



Brookline High School

Science Department

Course Selection of Optional Science Courses

This is a list of all available courses, and a brief description of the type of student who takes these courses. Larger descriptions are in the course catalog, and at bhs.brookline.k12.ma.us/science.html and from the Women in STEM Club at bhs.wistem.wixsite.com/bhs.wistem.

Sincerely,
Ed Wiser
Curriculum Coordinator for Science

AP Physics For students interested in Physics at an advanced level, or students broadly interested in many disciplines of science at an advanced level; such as medicine, biophysics, and engineering. Students work collaboratively to solve problems and perform experiments in class. It covers many topics in Physics, including fluid dynamics, thermal physics, modern physics, mechanics, and electricity & magnetism. Students should be concurrently enrolled in AP Calculus (AB or BC).

AP Chemistry For students interested in Chemistry at an advanced level. Students will find this course to be a very good preparation for all Biology electives, and collegiate studies in Chemistry.

Biomedical Science Honor For students interested in medicine, health, and molecular/cell biology. Topics include infectious disease, immunology, molecular genetics, biotechnology, neurobiology, and cancer through a combination of lecture/discussion and collaborative activities & labs.

AP Biology This course is for students interested in Biology at an advanced level. Students will find this course to be a very good preparation for collegiate studies in Biology, as long as they did not take Biology in Summer school.

AP Environmental Science For students interested in Earth Science, Ecology, Chemistry and environmental issues at an advanced level. Students are expected to read copiously, have strong math skills, and be earnest participants in discussions.

Anatomy & Physiology/Anatomy & Physiology Honor For students interested in the human body, with emphasis on the structure and function of tissues, organs and organ systems. Students dissect organs and a fetal pig, will read articles about current research and disease treatments, and examine and memorize all the muscles and bones of the body. Memorization is an important part of this course. A perfect choice for pursuing any career in health care.

Climate Science & Social Change A course on the science of climate change, the impacts of climate change on ecosystems and human societies, and strategies for mitigating and adapting to climate change.



Neuroimmunology (formerly Body/Mind) Honor For students who are interested in the biological underpinnings of mind-body practices. Topics include immunology, epigenetics, the microbiome, neurology, and the stress response. The second semester involves weekly readings and students also explore mind-body practices such as yoga, gi gong, and meditation.

Marine Biology/Marine Biology Honor This course is for students interested in Biology and ocean science. It is focused on the ocean environment, ecosystems and marine organisms.

Engineering by Design For students who love to problem solve with their hands and learn by building. Ask about it, or peek into UA14.



Engineering Innovation & Design Honor Design : Create : Innovate Also hosted in UA14, this course is for students who want to bridge creativity with design. Students will focus on prototyping and the creation of real products (2D & 3D), all while infusing artistic elements into the final product.



Astronomy/Astronomy Honor This course is for students who are interested in stars and planets.

Semester Courses

Drawing for Understanding in Field Science This course can be taken for Visual Arts or Science credit. Students will explore the natural world by observing complex organisms and systems. They will also learn how drawing is used for scientific study, and how science informs and deepens artistic practice.



Forensic Science/Forensic Science Honor This course is for students who love crime solving.



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Science Department

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12th Grade Science Course Selection

To initiate the course request process for next year, please fill out the Google Form for your teacher to be able to review by March 7, 2023. Your science teacher will verify that the choices are appropriate. Then the information will be entered the student portal for you to verify with your caregivers and with your counselor.

Additional Courses are possible to schedule, only with consultation from guidance counselors and teachers. Graduation requirements and student interest will be important to balance. BHS Students have a wide range of courses available to them after they complete Physics, Chemistry and Biology. Please consult all of the available resources.

Alternate Courses must be considered as a backup if your course request is in conflict with others. Please choose alternates that you are interested in, because we use that information to build a schedule to satisfy as many students' schedules as possible. These alternate courses can be from other departments as well. For example: students can request **SC5020** Astronomy with an alternate of **SO5420** Economics (not just another science class).

Also, here is an example of choices that are not helpful. This is because the alternates would not provide a student with an actual alternative:

1st course **SC5630** Marine Science H with an alternate of **SC4330** Anatomy and Physiology H

2nd course **SC4330** Anatomy and Physiology H with an alternate of **SC5630** Marine Science H

Instructions for this process are as follows:

1. Student gathers information from teacher, Course Catalog and [BHS Science Website](#)
 2. Student considers how this will fit in their schedule with all courses in mind
 3. Student completes the [BHS Science Course Selection Form](#)
 4. Current Science teacher reviews the request, and will enter the primary course as soon as the form is complete
 5. The deadline for completing the form is 3/7/23
 6. 2nd course recommendation gets entered into Portal by 3/28/2023 – please be patient
 - a. Mr. Wiser enters all alternate choices to the primary request
 - b. Mr. Wiser also enters the additional requests – also known as 2nd science courses – and the alternate choice for that request.
 7. Students review all course requests and make changes by 4/4/23
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