INTERDISCIPLINARY MAJORS AND SPECIAL AREAS OF STUDY

In addition to traditional academic disciplines, the College also sustains programs of interdisciplinary study to reveal complicated realities not disclosed by any single discipline. In recognition of this, Bowdoin's faculty have created several interdisciplinary majors that bring together interconnected fields. These span multiple divisions—encompassing the humanities, social sciences, natural science, and mathematics—and give students opportunities to explore complex intersections of disciplinary methods and content. (Note that an interdisciplinary major cannot normally be combined with another departmental major, a coordinate major, or a student-designed major. If a student has a compelling academic reason to pursue an interdisciplinary major with another departmental major, they may seek an exception from the associate dean of academic affairs.)

Special areas of study are faculty-curated pathways through the curriculum that do not bear a major or minor credential. These include Arctic studies, coastal studies, the engineering dual-degree options, and legal studies. Each program is described in detail in this section.

Majors

Art History and Archaeology Interdisciplinary Major (p. 1)

The art history and archaeology interdisciplinary major consists of thirteen courses.

Code	Title	Credits
Required Courses		
Select one art history course (numbered 1100—1999).		1
ARCH 1101	Greek Archaeology	1
ARCH 1102	Roman Archaeology	1
Select one of the following:		1
CLAS 1101	Classical Mythology	
CLAS 1111	History of Ancient Greece: From Homer to Alexander the Great	
CLAS 1112	History of Ancient Rome: From Romulus to Justinian	
CLAS 2757	Tacitus: On How to be a Good Citizen under a Bad Emperor	
CLAS 2777 From Tyranny to Democracy: Models of Political Freedom in Ancient Greece		
Intermediate Independent Study in Classics		
PHIL 2111	Ancient Philosophy	
Intermediate course in Religion (2000–2669)		
Select one of the following:		1
ARTH 2130 Art of Three Faiths		
ARTH 2140	The Gothic World	
ARTH 2150 Illuminated Manuscripts and Early Printed Books		
ARTH 2220	The Medici's Italy: Art, Politics, and Religion, 1300-1600	
Select one art history course (3000–3999).		1
Select two additional art history courses. [a]		2
Select three additional archaeology courses, one of which must be at the advanced level (3000–3999).		3
ARTH 4000 or ARCH 4000		1

a ARTH 1050 or higher

- Courses that count toward the archaeology requirements of the major must be taken for regular letter grades (not Credit/D/Fail), and students must earn grades of C- or better in these courses.
- With approval of the Department of Classics, up to two transfer credits may be counted toward archaeology requirements.
- With approval of the Department of Art, up to two transfer credits from one semester of study at another institution or three transfer credits from two semesters of study at another institution may be counted toward art history requirements.
- No first-year writing seminars may be applied to art history requirements of the major.
- Students interested in completing intermediate or advanced independent studies, as well as honors projects, should consult the departments.

Art History and Visual Arts Interdisciplinary Major (p. 1)

The Art History & Visual Arts Interdisciplinary Major offers a pathway through both the Art History and Visual Arts curricula. Student's exploration of the histories and principles of art in a global context is informed and enhanced through the development of perceptual, material, and critical abilities in the art studio.

The art history and visual arts interdisciplinary major consists of thirteen courses.

Code	Title	Credits
Required Courses		
Select one art history course (numbered 1100—1999).		1
VART 1101	Drawing I	1
Select one course in African, Asian, or pre-Columbian art history numbered 1103 or higher.		1
Select one of the following:		1
VART 1201	Printmaking I	
VART 1401	Photography I	
VART 1601	Sculpture I	
VART 1701	Digital Media I	
Select four additional art history courses numbered 2000 or higher.		4
Select four additional visual arts courses, no more than one of which may be an independent study.		4
Select one advanced seminar in art history (3000–3999).		1

- Courses that count toward the art history and visual arts major must be taken for regular letter grades (not Credit/D/Fail), and students must earn grades of C- or better in these courses.
- With approval of the Department of Art, up to two transfer credits from one semester of study at another institution or three transfer credits from two semesters of study at another institution may be counted toward art history requirements.
- No first-year writing seminars are accepted.

- Students interested in completing intermediate or advanced independent studies, as well as honors projects, should consult the department.

Chemical Physics Interdisciplinary Major (p. 2)

The chemical physics interdisciplinary major consists of eleven courses.

Code	Title	Credits
Required Courses		
Select one course from the following: [b]		1
CHEM 1092	Introductory Chemistry and Quantitative Reasoning II	
CHEM 1102	Introductory Chemistry II	
CHEM 1109	General Chemistry	
PHYS 1130 & PHYS 1140	Introductory Physics I and Introductory Physics II [c]	2
MATH 1600	Differential Calculus [c]	1
MATH 1700	Integral Calculus [c]	1
MATH 1800	Multivariate Calculus [c]	1
PHYS 2130	Electric Fields and Circuits	1
CHEM 2510	Chemical Thermodynamics and Kinetics	1
CHEM 2520	Quantum Chemistry and Spectroscopy	1
Select two courses from the following: [d]		2
CHEM 2100	Chemical Analysis	
CHEM 2400	Inorganic Chemistry	
CHEM 2550	Introduction to Computational Chemistry	
CHEM 3100	Instrumental Analysis	
CHEM 3400	Advanced Inorganic Chemistry	
CHEM 3510	Reactivity and Kinetics	
PHYS 2150	Statistical Physics	
PHYS 2250	Physics of Solids	
PHYS 3000	Methods of Theoretical Physics	
PHYS 3010	Methods of Experimental Physics	
PHYS 3020	Methods of Computational Physics [e]	
PHYS 3140	Quantum Mechanics	
PHYS 3810	The Physics of Climate	
one approved chemistry or physics course 4000 or higher		

b Note that CHEM 1091 Introductory Chemistry and Quantitative Reasoning I is a prerequisite for CHEM 1092 Introductory Chemistry and Quantitative Reasoning II; CHEM 1101 Introductory Chemistry I is a prerequisite for CHEM 1102 Introductory Chemistry II. Placement above CHEM 1109 General Chemistry serves to meet this requirement and students do not have to replace the credit as part of the major requirements.

c If a student places out of PHYS 1130 Introductory Physics I, PHYS 1140 Introductory Physics II, MATH 1600 Differential Calculus, MATH 1700 Integral Calculus, or MATH 1800 Multivariate Calculus, no replacement course is required.

d At least one of these must be at the advanced level (3000–3999).

e PHYS 3020 cannot be counted towards the major if CHEM 2550 already counts.

- Other possible electives or transfer credit may be feasible; interested students should check with the departments in advance.
- Physics and chemistry courses that count toward the chemical physics major must be taken for regular letter grades (not Credit/D/Fail). For chemistry courses, under special circumstances a student may petition the department chair to allow one chemistry course required for the major to be taken with the Credit/D/Fail grading option. For physics courses, no more than two D grades can count towards the major.
- No first-year writing seminars count towards the chemical physics major; only one approved course 4000 or higher may count towards the major.

Advanced Placement/International Baccalaureate (AP/IB):

- Students who receive a minimum score of four on the Physics 1 AP exam are exempt from taking PHYS 1130 Introductory Physics I, and do not need to take an additional course to replace it. No AP credit is awarded for the Physics 2 AP exam.
- Students who receive a minimum score of four on the Physics C: Mechanics AP exam or a minimum score of six on the Physics without Optics IB exam are eligible to receive one credit toward the major, are exempt from taking PHYS 1130 Introductory Physics I, and are placed in PHYS 1140 Introductory Physics II. To earn the credit, a minimum grade of C- (not taken Credit/D/Fail) must be received in PHYS 1140 Introductory Physics II by the end of their junior year or no credit is awarded. Students who receive a minimum score of six on the Physics with Optics IB exam are eligible to receive one credit toward the chemical physics major and have the option of being placed in either PHYS 1140 Introductory Physics II or PHYS 2130 Electric Fields and Circuits. To receive the credit, the student must earn a minimum grade of C- (not taken Credit/D/Fail) in the course in which they choose to be placed, and are strongly encouraged to complete the required course by the end of their junior year or prior.
- No credit is awarded for the Physics 2 or Physics C: Electricity and Magnetism AP exams.
- Students who received a minimum score of four on the Chemistry AP exam or a minimum score of five on the Chemistry IB exam are eligible to receive a credit and can count it toward the chemical physics major after completion of CHEM 2050 Environmental Chemistry, CHEM 2100 Chemical Analysis, CHEM 2250 Organic Chemistry I, CHEM 2400 Inorganic Chemistry, CHEM 2510 Chemical Thermodynamics and Kinetics or CHEM 2520 Quantum Chemistry and Spectroscopy with a minimum grade of C-; however, credit is not given if the student places into or elects to take CHEM 1091 Introductory Chemistry and Quantitative Reasoning I, CHEM 1092 Introductory Chemistry and Quantitative Reasoning II, CHEM 1101 Introductory Chemistry I, CHEM 1102 Introductory Chemistry II, or CHEM 1109 General Chemistry.
- Regardless of AP/IB score, all students must take the placement exam. In order to receive credit for advanced placement work, students must have their scores officially reported to the Office of the Registrar by the end of their sophomore year at Bowdoin.

Computer Science and Mathematics Interdisciplinary Major (p. 2)

The interdisciplinary major in computer science and mathematics consists of ten courses.

Code	Title	Credits
Required Courses		
MATH 2000	Linear Algebra	1
MATH 2020	Introduction to Mathematical Reasoning	1
CSCI 2101	Data Structures	1
CSCI 2200	Algorithms	1
Select three additional computer science courses, higher than 2000. [e]		3
Select three additional mathematics courses, 1800 or higher.		3

e At least one computer science course in each of the areas Artificial Intelligence and Systems, and at least one computer science course that is an advanced course (3000-3999). *Artificial Intelligence* courses include CSCI 2400 Artificial Intelligence, CSCI 3400 Cognitive Architecture, CSCI 3420 Optimization and Uncertainty, CSCI 3445 Nature-Inspired Computation, CSCI 3465 Financial Machine Learning, CSCI 3725 Computational Creativity and CSCI 3485 Deep Learning for Computer Vision. *Systems* courses include CSCI 2320 Principles of Programming Languages, CSCI 2335 Software Engineering, CSCI 3310 Operating Systems, and CSCI 3325 Distributed Systems.

- Courses that count towards this major must be taken for a regular letter grade, not Credit/D/Fail, with a minimum earned grade of C-.
- With departmental approval, a total of two courses can be transfer credits from other institutions (at most one Mathematics and one Computer Science course).
- With approval of the appropriate department, an advanced level independent study or honors project may be counted towards the requirements of the major.
- Advanced Placement and International Baccalaureate scores are only used for placement by both the mathematics and computer science departments.
- Courses from other departments or programs do not count towards the computer science and mathematics major, but students may use mathematics or computer science courses towards a minor with permission of that department or program.
- Students who have mastered the material in MATH 2000 Linear Algebra prior to enrolling at Bowdoin may substitute another course numbered MATH 1800 Multivariate Calculus or higher if they have received an appropriate placement. The same holds for MATH 2020 Introduction to Mathematical Reasoning if they also obtain approval of the department chair. All students must submit a planned program of courses to the mathematics department when they declare a major.

English and Theater Interdisciplinary Major (p. 3)

The interdisciplinary major in English and theater focuses on the dramatic arts, broadly construed.

The English and theater major consists of ten required courses.

Code	Title	Credits
Required Courses		
Select one English first-year writing seminar or introductory course (1000–1049 or 1100–1999).		1
Select one theater course at the 1000 level		1
Select one course from English on drama before 1800, such as ENGL 2200 or the equivalent in English or another department.		1
Select one course in modern drama, such as ENGL 2452 or 2654, or the equivalent in English or another department.		1
Select one elective in English at the intermediate level (2000–2899).		1
Select one advanced English seminar (3000–3999).		1
Select one introductory course in Theatrical Design such as THTR 1301, THTR 1302 or THTR 1303		1
Select one introductory or intermediate course in Theatrical Practice such as Acting I, Making Theater, Performance and Narrative, Directing, or Playwriting THTR 1101, THTR 1201, THTR 1301, THTR 2303, or THTR 2304		1
Select one intermediate course in Theater History or Theory, such as THTR 3502 or THTR 3503		1
Select one advanced course in Theater History or Theory, such as THTR 2410, THTR 2510, THTR 2503 or THTR 2504		1

- Courses that count toward the English and theater major must be taken for a regular letter grade, not Credit/D/Fail, with a minimum earned grade of C-.
- With approval of the Department of English, up to two transfer credits for classes taken outside of the department, either at Bowdoin or at another institution, may be used to fulfill English requirements, but no transfer credits may be used to fulfill theater requirements.
- With approval of the Department of English, independent studies or honors projects in English may count toward the major, but no independent studies or honors projects in theater count toward the major.

Mathematics and Economics Interdisciplinary Major (p. 3)

The interdisciplinary major in Mathematics and Economics is aimed at students with an intellectual interest in both economics and mathematics, and especially the formal mathematical models used in the study of economics. The required coursework introduces students to rigorous theoretical and empirical approaches to the analysis of economic problems. If completed with the optional courses MATH 2020 Introduction to Mathematical Reasoning and MATH 2603 Introduction to Analysis, this major consists of courses particularly relevant to students who intend to pursue a doctoral degree in economics.

Code	Title	Credits
Required Courses		
ECON 2555	Microeconomics	1
ECON 2556	Macroeconomics	1
ECON 3516	Econometrics	1
MATH 1800	Multivariate Calculus	1
MATH 2000	Linear Algebra	1
MATH 2206	Probability	1
MATH 2606	Statistics	1
Select two of the following:		2
ECON 3350	Mathematical Economics	
MATH 2020	Introduction to Mathematical Reasoning	
MATH 2109	Optimization	
MATH 2208	Ordinary Differential Equations	
MATH 2301	Intermediate Linear Algebra	

MATH 2603	Introduction to Analysis	
MATH 3108	Advanced Topics in Modeling	
MATH 3109	Optimal Control	
MATH 3208	Advanced Topics in Dynamical Systems	
MATH 3209	Partial Differential Equations	
Select one of the following:		1
CSCI 1101	Introduction to Computer Science	
CSCI 1103	Programming with Data	
CSCI 2101	Data Structures	
MATH 2209	Numerical Methods	
MATH 3606	Advanced Topics in Probability and Statistics	
Select one additional advanced course in economics (3000–3999).		1

- Courses that count for this major must be taken for a regular letter grade, not Credit/D/Fail, with a minimum earned grade of C-.
- A total of two courses can be transfer credits from other institutions.
- An advanced level independent study or honors project in economics may be substituted for an advanced elective course in economics with permission of the economics department.
- Advanced Placement and International Baccalaureate scores are only used for placement by both the mathematics and economics departments.
- Students may use one course from this major towards the requirements of another major or minor with the permission of that department or program.
- Students who have mastered the material in MATH 1800 Multivariate Calculus or MATH 2000 Linear Algebra prior to enrolling at Bowdoin may substitute a higher-numbered mathematics course if they have received the appropriate placement.

Mathematics and Education Interdisciplinary Major (p. 4)

The interdisciplinary major in mathematics and education combines the study of mathematics and pedagogy. The prescribed mathematics courses represent the breadth of preparation necessary for both the scholarly study as well as the practice of secondary school mathematics. The required education courses provide students with the theoretical knowledge and practicum-based experiences crucial to understanding the challenges of secondary mathematics education. Students completing this major are prepared to become leaders in the field of mathematics education, either as scholars or educators.

The mathematics and education interdisciplinary major consists of eleven required courses.

Code	Title	Credits
Required Courses		
MATH 1800	Multivariate Calculus [f]	1
MATH 2000	Linear Algebra	1
MATH 2020	Introduction to Mathematical Reasoning	1
Select at least one mathematics course in differential equations and modeling:		1
MATH 1808	Biomathematics	
MATH 2208	Ordinary Differential Equations	
MATH 3108	Advanced Topics in Modeling	
MATH 3208	Advanced Topics in Dynamical Systems	
MATH 3209	Partial Differential Equations	
Select at least one mathematics course in algebra and analysis:		1
MATH 2301	Intermediate Linear Algebra	
MATH 2303	Functions of a Complex Variable	
MATH 3303	Advanced Complex Analysis	
MATH 2603	Introduction to Analysis	
MATH 3603	Advanced Analysis	
MATH 2502	Number Theory and Cryptography	
MATH 2602	Group Theory	
MATH 3602	Advanced Topics in Group Theory	
MATH 2702	Rings and Fields	
MATH 3702	Advanced Topics in Rings and Number Theory	
Select at least one mathematics course in geometry and topology:		1
MATH 2404	Geometry	
MATH 3204	Topology	
MATH 3404	Advanced Topics in Geometry	
Select at least one course in combinatorics, probability, and statistics: [g]		1
MATH 1300	Biostatistics	
MATH 1400	Statistics in the Sciences	
MATH 2206	Probability	
MATH 2601	Combinatorics and Graph Theory	
MATH 2606	Statistics	
MATH 3606	Advanced Topics in Probability and Statistics	
EDUC 1101	Contemporary American Education	1
EDUC 2203	Educating All Students	1
EDUC 3301 & EDUC 3302	Teaching and Learning and Curriculum Development [h]	2

[f] If a student places out of MATH 1800 Multivariate Calculus, no replacement course is required. If a student places out of MATH 2000 Linear Algebra, a higher-numbered mathematics course must be substituted.

[g] This statistics requirement may alternately be met with a score of four or five on the AP Statistics exam, ECON 2557 Economic Statistics, or PSYC 2520 Data Analysis, provided that the student also completes MATH 2206 Probability.

[h] Students must take EDUC 3301 Teaching and Learning and EDUC 3302 Curriculum Development concurrently during the fall semester of their junior or senior year.

- Courses that count for this major must be taken for a regular letter grade, not Credit/D/ Fail, with a minimum earned grade of C-.
- With prior approval of the mathematics department, at most two of the courses in mathematics can be transfer credits from other institutions. Transfer credits are not accepted for the courses in education.
- With the exception of the AP Statistics scores, Advanced Placement and International Baccalaureate scores are only used for placement.
- Students may use a mathematics course applied to the mathematics and education interdisciplinary major towards the requirements of a minor with permission of that department or program. None of the education courses required for this major may be counted towards the requirements of a minor.
- With prior approval of the mathematics department, one advanced level independent study or honors project may be allowed to count

towards the major. No independent studies or honors projects count towards the education requirements.

- Students interested in meeting the course requirements for the Bowdoin Teacher Scholars teacher certification program are advised to take an additional course in mathematics and should consult the department with additional questions.

Physics and Education Interdisciplinary Major (p. 5)

The physics and education interdisciplinary major consists of eleven required courses.

Code	Title	Credits
Required Courses		
Mathematics through 1700 or 1750, or placement about 1700		1
PHYS 1130 & PHYS 1140	Introductory Physics I and Introductory Physics II [i]	2
PHYS 2130	Electric Fields and Circuits	1
PHYS 2140	Quantum Physics and Relativity	1
or PHYS 2150	Statistical Physics	
PHYS 3010	Methods of Experimental Physics	1
EOS 1105	Introducing Earth [j]	1
Select one of the following:		1
CHEM 1092	Introductory Chemistry and Quantitative Reasoning II (or higher)	
CHEM 1102	Introductory Chemistry II (or higher)	
CHEM 1109	General Chemistry (or higher)	
EDUC 1101	Contemporary American Education	1
EDUC 2203	Educating All Students	1
EDUC 3301 & EDUC 3302	Teaching and Learning and Curriculum Development [k]	2

i If a student places out of PHYS 1130 Introductory Physics I, no replacement course is required.

j An earth and oceanographic science course higher than 1105 will also satisfy this requirement.

k Students must take EDUC 3301 Teaching and Learning and EDUC 3302 Curriculum Development concurrently during the fall semester of their junior or senior year.

This major meets all the course requirements for the Bowdoin Teacher Scholars teacher certification program, and majors are eligible to apply for admission to that program. Completing the major requirements in a timely fashion requires advanced planning, so students are strongly encouraged to meet with faculty from both the physics and education departments early in their college careers.

Students pursuing this major may be able to use up to two transfer credits toward the physics, chemistry, or earth and oceanographic science part of the requirements. None of the education requirements can be fulfilled with transfer credit.

Students may count physics courses required for this major towards the requirements of a minor. None of the education courses required for this major may be counted towards the requirements of a major.

No courses taken with the Credit/D/Fail grading mode will be accepted to the major. In addition, physics and education interdisciplinary majors must:

- achieve a grade of C- or higher in education courses required for this major; and
- achieve a grade of C- or higher in the physics courses if they are to serve as a prerequisite.

Normally, students pursuing this major may receive one D in a required physics course and count the course toward the major.

Students may pursue honors projects or independent studies, but they do not replace any of the requirements for this major.

Advanced Placement/International Baccalaureate (AP/IB):

- Students who receive a minimum score of four on the Physics 1 AP exam are exempt from taking PHYS 1130 Introductory Physics I, and do not need to take an additional course to replace it. No AP credit is awarded for the Physics 2 AP exam.
- Students who receive a minimum score of four on the Physics C: Mechanics AP exam or a minimum score of six on the Physics without Optics IB exam are eligible to receive one credit toward the major, are exempt from taking PHYS 1130 Introductory Physics I, and are placed in PHYS 1140 Introductory Physics II. To earn the credit, a minimum grade of C- (not taken Credit/D/Fail) must be received in PHYS 1140 Introductory Physics II by the end of their junior year or no credit is awarded. Students who receive a minimum score of six on the Physics with Optics IB exam are eligible to receive one credit toward the chemical physics major and have the option of being placed in either PHYS 1140 Introductory Physics II or PHYS 2130 Electric Fields and Circuits. To receive the credit, the student must earn a minimum grade of C- (not taken Credit/D/Fail) in the course in which they choose to be placed, and are strongly encouraged to complete the required course by the end of their junior year or prior.
- No credit is awarded for the Physics 2 or Physics C: Electricity and Magnetism AP exams.

Special Areas of Study

Arctic Studies (p. 5)

A focus in Arctic studies (https://www.bowdoin.edu/arctic-museum/arctic-studies/)—offered through a variety of departments, including the Department of Anthropology, the Department of Earth and Oceanographic Science, the environmental studies program, the Department of Government and Legal studies, and the Peary-MacMillan Arctic Museum (https://www.bowdoin.edu/arctic-museum/) and Arctic Studies Center—provides students with opportunities to explore artistic, cultural, social, political, and environmental issues involving Arctic lands, seas, and communities. Students interested in the Arctic are encouraged to consult with the director of the Arctic Studies Center in order to plan an appropriate interdisciplinary program involving coursework and fieldwork and study abroad. Work-study and internship opportunities at the Arctic Museum complement the academic program, as does the Bowdoin Students Arctic Initiative, a student-run organization.

Coastal Studies (p. 5)

The College offers expertise in the marine sciences primarily through the biology, earth and oceanographic science, and environmental studies departments and programs and two unique field sites: Schiller Coastal Studies Center (https://www.bowdoin.edu/coastal-studies-center/),

located on Orr's Island in Harpswell, Maine; and the more remote Kent Island Scientific Station (https://www.bowdoin.edu/kent-island/), located in the Bay of Fundy, New Brunswick, Canada.

The College offers the Bowdoin Coastal Studies Semester (BCSS) (https://www.bowdoin.edu/coastal-studies-center/coastal-studies-semester/)in the fall which is designed to immerse students in a place-based learning experience that supports both disciplinary and interdisciplinary approaches to the exploration of coastal concerns in the Gulf of Maine. As one of the most rapidly warming bodies of water in the world, the Gulf of Maine, with its varied ecosystems and coastal communities, offers students the opportunity to see firsthand how climate change is impacting our world and to develop the skills to identify underlying problems and potential solutions. Students take four courses taught in parallel, including a humanities course, at the Schiller Coastal Studies Center in Harpswell, Maine. This format allows students and faculty to work across courses to identify emerging themes and pathways for collaborative inquiry. Students from all disciplines who are keen to experience coastal studies in action are welcome and the semester is available to Bowdoin students and non-Bowdoin students who are enrolled in colleges that participate in the 12-College Exchange Program (https://www.bowdoin.edu/ocs/applying/). Summer research fellowships in coastal and marine studies are also available annually.

Interested students should speak with Holly Parker (https://catalogue.bowdoin.eduapplewebdata://DC4BCFAF-DAA4-4F75-A39D-513387B85E46/Summer%20research%20fellowships%20in%20coastal%20and%20marine%20studies%20are%20also%20available%20annually.%20Interested%20students%20should%20speak%20with%20Professor%20Amy%20Johnson,%20professor%20of%20marine%20biology%20and%20interim%20director%20of%20the%20Schiller%20Coastal%20Studies%20Center,%20or%20Steven%20Allen,%20assistant%20director%20of%20the%20Schiller%20Coastal%20Studies%20Center%20and%20coastal%20studies%20program%20coordinator.html), director of the Schiller Coastal Studies Center.

Engineering Dual-Degree Options (p. 6)

Bowdoin College arranges shared studies programs with the University of Maine College of Engineering (https://engineering.umaine.edu/) (open only to Maine residents), the School of Engineering and Applied Science of Columbia University (https://www.engineering.columbia.edu/), the California Institute of Technology (https://www.eas.caltech.edu/) (Caltech), and the Thayer School of Engineering at Dartmouth College (https://engineering.dartmouth.edu/).

- Students who successfully complete the Columbia, U-Maine, or Caltech programs earn a bachelor of science degree from the engineering school and a bachelor of arts degree from Bowdoin, both conferred at the end of their fifth year.
- 3-2 programs are available in which students complete certain courses at Bowdoin during the first three years of their undergraduate career; students may then apply to transfer to Columbia, Caltech, or U-Maine for two years of that institution's engineering program. Admission to these programs is highly competitive.
- Columbia also offers a 4-2 option, which may be of interest to some students.
- Dartmouth College offers a number of options, including the 2-1-1-1 program in which students complete two years at Bowdoin, their third year at Dartmouth, senior year at Bowdoin, and a fifth, optional year of specialized engineering courses at Dartmouth. For the Dartmouth program, engineering courses taken in the third year are used as transfer credits to complete the Bowdoin degree, conferred after the fourth year. The Dartmouth engineering degree is conferred upon successful completion of a fifth year in engineering at Dartmouth.
- Once a student decides to pursue a dual degree, the student must receive permission from their major department at Bowdoin and then meet with the Office of the Registrar and submit a declaration of intent to pursue this program to the Office of the Registrar when applying to the subsequent institution.
- Finally, students may also apply as regular transfer students into any nationally recognized engineering program, earning only a degree from that engineering institution.

These programs are coordinated by Corey Colwill (https://www.bowdoin.edu/profiles/staff/ccolwill/), associate director of the Center for Cocurricular Opportunities (https://www.bowdoin.edu/academics/cocurricular-opportunities/), with assistance from representatives from the natural sciences including Professor Christopher Chong (https://www.bowdoin.edu/profiles/faculty/cchong/) in the department of mathematics, Professor Sean Barker (https://www.bowdoin.edu/profiles/faculty/sbarker/) in the department of computer science, and Professor Dale Syphers (https://www.bowdoin.edu/profiles/faculty/dsyphers/) in the department of physics and astronomy. Curricular requirements for engineering dual-degree options vary by program. It is important for students to receive advising about the program early in their career at Bowdoin to plan a course of study that will satisfy major and distribution requirements. Students interested in these programs should contact Corey Colwill (https://www.bowdoin.edu/profiles/staff/ccolwill/).

Students planning to pursue one of the 3-2 engineering options and graduating with a physics degree must take:

Code	Title	Credits
PHYS 1140	Introductory Physics II	1
PHYS 2130	Electric Fields and Circuits	1
PHYS 2140	Quantum Physics and Relativity	1
PHYS 2150	Statistical Physics	1
PHYS 3000	Methods of Theoretical Physics	1
or MATH 2208	Ordinary Differential Equations	
CHEM 1102	Introductory Chemistry II	1
or CHEM 1109	General Chemistry	
MATH 1800	Multivariate Calculus (or higher)	1
CSCI 1101	Introduction to Computer Science	1

Legal Studies (p. 6)

Bowdoin students from every major and department have been successful applicants to highly competitive law schools. Students are provided guidance and assistance on all aspects of the application process by advisors in the Office of Career Exploration and Development (CXD) (https://www.bowdoin.edu/cxd/). They have excellent written and online resources about law schools and careers in the legal field and can introduce students to alumni attending law school or practicing law. It is best to begin planning for law school by the beginning of the junior year. In addition, CXD also supports and assists Bowdoin alumni with the law school application process if they choose to apply in the years following graduation.