Requirements: 14 courses for primary; 11 courses for joint-allied; 5 courses for secondary; everyone attends 5 dept tutorials

Students entering the concentration prior to 16-17 complete previous requirements. Students entering the concentration in 16-17 follow the new requirements (bullet points 1 & 2)

For Primary

• A minimum of six EPS courses with at least one course at the 50- or 100-level sampling all three sub-disciplines: Atmosphere(s) & Oceans; Earth History & Geobiology; and Geology, Geophysics & Planetary Science. Ordinarily, courses taken to fulfill chemistry, math or physics will not count toward fulfilling a breadth category.

• Of these six, two should be foundational courses from either EPS 10 or SPU 12, 14, 25, 29, 30, and 31, and all 50-level EPS courses. No more than one of these from EPS 10 or SPU 12, 14, 25, 29, 30 or 31 (ordinarily taken no later than the first semester of the junior year).

• Four additional courses in EPS, at least three of which must be numbered 99 or above. Examples: Acceptable: EPS 52, 99, 109, 134; Unacceptable: EPS 52, 56, 99, 109—instead either 52 or 56 would have to be moved to "other related courses" where it would still count for concentration credit, just no longer in the "four courses" requirement.

For Joint-Allied

A minimum of five EPS courses, two of which should be foundational courses from either EPS 10 or SPU 12, 14, 25, 29, 30, and 31, and all 50-level EPS courses. No more than one of these from EPS 10 or SPU 12, 14, 25, 29, 30 or 31 (ordinarily no later than the first semester of the junior year). Three additional EPS courses, one of which must be EPS 99 Senior Thesis Tutorial, at least two of which must be numbered 99 or above, and one of which must be EPS 99 senior thesis tutorial or its equivalent.

• Physics (2-3 courses):
  Physical Sciences 12a & 12b or Physics 15a, 15b, & 15c or Physics 15a & Phy Sci 12b or Applied Physics 50a & 50b. Physical Sciences 2 & 3 allowable by petition. NB: Strongly encourage students who take the physics 15 series to complete all three courses.

• Chemistry (1-2 courses):
  Option 1 (preferred): Physical Sciences 11; followed by EPS-ESE 133, EPS-ESE 135, or ESE 164;
  Option 2: Physical Sciences 1 or 10; followed by EPS-ESE 133, EPS-ESE 135, or ESE 164;
  Option 3: Physical Sciences 10 & 11
  NB: One course option: Other advanced chemistry (Chem 17 or higher) or chemistry-related courses such as EPS-ESE 133, EPS-ESE 135 or ESE164 may be substituted by petition.
  NB: Physical Sciences 1 and Physical Sciences 11 cannot both be taken for credit.

• Math through or above Applied Math 21a & 21b or Math 21a & 21b or Math 22a & 22b. (2 courses).

For Secondary

Five EPS courses, two of which should be foundational courses from either EPS 10 or SPU 12, 14, 25, 29, 30, and 31, and all 50-level EPS courses. No more than one of these from EPS 10 or SPU 12, 14, 25, 29, 30 or 31 (ordinarily no later than the first semester of the junior year).

• All courses must be taken for a grade, and C-minus is normally the minimum acceptable grade.
Thematic Plan of Study: Students must discuss and develop individual plans of study together with their concentration adviser. This ensures that the upper-level courses in EPS and related fields provide a coherent focus. The following lists may help focus these discussions, but students should have the option to suggest and develop their own themes outside these boundaries:

- **Focus on Atmospheric and Ocean Science**: 50, 112, 130, 131, 132, 133, 134, 135, 138, 139.
- **Focus on Energy and Climate**: EPS 109, 112, 130, 131, 132, 133, 134, 135, 139, 162.
- **Focus on Environmental Geoscience**: EPS 51, 109, 112, 130, 133, 135, 160, 162, 189, ES 164.
- **Focus on Geobiology**: EPS 53, 56, 107, 174, 182, 187, 189.
- **Focus on Geochemistry**: EPS 51, 53, 112, 130, 133, 135, 139, 141, 142, 145, 146, 187, 189.
- **Focus on Geology**: EPS 51, 52, 56, 112, 139, 142, 145, 146, 171, 174, 189.
- **Focus on Planetary Sciences**: EPS 51, 52, 112, 120, 142, 160, Astro 16, Astro 189.
- **Focus on Solid Earth Geophysics**: EPS 52, 55, 120, 142, 146, 162, 166.
- **For preparation for advanced work in any sub-discipline**: EPS 100, 112.

Advanced Placement: May allow students to complete higher-level courses, but a minimum of two physics, one chemistry, and two math courses must be completed to satisfy concentration requirements.

Department Tutorial: EPS hosts six department tutorials each year during which EPS faculty speak informally about their research. EPS concentrators are required to attend a minimum of five tutorials prior to graduation. Tutorial dates for 18-19 at 5:00 pm, Faculty Lounge: October 3, November 7, December 5, February 6, March 6, and April 3.

Senior Thesis: Optional, but required for departmental (English) honors. Students interested in doing a thesis should begin discussions with potential thesis advisors no later than the end of their junior year. (The summer prior to their senior year is usually spent conducting thesis research.) Students must complete at least one term of EPS 99 which must be taken for a letter grade. An oral presentation of the thesis is required.
Courses Required for Admission to Most Medical Schools
• General or inorganic chemistry with lab (one year)
• Organic chemistry with lab (one year)
• General physics with lab (one year)
• Biology with lab (one year)
• English (one year)

Taken from https://ocs.fas.harvard.edu/premedical-health-careers-advising

Harvard Courses That Satisfy Most Medical School Admissions Requirements

GENERAL OR INORGANIC CHEMISTRY WITH LAB (ONE YEAR):
Two of the following courses. Preferably both should contain labs.
• Life Sciences 1a OR Life & Physical Sciences A OR Life Sciences 50a
• Physical Sciences 1 or Physical Sciences 11 EPS credit
• Advanced inorganic, or physical chemistry. For example, Physical Sciences 10, Chemistry 40, Chemistry 60, or Chemistry 160 EPS credit

ORGANIC CHEMISTRY WITH LAB (ONE YEAR):
• Chem 17 & 27 OR Chem 20 & 30 OR ChemS 17 & Chem 27 OR Chem S-20ab (Harvard Summer School) EPS credit

BIOLOGY WITH LAB (ONE YEAR): Case by case for EPS credit
Two of the following courses. Preferably both should contain labs. Most medical schools recommend that these courses cover the cellular and molecular aspects as well as the structure and function of living organisms.
• Life Sciences 1b • Life Sciences 2 • Life Sciences 50a/b • MCB 60 • MCB 68 • OEB 10 • HEB 1420

BIOCHEMISTRY (ONE SEMESTER) : Case by case for EPS credit
Options for students who need to meet a biochemistry requirement include the following:
Most medical schools who require biochemistry will accept a combination of Chem 17 and Chem 27 EPS credit as fully meeting both the organic and biochemistry requirements OR • MCB 63 • MCB 65 OR• BCMP 234 • OR • BIOS S-10 (Harvard Summer School) OR • Enroll in a biochemistry course the summer before starting medical school.

PHYSICS WITH LAB (ONE YEAR):
• Physical Sciences 2 & 3* OR • Physical Sciences 12a & 12b OR • Physics 15a & 15b OR • Applied Physics 50a & 50b EPS credit OR • Phys-S1a & 1b (Harvard Summer School)
*by petition

MATHEMATICS (ONE SEMESTER OF CALCULUS AND ONE SEMESTER OF STATISTICS)
• Math Ma & Mb OR • Math 1a or Math 1b OR • Math 19a OR • Math 18 OR •Math21a or 21b OR •Applied Math 21a or 21b EPS credit OR • Life Sciences 50b OR •Any more advanced Math or Applied Math course
PLUS • Any statistics course (e.g. Stats Dept courses or Psychology 1900 or OEB 153 or Math 19b).

ENGLISH (ONE YEAR):
• One semester of the English requirement is met with Expos. Students who take two semesters of Expos have met the full requirement of two semesters of English. For many schools, the second semester can be met with English or Literature courses or with many of the Aesthetic and Interpretive Understanding and Culture and Belief courses.