

Colby



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Colby College Physics Department Policy on Courses Taken at Dartmouth College

The faculty of the Department of Physics and Astronomy has developed a policy regarding how courses taken in the coordinated dual degree engineering program at Dartmouth College can fit into the requirements for a Physics Major at Colby. For many study-abroad programs, the approval of course equivalents is at the discretion of the department chair and done at the time of the student's application to study off-campus. Due to the large number of physics majors enrolled in the Dartmouth program, it seemed appropriate to develop a regular set of guidelines regarding courses taken in Engineering Sciences or Physics at Dartmouth College.

The equivalences below were approved by all members of Colby College's Department of Physics and Astronomy. As offerings at Dartmouth change and as Colby's requirements for the Physics Major change, this document may be revised.

1. Engineering Courses at Dartmouth that are equivalent to Colby physics requirements

ENGS 20 – Introduction to Scientific Computing

Equivalent to CS151 for the purposes of the physics major.

Note: Normally Colby's Dartmouth Engineering students should have taken CS151 before starting at Dartmouth.

2. Engineering Courses at Dartmouth that are equivalent to Colby physics classes

ENGS 32 – Electronics: Introduction to Linear and Digital Circuits.

(Equivalent to Colby's PH254 and identical to Dartmouth's PHYS 48)

3. Engineering courses at Dartmouth that are not equivalent to Colby physics classes but which can be counted as 300-level or higher physics classes.

ENGS 25 – Introduction to Thermodynamics

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4. Engineering courses at Dartmouth that can be counted as electives but not as a 300-level or higher physics classes.

ENGS 24 – Science of Materials

ENGS 31 – Digital Electronics

ENGS 33 – Solid Mechanics

ENGS 34 – Fluid Dynamics

5. Physics Courses at Dartmouth that will satisfy the requirements toward the physics major.

PHYS 19-24 -- Introductory Physics III and Special Topics in Physics.

This pair of classes can be substituted for PH241-242 with permission of the chair of the Colby College Physics Department. Note: The PH241-242 sequence is central to the physics major at Colby College, and it is the feeling of the members of Colby's Department of Physics and Astronomy that only in very rare circumstances should equivalent courses at other institutions be allowed to satisfy these requirements for the major at Colby College. Further, taking these classes at Dartmouth is not recommended due to the large number of technical classes which must be taken in the engineering program. Permission will not be given except in the rare circumstance that does not allow the Modern Physics classes to be taken at Colby College.

PHYS 41 – Electricity and Magnetism (Equivalent to PH321)

PHYS 42 – Introductory Quantum Mechanics (Equivalent to PH431)

PHYS 43 – Statistical Physics (Equivalent to PH332)

PHYS 44 – Mechanics (Equivalent to PH311)

PHYS 47 – Optics (No equivalent at Colby College, but counts as a 300-level or higher physics class)

PHYS 48 – Electronics: Introduction to Linear and Digital Circuits (Identical to ENGS 32)

PHYS 49 – Intermediate Physics Laboratory (equivalent to PH333 or PH334)
