

ACADEMIC PLANNING SHEET

B.S. PHYSICS: Pre-Calculus Start

COLORADO STATE UNIVERSITY - PUEBLO

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2019-2020 CATALOG

(Fall Start in an Odd Year)

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	Fall Semester		Spring Semester	
First Year (Odd F/ Even S)	MATH 124: Pre-Calculus Math CHEM 121/L: General Chemistry I/Lab ENG 101: English Composition I General Education Course: Humanities	5 5 3 3	PHYS 221/L: General Physics I/Lab MATH 126: Calculus and Analytical Geometry I MATH 207: Matrix & Vector Algebra ENG 102: English Composition II	5 5 3 3
	TOTAL SEMESTER HOURS	16	TOTAL SEMESTER HOURS	16
Second Year (Even F/ Odd S)	PHYS 222/L: General Physics II/Lab PHYS 321: Thermodynamics PHYS 322: Advanced Lab – Thermodynamics MATH 224: Calculus and Analytical Geometry II General Education Course: Humanities	5 3 1 5 3	PHYS 323/L: General Physics III/Lab MATH 325: Intermediate Calculus MATH 337: Differential Equations I CHEM 122/L: General Chemistry II/Lab	5 4 5 4
	TOTAL SEMESTER HOURS	17	TOTAL SEMESTER HOURS	18
Third Year (Odd F/ Even S)	PHYS 341: Optics PHYS 342: Advanced Lab - Optics MATH 338: Differential Equations II General Education Course: Humanities General Education Course: Social Science Elective	3 1 3 3 3 3	PHYS 431: Electricity and Magnetism PHYS 432: Adv. Lab – Electricity & Magnetism PHYS 492: Research General Education Course: History MATH 242: Intro. to Computation	4 1 1 3 4
	TOTAL SEMESTER HOURS	16	TOTAL SEMESTER HOURS	13
Fourth Year (Even F/ Odd S)	PHYS 301: Analytical and Orbital Mechanics PHYS 480: Lab Practicum Approved Math Elective* Elective Elective	4 1 3-4 3 3	PHYS 441: Quantum Mechanics PHYS 499: Thesis Research PHYS 493: Physics Seminar Elective Elective General Education Course: Social Science	4 1 1 3 3 3
	TOTAL SEMESTER HOURS	14-15	TOTAL SEMESTER HOURS	15

*Include Approved Math Elective (Junior or Senior Year) Math 307: Intro to Linear Algebra OR Math 350: Probability OR Math 425: Complex Variables

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General Education Requirements: 24 semester hours

- ENG 101: English Composition I (3)
- ENG 102: English Composition II (3)
- Mathematics Course (3)
 - MATH 126: Calculus & Analytic Geometry I (5)*
- Humanities Courses (9)
- History Course (3)
- Social Sciences Courses (6)
- Natural and Physical Sciences Courses (8) (2 courses with labs)
 - PHYS 221/L: General Physics I with/Lab (5)*
 - PHYS 222/L: General Physics II with/Lab (5)*

Transfer Students:

Course Completed elsewhere	CSU-Pueblo equivalent
(Ex: English 101)	(Ex: English 101)

Major Requirements:

Physics Emphasis: 40 semester hours

- PHYS 221/L: General Physics I/Lab (5)*
- PHYS 222/L: General Physics II/Lab (5)*
- PHYS 301: Analytical and Orbital Mechanics (4)
- PHYS 321: Thermodynamics (3)
- PHYS 322: Advanced Laboratory-Heat (1)
- PHYS 323/L: General Physics III/Lab (5)
- PHYS 341: Optics (3)

Institutional Graduation Requirements:

- Total of 120 semester hours, minimum.
- Complete a minimum of 40 semester hours in upper-division courses.
- Overall cumulative grade point average of at least 2.00.
- A minimum of 60 semester hours must be earned from a four-year institution. Of these, a minimum of 30 semester hours of credit must be earned in residence.
- Of the last 30 semester credits earned immediately preceding graduation, no more than 15 may be completed at other colleges or universities.
- All other requirements as specified in the Catalog.

Additional Major Graduation Requirements:

- Students must have at least a 2.000 grade-point average in physics courses and no more than four credits in physics with grades of D.
- At least 12 physics credits applied to the major must be earned at CSU-Pueblo with a C or better average.
- Students must have earned a C or better grade in lower-division prerequisite courses before being admitted to upper-division courses in physics.

Physics Emphasis: cont'd

- PHYS 342: Advanced Laboratory-Optics (1)
- PHYS 431: Electricity and Magnetism (4)
- PHYS 432: Advanced Lab Electricity & Magnetism (1)
- PHYS 441: Quantum Mechanics (4)
- PHYS 480: Practicum in Lab Instruction (1)
- PHYS 492: Research (1)
- PHYS 493: Seminar (1)
- PHYS 499: Thesis Research (1)

Other Required Courses: 37-39 semester hours

- CHEM 121/L: General Chemistry I/Lab (5)
 - CHEM 122/L: General Chemistry II/L (5)
 - MATH 242: Introduction to Computation (4)
OR
 - EN 103: Problem Solving for Engineers (3)
 - MATH 126: Calculus & Analytic Geometry I (5)*
 - MATH 207: Matrix & Vector Algebra with Applications (3)
 - MATH 224: Calculus and Analytic Geometry II (5)
 - MATH 325: Intermediate Calculus (4)
 - MATH 337: Differential Equations I (3)
 - MATH 338: Differential Equations II (3)
 - Approved Math Elective (3-4)
- (Courses *italicized* meet General Education requirements)

Electives: 15-17 semester hours

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