



## Physics

**Program Code:**

LF\_LFPH

**Academic Area:**

Science, Technology, Engineering and Mathematics

**Type:**

Associate in Science

### Program Statement

This program is designed for students who plan to transfer to a four-year institution and major in Physics or a related field. The goal is to provide students with a solid foundation in the knowledge and skills that they will need to succeed at a four-year institution.

### Program Information

- This program is designed to prepare students who plan to transfer to a four-year institution and major in Physics or a related field.
- Students will be introduced to each of the four major branches of physics: mechanics, electromagnetism, thermodynamics, and modern physics. This gives students a strong foundation on which to build the last two years of a Physics major.
- All General Education requirements will be met.

### After Bristol

- Transfer to a four-year institution and finish the last two years of a major related to Physics; these include Physics, Astrophysics, Applied Physics, Mathematics, or Engineering, among others. Visit Transfer Services or contact your advisor for more information.
- Physics majors can go on to teach or do research within the field of physics, and can also work as a data analyst, software developer, materials scientist, patent agent, health physicist, science writer, and more. Some physics majors even end up working in finance or government.
- Bristol participates in the statewide MassTransfer program and has developed many program-to-program transfer articulation agreements which guarantee admission and credit transfer. For a complete listing of eligible MassTransfer programs, current Bristol articulation agreements, and to complete an A2B Program Search, visit the Transfer Services website to review which credits will be transferred and applied to your degree.

**NOTE:** Please note that if you are completing this degree to benefit from MassTransfer by transferring to a UMass Campus or State University with your associate degree, you must complete one additional Behavioral and Social Science elective (3 credits) and select a Behavioral/Social Science elective within the Social/Ethical Elective requirement).

### Degree Requirements



## General Courses

Course #	Title	Credits
COM 104	Fundamentals of Public Speaking	3
CSS 101	College Success Seminar	1
ENG 101	Composition I: College Writing	3
ENG 102	Composition II: Writing about Literature	3
	HST 113 or HST 114	3
SCI 117	History and Philosophy of Science	3

## Elective Courses

Course #	Title	Credits
	Social/Ethical Elective	3
	Information Literacy Elective	3-4

## Program Courses

Course #	Title	Credits
MTH 214	Calculus I	4
MTH 215	Calculus II	4
MTH 253	Calculus III	4
MTH 254	Ordinary Differential Equations	3
	Technical or General Physics I & II	8

## Program Electives

Choose four of the following:

Course #	Title	Credits
AST 211	Introduction to Astrophysics	4
AST 212	Introduction to Astrophysics II	4
BIO 121	Fundamentals of Biological Science I	4
BIO 122	Fundamentals of Biological Science II	4
CHM 113	Fundamentals of Chemistry I	4
CHM 114	Fundamentals of Chemistry II	4
	EGR 231 and EGR 233	4
	EGR 232 and EGR 234	4
	EGR 251 and EGR 253	4
EGR 255	Thermodynamics	3
PHY 120	Introduction to Modern Physics	3



## Recommended Course Sequence - Semester 1

Course #	Title	Credits
COM 104	Fundamentals of Public Speaking	3
CSS 101	College Success Seminar	1
ENG 101	Composition I: College Writing	3
MTH 214	Calculus I	4
SCI 117	History and Philosophy of Science	3

## Recommended Course Sequence - Semester 2

Course #	Title	Credits
ENG 102	Composition II: Writing about Literature	3
	HST 113 or HST 114	3
MTH 215	Calculus II	4
	PHY 101 or PHY 211	4

## Recommended Course Sequence - Semester 3

Course #	Title	Credits
MTH 253	Calculus III	4
	PHY 102 or PHY 212	4
	Program Elective	3
	Information Literacy Elective	3-4

## Recommended Course Sequence - Semester 4

Course #	Title	Credits
MTH 254	Ordinary Differential Equations	3
	Social/Ethical Elective	3
	Program Elective	3
	Program Elective	3
	Program Elective	3
	<b>Total credits:</b>	<b>60-62</b>

## Category Descriptions

### HST 113 or HST 114

Credits: 3

Choose one of the following:



Course #	Title	Credits
HST 113	United States History to 1877	3
HST 114	United States History from 1877	3

## Social/Ethical Elective

Credits: 3

Choose one of the following:

Course #	Title	Credits
GVT 111	U.S. Government	3
GVT 112	Comparative Government	3
GVT 251	State and Local Government	3
PHL 101	Introduction to Philosophy	3
PHL 152	Ethics: Making Ethical Decisions in a Modern World	3
SOC 101	Principles of Sociology	3

## Information Literacy Elective

Credits: 3-4

Choose one of the following:

Course #	Title	Credits
CAD 101	Computer Aided Drafting	3
CIS 111	Introduction to Business Information Systems	3
CIS 120	Programming: Logic, Design and Implementation	3
CIS 155	Introduction to C++ Programming	3
CIS 157	Object-Oriented JAVA Programming I	4
CIS 158	Introduction to Procedural Programming	4
EGR 103	Computer Skills for Engineers and Technicians	3

## Technical or General Physics I & II

Credits: 8

Choose one of the following:

Course #	Title	Credits
	PHY 101 and PHY 102	8
	PHY 211 and PHY 212	8

## EGR 231 and EGR 233

Credits: 4

EGR 231 and EGR 233 count as one course towards the Program Electives requirement.



<b>Course #</b>	<b>Title</b>	<b>Credits</b>
EGR 231	Electrical Engineering I	3
EGR 233	Electrical Engineering I Laboratory	1

## EGR 232 and EGR 234

Credits: 4

EGR 232 and EGR 234 count as one course towards the Program Electives requirement.

<b>Course #</b>	<b>Title</b>	<b>Credits</b>
EGR 232	Electrical Engineering II	3
EGR 234	Electrical Engineering II Laboratory	1

## EGR 251 and EGR 253

Credits: 4

EGR 251 and EGR 253 count as one course towards the Program Electives requirement.

<b>Course #</b>	<b>Title</b>	<b>Credits</b>
EGR 251	Statics	3
EGR 253	Advanced Statics	1