

Bachelor of Science in Physics – Computational Physics Concentration (BIC)

A Suggested Sequence of Required Courses (2018-2019 Catalog)

F r e s h m a n Y e a r

Fall	Spring
_____ 0 Chapel (CHA 1088)	_____ 0 Chapel (CHA 1088)
_____ 2 BIC 1212 Examined Life I	_____ 3 BIC 1324 World Cultures II
_____ 3 BIC 1314 World Cultures I	_____ 3 BIC 1323 Rhetoric II
_____ 4 BIC 1413 Rhetoric I	_____ 3 MTH 1322 Calculus II
_____ 3 MTH 1321 (if eligible) Calculus I	_____ 4 PHY 1430 Physics II (Cal. Based)
_____ 4 PHY 1420 Physics I (Cal. Based)	_____ 4 CSI 1430 Intr. To Comp Sci. w/ Lab
Total: 16	Total: 17

S o p h o m o r e Y e a r

Fall	Spring
_____ 3 BIC 2330 Social World I	_____ 3 BIC 2340 Social World II
_____ 4 CSI 1440 Intro. To Comp. Sci II w/ Lab	_____ 3 BIC 2344 World Cultures IV
_____ 3 MTH 2311 Linear Algebra	_____ 3 CSI 2350 Discrete Structures
_____ 3 MTH 2321 Calculus III	_____ 3 CSI 2334 Intro. To Comp. Systems
_____ 1 PHY 2135 Basic Electronics Lab	_____ 1 PHY 2190 Intr to Research
_____ 3 PHY 2350 Modern Physics	_____ 3 PHY 2360 Math. And Comp. Physics
Total: 17	Total: 16

J u n i o r Y e a r

Fall	Spring
_____ 3-4 Foreign Language 1401/12 (see reverse)	_____ 3 BIC 3358 Biblical Heritage/Ethics
_____ 3 MTH 3325 Ordinary Diff. Equations	_____ 3-4 Foreign Language - 1402/2310 (see reverse)
_____ 1 PHY 3175 Int. Physics Lab I	_____ 3 PHY 3330 Int. Electricity and Mag.
_____ 3 PHY 3320 Int. Classical Mechanics	_____ 3 PHY 3373 Intro. To Quantum Mech.II
_____ 3 PHY 3372 Intro. To Quantum Mech. I	_____ 3 PHY or CSI (3000 or 4000 level)
_____ 3 CSI 3324 Numerical Methods	_____ 3 MTH 3326 Partial Diff. Equations
Total: 16-17	Total: 15-16

S e n i o r Y e a r

Fall	Spring
_____ 3 Foreign Language 2310	_____ 3 Foreign Language 2320
_____ 1 PHY 4190 Dissemination of Research	_____ 3 PHY 4360 Computer Models in Physics
_____ 3 PHY 4340 Stat. and Thermal Physics	_____ 3 PHY or CSI (3000 or 4000 level)
_____ 3 PHY or CSI (3000 or 4000 level)	_____ 3 Elective (variable depending on hours)
_____ 0 PHY 4001 Exit Exam	_____ 1 Lifetime Fitness
_____ 1 Lifetime Fitness	
_____ 3 BIC 2334 World Cultures III	
Total: 14	Total: 13

*All students must graduate with a minimum of 124 hours,
36 of which must be at the 3000/4000 level.*

Notes about major requirements:

Note: Any student pursuing a major or secondary major within the Department of Physics (BA or BS, all concentrations) must complete PHY 1420 with a grade of B- or better in order to enroll in PHY 1430. A student who fails to make a B- or better in the course, yet wishes to continue as a major within the Department of Physics must petition to repeat PHY 1420. Any student pursuing a major or secondary major within the Department of Physics (BA or BS, all concentrations) must complete PHY 1430 with a grade of C or better in order to enroll in PHY 2350. A student who fails to make a C or better in the course (where a C- is insufficient) yet wishes to continue in the major within the Department of Physics must petition to repeat PHY 1430.

- Prior to taking PHY 4190, students are expected to make substantial progress on a research project. Research typically begins when PHY 2190 is taken in the sophomore year. Students involved in research during their junior year should enroll in PHY 3V95 (Undergraduate Research). In addition, students are strongly encouraged to participate in summer research opportunities.
- Many required courses are offered only one time each year in either the fall semester or the spring semester.
- Check your degree audit often through Bearweb to ensure that you are making timely progress towards your degree.
- For more information, see the undergraduate catalog.