

**Suggested course plan for B.E.(Mechanical and Manufacturing)/B.Sc.
students leading to a Physics major and entry to Physics Honours**

NB: Variations may be required to minimise timetable clashes

Year 1		1st year of course		B.E./B.Sc.
Semester	Code	Subject Name	Points	
1	640-121/141**	Physics A	12.5	12.5
1	620-121/141	Mathematics A	12.5	12.5
1		Engineering subjects		
2	640-122/142**	Physics B	12.5	12.5
2	620-122/142	Mathematics B#	12.5	12.5
2	620-130/132/143/123	Applied Mathematics	12.5	12.5
2		Engineering subjects		
Total Science points for year				62.5

Year 2		2nd year of course		B.E./B.Sc.
Semester	Code	Subject Name	Points	
1	640-223/243**	Quantum Mechanics and Thermal Physics	12.5	12.5
1	640-251***	Instrumentation for Scientists	12.5	12.5
1	620-231	Vector Analysis	12.5	12.5
1		Engineering subjects[2]†		
2	640-225/245**	Electromagnetism and Relativity	12.5	12.5
2	620-232	Mathematical methods	12.5	12.5
2		Engineering subjects[2]		
Total Science points for year				62.5

Year 3		3rd year of course		Points	
1	640-321/341**	Quantum Mechanics	12.5	12.5	
1	640-322/342*	Thermal Physics	12.5	12.5	
1		Engineering subjects[2]			
2	640-299**	Laboratory work	12.5	12.5	
2	640-353*	Atomic, molecular and solid state physics	12.5	12.5	
2	640-234¶	Further classical and quantum mechanics	12.5	12.5	
2		Engineering subjects[1]			
Total Science points for year				62.5	

n.b. 620-331, 620-160 variations

Year 4		4th year of course		
		Primarily engineering subjects		
		Possibly room for one Science subject[2]		
Total Science points for year				0

Year 5		5th year of course		Points	
1	640-393*	Physics laboratory work	12.5	12.5	
1		Physics option		12.5	
1		Engineering subjects			
2	640-323/343*	Electrodynamics	12.5	12.5	
2	640-394*	Physics laboratory work	12.5	12.5	
2		Engineering subjects			
Y	640-310§	Physics seminar	0	0	
Total Science points for year				50	

† one engineering subject may be deferred to avoid overload

* Completion of these subjects and those marked ** is essential in order to proceed to Physics Honours

** Completion of these subjects is essential to proceed to a major in Physics. See other requirements.

*** This subject is required if 431-101 Fund. of Elect. Eng. (or equivalent) has not been completed.

¶ Another Science or Eng subject could replace this unit

§ Students taking 50 points or more 300-level physics should take this unit

This subject can be deferred until 2nd year if Science maths units are being taken