



Breadth Subject Requirements

(As of Fall 2023)

To enrich knowledge about physics outside of one's own research field, students must complete two breadth requirement subjects. At least one of these must be from the list below. Both must be passed with a grade of B- or better.

There are four category of courses:

- * At least one course marked by 1 (true breadth) must be taken; *no exceptions granted*.
- * One of the courses marked by 2 (technique) should be taken; *in legitimate circumstances a substitution can be requested*. (This is similar to the current substitution procedure.)
- * Courses marked by X are not acceptable as breadth for students in the area; *no exceptions granted*.
- * Courses marked by X*, not normally accepted for breadth in a particular area, can be appealed to as substitution in rare circumstances.
- * Only one course from any row can be taken.

The following table is a first attempt at designating the courses, but should be further refined by relevant faculty in each area:

Subject #	Subject name	Atomic	Bio	CMX	CMT	Plasma	Astro	Nuclear-ParticleX	Nuclear-ParticleT	QI
8.323 8.324/8.325 or Harvard equivalent	Relativistic QFT	1	1	1	X	1	1	1	X	2
		2	2	2	X	2	2	2	X	2
8.370 8.371/8.372	Quantum Computation	2	1	1	1	1	1	1	1	X
		2	2	2	2	2	2	2	2	X
8.421/8.422	AMO	X	2	2	2	2	1	1	1	X*
8.511 8.512/8.513/8.514	Theory of Solids	2	2	X	X	2	1	1	1	1
		2	2	X	X	2	2	2	2	2

8.591	Quantitative Biology	1	X	1	1	1	1	1	1	1
8.592	Stat Phys in Biology	1	X	1	1	1	1	1	1	1
8.613J	Plasma Physics	1	1	1	1	X	1	1	1	1
8.614		2	2	2	2	X	2	2	2	2
8.701/8.711/8.11	Nuclear & Particle Physics	1	1	1	1	1	1	X	2	1
8.712		2	2	2	2	2	2	X	2	2
8.821	String Theory	1	1	1	1	1	1	1	X	1
8.901	Astrophysics	1	1	1	1	1	X	1	1	1
8.902		2	2	2	2	2	X	2	2	2
8.942	Cosmology	1	1	1	1	1	X	1	1	1
8.962	General Relativity	2	2	2	2	2	X*	2	X	2
8.316	Data Science	2	2	2	2	2	2	2	2	2
8.750J	Machine Learn	2	2	2	2	2	2	2	2	2