Physics Curriculum Map

This table is intended to assist students in planning by providing an overview of the courses offered by the Dept. of Physics and Astronomy. Specifically, the table below indicates the year in which each course is typically taken, the pre-requisites, the co-requisites, and the courses that completion of the given course opens. In addition, four major themes in the curriculum—mechanics, electricity and magnetism (E&M), thermal physics, and quantum physics—are indicated both in words and through colours. Courses in each of these themes provide tools which are foundational to all areas of physics. 2250H is offered in alternate years and is intended for students in either Year 2 or Year 3. This course introduces important practical skills for experimental and theoretical physics. 4050H, 4240H, 4310H, and 4520H are also offered in alternate years and may be taken in Year 3 or Year 4. These provide the opportunity to see how the tools developed in the core courses apply to systems in areas of interest to Trent faculty. Please refer to the Projected Course Offerings document for information on when these courses are expected to next be offered.

Year	Course	Themes	Completed Before	Take at Same Time or Before	Opens which courses
1	**PHYS 1001H/1002H**	General Physics	4U Math recommended	MATH 1110H/1120H, MATH 1350H, & COIS 1020H recommended	Many
2	**PHYS 2110H** – Introductory Classical Mechanics	Mechanics	PHYS 1001H/1002H, MATH 1110H/1120H	PHYS-MATH 2150H	PHYS 3610H, PHYS 4240H, PHYS 4310H, PHYS 4520H, PHYS 4700H
2	**PHYS 2610H** – Intro to Quantum Physics	Quantum	PHYS 1001H/1002H, MATH 2110H, PHYS-MATH 2150H		PHYS 2700H, PHYS 3610H, PHYS 4240H, PHYS 4310H, PHYS 4520H, PHYS 4700H
2	**PHYS 2700H** – Thermal Physics	Thermal	MATH 2110H	PHYS 2610H	PHYS 4310H
2/3	**PHYS 2250H** – Electronics	Practical Skills	PHYS 1001H/1002H, MATH 1110H/1120H	-	PHYS 4050H
3	**PHYS 3130H** – Classical Mechanics	Mechanics	PHYS 1001H/1002H, MATH 1110H/1120H	MATH 2110H, PHYS-MATH 2150H	PHYS 4140H

Year	Course	Themes	Completed Before	Take at Same Time or Before	Opens which courses
3	**PHYS 3610H** – Foundations of Quantum Mechanics	Quantum	PHYS 2110H (or PHYS 2620H), PHYS-MATH 2150H, PHYS 2610H	-	PHYS 4610H
3	**PHYS 3200Y** – Electricity & Magnetism	E&M	PHYS 1001H/1002H, PHYS-MATH 2150H, MATH 2110H, MATH 2120H	-	PHYS 4220H
3/4	**PHYS 4240H** – Modern Optics	Special Topic	-	PHYS 2110H (or PHYS 2620H), PHYS 2610H, PHYS 3200Y, PHYS-MATH 3150H	-
3/4	**PHYS 4310H** – Condensed Matter Physics	Special Topic	PHYS 2110H (or PHYS 2620H), PHYS 2610H, PHYS 2700H	PHYS 3200Y, PHYS-MATH 3150H	-
3/4	**PHYS 4050H** – Advanced Experimental Techniques	Special Topic	-	PHYS 2250H	-
3/4	**PHYS 4520H** – Astrophysics	Special Topic	PHYS 2110H (or PHYS 2620H), PHYS 2610H	-	-
4	**PHYS 4140H** – Advanced Classical Mechanics	Mechanics	PHYS-MATH 2150H, PHYS-MATH 3130H	-	-
4	**PHYS 4610H** – Advanced Quantum Mechanics	Quantum	PHYS 3610H, PHYS-MATH 3150H	-	-
4	**PHYS 4220H** – Electromagnetic Theory	E&M	PHYS 3200Y, PHYS-MATH 3150H	-	-
4	**PHYS 4700H** – Statistical & Thermal Physics	Thermal	PHYS 2110H (or PHYS 2620H), PHYS 2610H, PHYS 2700H, MATH 2110H	PHYS-MATH 3150H	-