

EAST TENNESSEE STATE UNIVERSITY — COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF CHEMISTRY
CHEMISTRY MAJOR—CHEMICAL PHYSICS CONCENTRATION

Name: _____ E#: _____ Catalog Year: _____

TBR Requirements: See other check sheet

Chemical Physics Concentration Core (22 cr)

| | | |
|--|-------|------|
| CHEM 1110: General Chemistry I Lecture | (F/S) | 4 cr |
| CHEM 1111: General Chemistry I Lab | (F/S) | 0 cr |
| CHEM 1120: General Chemistry II Lecture | (F/S) | 4 cr |
| CHEM 1121: General Chemistry II Lab | (F/S) | 0 cr |
| CHEM 2010: Organic Chemistry I Lecture | (F/S) | 3 cr |
| CHEM 2011: Organic Chemistry I Lab | (F/S) | 2 cr |
| CHEM 2020: Organic Chemistry II Lecture | (F/S) | 3 cr |
| CHEM 2021: Organic Chemistry II Lab | (F/S) | 2 cr |
| CHEM 2220: Quantitative Analysis Lecture | (F/S) | 2 cr |
| CHEM 2221: Quantitative Analysis Lab | (F/S) | 2 cr |

Additional Required Courses (27 cr)

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|--|-------|------|
| CHEM 3110: Descriptive Inorganic Chemistry | (F) | 3 cr |
| CHEM 3611: Introductory Integrated Lab | (F/S) | 2 cr |
| CHEM 3750: Physical Chemistry I | (F) | 3 cr |
| CHEM 3760: Physical Chemistry II | (S) | 3 cr |
| CHEM 4010: Seminar in Chemistry | (F/S) | 2 cr |
| CHEM 4110: Advanced Inorganic Chemistry | (S) | 3 cr |
| CHEM 4200: Principles of Instrumental Analysis | (F) | 3 cr |
| CHEM 4611: Advanced Integrated Lab— Dynamics | (F/S) | 2 cr |
| CHEM 4621: Advanced Integrated Lab— Structures | (S) | 2 cr |
| CHEM 4631: Adv. Integrated Lab— Analytical Tech. | (F) | 2 cr |
| OR | | |
| BIOL 4147: Biochem. of Macromolecules Lecture | (S) | 3 cr |
| BIOL 4157: Biochem. of Macromolecules Lab | (S) | 2 cr |
| OR | | |
| BIOL 4167: Biochem. of Metabolism Lecture | (F) | 3 cr |
| BIOL 4177: Biochem. Of Metabolism Lab | (F) | 2 cr |

Select three credit hours from the following:

| | | |
|---------------------------------------|-------|--------|
| CHEM 4900: Research in Chemistry | (F/S) | 1-3 cr |
| CHEM 4957 Special Topics in Chemistry | (F/S) | 1-6 cr |
| CHEM 4817: Intro Industrial Chemistry | (F/S) | 3 cr |

Other Required Courses (18cr)

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|---|-------|------|
| MATH 1910: Calculus I | (F/S) | 4 cr |
| MATH 1920: Calculus II | (F/S) | 4 cr |
| PHYS 2110: Technical Physics-Calculus Based | (F) | 5 cr |
| PHYS 2120: Technical Physics-Calculus Based | (S) | 5 cr |

Required Physics courses beyond first year (5-6cr)

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|---|------|
| PHYS 3010: Classical Mechanics <i>or</i> | 4 cr |
| PHYS 3610: Introduction to Atomic and Nuclear Physics | 3 cr |
| PHYS 3410: Modern Physics Lab | 2 cr |

Pick two of the following (7-8)

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|--|------|
| PHYS 3510: Biophysics | 3 cr |
| PHYS 3710: Electricity and Magnetism | 4 cr |
| PHYS 4007: Computational Physics | 4 cr |
| PHYS 4117: Thermal and Statistical Physics | 4 cr |
| PHYS 4617: Quantum Physics | 4 cr |

Other Bachelor of Science Required Courses

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|---|----------|------|
| PHIL 2640: Science and the Modern World | (F/S) | 3 cr |
| SPCH 2320: Argumentation and Debate | | |
| PHIL 2030: Practical Reasoning | OR (F/S) | 3 cr |

Elective Requirements

3-5 cr

| Subject | Course # | Title | Hours |
|---------|----------|-------|-------|
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| | | | |
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Student Signature: _____

Advisor Signature: _____

Advisor Printed Name: _____