



DEPARTMENT OF PHYSICS
AND ASTRONOMY
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October 14, 2014

Dr. James Thompson
Associate Dean for Undergraduate Curricula
Office of Undergraduate Education
3018 Steele Building, Campus Box 3504
University of North Carolina at Chapel Hill
Chapel Hill, NC 27599-3504

CHRIS CLEMENS
Department Chair

Dear Professor Thompson,

Last year, the Department of Physics and Astronomy underwent a major revision of its undergraduate curriculum, including the implementation of new BA options and changes to our minors.

With this letter we are submitting updates to our BA requirements that arose from two sources:

- (1) The courses PHYS 301, 312 and 341 were renumbered 401, 412 and 441, to accommodate the Department's implementation of a custom study plan for first-year graduate students. The custom study plans allow graduate students with missing course work to take one or more of the above 400-level undergraduate courses while remaining in good standing with the graduate school.
- (2) The introduction of the two new honor thesis courses PHYS 691H and 692H led to a change in the BA requirements.

The total number of credits was not affected by the above changes. The specific changes are listed below the signatures. All of our undergraduate advisors are aware of these changes. Current students will be advised that they may follow the new requirements, but that they are not required to.

Thank you for working with us on our submission.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Clemens', with a long horizontal flourish extending to the right.

Dr. J. Christopher Clemens
Professor and Chair
Department of Physics and Astronomy
University of North Carolina at Chapel Hill

A handwritten signature in black ink, appearing to read 'Fabian Heitsch', with a long horizontal flourish extending to the right.

Dr. Fabian Heitsch
Assistant Professor
Department of Physics and Astronomy
University of North Carolina at Chapel Hill

Here is the text that we want to appear in the undergraduate bulletin (new courses PHYS 691H and PHYS 692H pending approval have been marked with an asterisk, changes have been indicated with red):

B.A. Major in Physics and Astronomy: Standard Option

Core Requirements

- PHYS 118 (gateway)
- PHYS 119, 201 or 401, 211 or 311, 281L, and 331
- Nine additional credits chosen from ASTR (numbered above 300) and PHYS (numbered above 200)

Additional Requirements

- CHEM 101/101L and 102/102L
- MATH 231, 232, 233, and 383

B.A. Major in Physics and Astronomy: Astronomy Option

Core Requirements

- PHYS 118 (gateway)
- PHYS 119, 201 or 401, 211 or 311, 281L, and 331
- Six additional credits chosen from ASTR (numbered above 300)
- Three additional credits chosen from ASTR (numbered above 300); PHYS 231, 295, 395, 585, 691H*, 692H*

Additional Requirements

- ASTR 101, 101L or 111L, 102, and 301
- MATH 231, 232, 233, and 383

B.A. Major in Physics and Astronomy: Biological Physics Option

Core Requirements

- PHYS 118 (gateway)
- PHYS 119, 201 or 401, 211 or 311, 281L, 331, and 405
- PHYS 441 or CHEM 481
- PHYS 585 (capstone)

Additional Requirements

- BIOL 101
- CHEM 101/101L and 102/102L
- MATH 231, 232, 233, and 383
- Six additional credits chosen from BIOL (numbered above 200); CHEM 261, 262, 430; PHYS (numbered above 200)

B.A. Major in Physics and Astronomy: Energy Option

Core Requirements

- PHYS 118 (gateway)
- PHYS 119, 131, 131L or 281L, 201 or 401, 211 or 311, 331, and 351
- PHYS 581 or 582

Additional Requirements

- BIOL 101/101L, and 202 or 271
- CHEM 101/101L, 102, 261, and 481
- MATH 231, 232, 233, and 383

B.A. Major in Physics and Astronomy: Quantitative Finance Option

Core Requirements

- PHYS 118 (gateway)
- PHYS 119, 201 or 401, 211 or 311, 281L, and 331
- PHYS 441 or CHEM 481
- Six additional credits chosen from BUSI (numbered above 400), MATH (numbered above 200), and PHYS (numbered above 200)

Additional Requirements

- BUSI 408*, 580, 588, 589, 600, and 688
- CHEM 101 and 102
- MATH 231, 232, 233, and 383

*BUSI 101 and ECON 410 are prerequisites for BUSI 408.

As part of these course requirements, candidates for the B.A. degree must earn grades of C (not C-) or better in at least 18 credit hours of courses that are listed under Core Requirements.

Here is the text that currently appears in the bulletin, for reference:

B.A. Major in Physics and Astronomy: Standard Option

Core Requirements

- PHYS 118 (gateway)
- PHYS 119, 201 or 301, 211 or 311, 281L, and 331
- Nine additional credits chosen from ASTR (numbered above 300) and PHYS (numbered above 200)

Additional Requirements

- CHEM 101/101L and 102/102L
- MATH 231, 232, 233, and 383

B.A. Major in Physics and Astronomy: Astronomy Option

Core Requirements

- PHYS 118 (gateway)
- PHYS 119, 201 or 301, 211 or 311, 281L, and 331
- Six additional credits chosen from ASTR (numbered above 300)
- Three additional credits chosen from ASTR (numbered above 300); PHYS 231, 295, 395, 585

Additional Requirements

- ASTR 101, 101L or 111L, 102, and 301
- MATH 231, 232, 233, and 383

B.A. Major in Physics and Astronomy: Biological Physics Option

Core Requirements

- PHYS 118 (gateway)
- PHYS 119, 201 or 301, 211 or 311, 281L, 331, and 405
- PHYS 341 or CHEM 481
- PHYS 585 (capstone)

Additional Requirements

- BIOL 101
- CHEM 101/101L and 102/102L
- MATH 231, 232, 233, and 383
- Six additional credits chosen from BIOL (numbered above 200); CHEM 261, 262, 430; PHYS (numbered above 200)

B.A. Major in Physics and Astronomy: Energy Option

Core Requirements

- PHYS 118 (gateway)
- PHYS 119, 131, 131L or 281L, 201 or 301, 211 or 311, 331, and 351
- PHYS 581 or 582

Additional Requirements

- BIOL 101/101L, and 202 or 271
- CHEM 101/101L, 102, 261, and 481
- MATH 231, 232, 233, and 383

B.A. Major in Physics and Astronomy: Quantitative Finance Option

Core Requirements

- PHYS 118 (gateway)

- PHYS 119, 201 or 301, 211 or 311, 281L, and 331
- PHYS 341 or CHEM 481
- Six additional credits chosen from BUSI (numbered above 400), MATH (numbered above 200), and PHYS (numbered above 200)

Additional Requirements

- BUSI 408*, 580, 588, 589, 600, and 688
- CHEM 101 and 102
- MATH 231, 232, 233, and 383

*BUSI 101 and ECON 410 are prerequisites for BUSI 408.

As part of these course requirements, candidates for the B.A. degree must earn grades of C (not C-) or better in at least 18 credit hours of courses that are listed under Core Requirements.