISTRY | MATH 1113 (PRE-OR CO/REQUISITE) | FALL, SPRING, SUMMER |
| CHEM 1212K (4) | PRINCIPLES OF CHEMISTRY II | CHEM 1211K | FALL, SPRING, SUMMER |
| CHEM 2400 (4) | ORGANIC CHEMISTRY I | CHEM 1212K | FALL, SPRING, SUMMER |
| CHEM 3100 (2) | ORGANIC CHEMISTRY I LAB | CHEM 1212K | FALL, SPRING, SUMMER |
| CHEM 3110 (2) | ORGANIC CHEMISTRY II LAB | CHEM 2400 | FALL, SPRING, SUMMER |
| CHEM 3410 (4) | ORGANIC CHEMISTRY II | CHEM 2400 | FALL, SPRING, SUMMER |
| CHEM 2010 (2) | INTRO TO QUANTITATIVE ANALYSIS | CHEM 1212K | FALL, SUMMER |
| CHEM 4000 (3) | FUND OF CHEMICAL ANALYSIS | CHEM 3410, MATH 2212, 2.2 GPA | FALL, SPRING |
| CHEM 4010 (3) | INSTR METH I: CHROMATOGRAPHY | CHEM 4000 | FALL, SPRING |
| CHEM 4110 (3) | PHYSICAL CHEMISTRY I | CHEM 1212K, PHYS 2212K, MATH 2212 | FALL, SPRING |
| CHEM 4120 (3) | PHYSICAL CHEMISTRY II | CHEM 4110 | SPRING, SUMMER |
| CHEM 4160 (3) | CHEMISTRY LABORATORY IVA | CHEM 4000, CHEM 4110 | FALL, SPRING, SUMMER |
| CHEM 4170 (4)* | CHEMISTRY LABORATORY IVB | CHEM 4000 | FALL, SPRING, SUMMER |
| CHEM 4190 (3) | SPECTROSCOPY | CHEM 4000, CHEM 4120 | FALL, SUMMER |
| CHEM 4210 (3)* | INORGANIC CHEMISTRY | CHEM 4120 | SPRING |
| CHEM 4230 (5) | METALS IN BIOLOGY AND MEDICINE | CHEM 4600 | SPRING |
| CHEM 4330 (3)* | ADVANCED SYNTHESIS | ORG CHEM (3410) WITH LAB (3110) | FALL |
| CHEM 4600 (5)* | BIOCHEMISTRY I | CHEM 3410 | FALL, SPRING, SUMMER |

Quick Notes

You must take 39 semester hours of 3000/4000 level credit to meet your GSU residency requirement

You must also have a total of 120 semester hours of college course work to earn a degree from the university

You must have a 2.0 GPA in your residency hours as well as your institutional GPA

Interested in ACS Certification (American Chemical Society Certification)?

(Important if interested in a national job search)

*Courses Required in addition to the Major Courses (Courses are also identified with an * on the chart above):*

CHEM 4330 Advanced Synthesis (3), CHEM 4210 Advanced Inorganic (3), CHEM 4120 Physical Chemistry II (3), CHEM 4170, CHEM 4600 (5) Biochemistry I

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