PHYSICS (COURSE 8)

Department of Physics (*http://catalog.mit.edu/schools/science/physics/#undergraduatetext*)

Bachelor of Science in Physics (Focused Option)

General Institute Requirements (GIRs)

The General Institute Requirements include a Communication Requirement that is integrated into both the HASS Requirement and the requirements of each major; see details below.

Summary of Subject Requirements	Subjects
Science Requirement	6
Humanities, Arts, and Social Sciences (HASS) Requirement; at least two of these subjects must be designated as communication-intensive (CI-H) to fulfill the Communication Requirement.	8
Restricted Electives in Science and Technology (REST) Requirement [can be satisfied by 8.03 or 8.04, and 18.03 in the Departmental Program]	2
Laboratory Requirement (12 units) [satisfied by 8.13 or equivalent in the Departmental Program]	1
Total GIR Subjects Required for SB Degree	**17**

Physical Education Requirement
Swimming requirement, plus four physical education courses for eight points.

Departmental Program

Choose at least two subjects in the major that are designated as communication-intensive (CI-M) to fulfill the Communication Requirement.

Required Subjects		Units
18.03	Differential Equations [1]	12
8.03	Physics III	12
8.033	Relativity	12
8.04	Quantum Physics I	12
8.044	Statistical Physics I	12
8.05	Quantum Physics II	12
8.06	Quantum Physics III (CI-M)	12
8.13	Experimental Physics I (CI-M)	18
8.14	Experimental Physics II	18
8.223	Classical Mechanics II	6
8.THU	Undergraduate Physics Thesis [2]	12
Restricted Electives		
One subject in the Department of Mathematics beyond 18.03		12
Two subjects in the Department of Physics in addition to those listed above, including at least one of the following: [3]		24
8.07	Electromagnetism II	
8.08	Statistical Physics II	
8.09	Classical Mechanics III	
Units in Major		174
Unrestricted Electives		48
Units in Major That Also Satisfy the GIRs		(36)
Total Units Beyond the GIRs Required for SB Degree		186

The units for any subject that counts as one of the 17 GIR subjects cannot also be counted as units required beyond the GIRs.

1. *18.032 Differential Equations is also an acceptable option.*
2. *A thesis of 12 units is required. Not more than 30 units of thesis credit may be included in the minimum units beyond the General Institute Requirements required for the SB degree.*
3. *Subject descriptions identify subjects that cannot be used for this purpose.*

Bachelor of Science in Physics (Flexible Option)

General Institute Requirements (GIRs)

The General Institute Requirements include a Communication Requirement that is integrated into both the HASS Requirement and the requirements of each major; see details below.

Summary of Subject Requirements	Subjects
Science Requirement	6
Humanities, Arts, and Social Sciences (HASS) Requirement; at least two of these subjects must be designated as communication-intensive (CI-H) to fulfill the Communication Requirement.	8
Restricted Electives in Science and Technology (REST) Requirement [can be satisfied by 8.03 or 8.04, and 18.03 in the Departmental Program]	2
Laboratory Requirement (12 units) [satisfied by 8.13 or equivalent in the Departmental Program]	1
Total GIR Subjects Required for SB Degree	**17**

Physical Education Requirement
Swimming requirement, plus four physical education courses for eight points.

Departmental Program

Choose at least two subjects in the major that are designated as communication-intensive (CI-M) to fulfill the Communication Requirement.

Required Subjects		Units
18.03	Differential Equations [1]	12
8.03	Physics III	12
8.04	Quantum Physics I	12
8.044	Statistical Physics I	12
8.21	Physics of Energy (CI-M)	6-12
or 8.223	Classical Mechanics II	
Select one of the following:		9-12
8.05	Quantum Physics II	
8.20	Introduction to Special Relativity	
8.033	Relativity	
Select one of the following experimental experiences, subject to the approval of the department:		18
8.13	Experimental Physics I (CI-M)	
A laboratory subject of similar intensity in another department		
An experimental research project or senior thesis [2]		
An experimentally oriented summer externship		
Restricted Electives		
At least one subject in the Department of Physics in addition to those listed above [3]		12
Three subjects forming one intellectually coherent unit in some area, not necessarily physics, subject to the approval of the department		36
Units in Major		129-138
Unrestricted Electives		66-87
Units in Major That Also Satisfy the GIRs		(24-36)
Total Units Beyond the GIRs Required for SB Degree		180

The units for any subject that counts as one of the 17 GIR subjects cannot also be counted as units required beyond the GIRs.

1 *18.032 Differential Equations is also an acceptable option.*

2 *Not more than 30 units of thesis credit may be included in the minimum units beyond the General Institute Requirements required for the SB degree.*

3 *Subject descriptions identify subjects that cannot be used for this purpose.*