

# First Year Physics 21/22 Modules & Assessment

Trimesters 1 & 2 (20 credit long thin modules)

## Mechanics, Relativity and Quantum Physics

Coursework: Assignment 1, 50%

Coursework: Assignment 2, 50%

## Electricity, Magnetism and Light

Coursework: Assignment 1, 50%

Coursework: Assignment 2, 50%

## Physics Laboratory 1

Practical: Laboratory Skills Journal, 70%

Coursework: Electronics Journal, 30%

## Physics in Context

Coursework: Problem Solving Journal, 70%

Coursework: Energy Research, 30%

## Modelling of Physical Systems

Coursework: Assignment: Dynamics of Physical Systems, 50%

Coursework: Assignment: Waves & Thermal Physics, 50%

## Mathematics

Coursework: Assignment 1, 50%

Coursework: Assignment 2, 50%

Note on week numbers. Week numbering starts with Induction Week as week 0, and then Trimester 1 (T1) *teaching weeks* start with week 01. The *timetabling week* numbers then continue throughout the year, up to week 51 (including vacation weeks) – shown in brackets on next page. It is useful to list timetabling and teaching weeks – the latter such as in Trimester 2: T2-01 being the first teaching week of this Trimester. See the next pages for detailed breakdowns of dates and week numbering.

# Units and dimensions

The SI units for the five basic dimensions are:

Time	second	hertz	Hz	s	s <sup>-1</sup>
Length	metre	metre	metre	m	m <sup>2</sup>
Area	metre × metre	metre × metre	metre × metre	m <sup>2</sup>	m <sup>3</sup>
Volume	metre × metre × metre	metre / second	metre / second	m s <sup>-1</sup>	m s <sup>-2</sup>
Speed, velocity	metre / second	metre / (second × second)	metre / (second × second)	m s <sup>-1</sup>	m s <sup>-2</sup>
Acceleration	metre / (second × second)	kilogram	kg	kg	kg m <sup>-3</sup>
Mass	kilogram	mass / volume	kg	kg m <sup>-3</sup>	kg m s <sup>-2</sup>
Density	mass / volume	newton	N	J	kg m s <sup>-2</sup>
Force	newton	work, energy, joule	J	N m	kg m <sup>2</sup> s <sup>-2</sup>
Work, energy, joule	newton × metre	electron volt	eV	1.60 × 10 <sup>-19</sup> J	kg m <sup>2</sup> s <sup>-2</sup>
Power	watt	watt	W	J / s	kg m <sup>2</sup> s <sup>-3</sup>
Pressure	pascal	pascal	Pa	N / m <sup>2</sup>	kg m s <sup>-2</sup>
Electric current	ampere	ampere	A	A	A
Charge	coulomb	coulomb	C	A s	A s
Potential difference	volt	volt	V	J / C	kg m <sup>2</sup> A <sup>-1</sup> s <sup>-2</sup>
Resistance	ohm Ω	ohm Ω	Ω	V / A	kg m <sup>2</sup> A <sup>-2</sup> s <sup>-2</sup>



<u>Week</u>	Week	<u>Assessment</u>
Trimester weeks	Timetable weeks	
1745 - 1827	17	<b>TRIMESTER ONE (T1)</b>
<b>T1-12</b>	12	<b>Modelling of Physical Systems.</b> Assignment: Dynamics of Physical Systems: 50% Due week T1-12 (12), Fri 17 Dec 2021
<b>T1-13</b>	16	<b>Mechanics, Relativity and Quantum Physics.</b> Assignment 1: 50% Due week T1-13 (16), Fri 14 Jan 2022
<b>T1-14</b>	17	<b>Mathematics.</b> Assignment 1: 50% Due week T1-14 (17), Wed 19 Jan 2022
<b>T1-14</b>	17	<b>Electricity, Magnetism and Light.</b> Assignment 1: 50% Due week T1-14 (17), Fri 21 Jan 2022
1736 - 1806		<b>TRIMESTER TWO (T2)</b>
<b>T2-05</b>	23	<b>Physics Laboratory 1.</b> Laboratory Skills Journal: 70% Due week T2-05 (23), Fri 04 Mar 2022
<b>T2-06</b>	24	<b>Physics in Context.</b> Problem Solving Journal 70% Due week T2-06 (24), Fri 11 Mar 2022
<b>T2-11</b>	32	<b>Physics in Context.</b> Energy Research 30% Due week T2-11 (32), Fri 06 May 2022
<b>T2-12</b>	33	<b>Physics Laboratory 1.</b> Electronics Journal: 30% Due week T2-12 (33), Wed 11 May 2022
<b>T2-12</b>	33	<b>Modelling of Physical Systems.</b> Assignment: Waves and Thermal Physics: 50% Due week T2-12 (33), Fri 13 May 2022
<b>T2-13</b>	34	<b>Electricity, Magnetism and Light.</b> Assignment 2: 50% Due week T2-13 (34), Fri 20 May 2022
<b>T2-14</b>	35	<b>Mathematics.</b> Assignment 2: 50% Due week T2-14 (35), Wed 25 May 2022
<b>T2-14</b>	35	<b>Mechanics, Relativity and Quantum Physics.</b> Assignment 2: 50% Due week T2-14 (35), Fri 27 May 2022

**Units and dimensions**

The SI units for the five basic dimensions are:

the second (for time)  
the metre (for length)  
the kilogram (for mass)  
the kelvin (for temperature)  
the ampere (for electric current)

Time	second	s
Frequency	Hz	s <sup>-1</sup>
Length	metre	m
Area	metre squared	m <sup>2</sup>
Volume	metre cubed	m <sup>3</sup>
Speed, velocity	metre / second	m s <sup>-1</sup>
Acceleration	metre / (second × second)	m s <sup>-2</sup>
Mass	kilogram	kg
Density	mass / volume	kg m <sup>-3</sup>
Force	newton N	kg m s <sup>-2</sup>
Work, energy, heat	joule J	kg m <sup>2</sup> s <sup>-2</sup>
Power	watt W	kg m <sup>2</sup> s <sup>-3</sup>
Pressure	pascal Pa N / m <sup>2</sup>	kg m s <sup>-2</sup>
Temperature	kelvin K	K
Electric current	ampere A	A
Charge	coulomb C	kg m <sup>2</sup> A <sup>-1</sup> s <sup>-2</sup>
Potential	volt V	kg m <sup>2</sup> A <sup>-1</sup> s <sup>-2</sup>
Resistance	ohm Ω V / A	kg m <sup>2</sup> A <sup>-2</sup> s <sup>-2</sup>

## Academic Year by Week 2021/2022

week begins (Monday)      trimesters      timetable wk no      pool rooms bookable for teaching and revision

Note that other assessment deadlines may appear in non-exam weeks

13 September 2021	<i>International/Early Arrivals Welcome 2021/22</i>					
20 September 2021	<i>Welcome/Induction</i>				0	
27 September 2021	<b>Trimester 1</b>	1	1	✓		
4 October 2021	<b>Trimester 1</b>	2	2	✓		
11 October 2021	<b>Trimester 1</b>	3	3	✓		
18 October 2021	<b>Trimester 1</b>	4	4	✓		
25 October 2021	<b>Trimester 1</b>	5	5	✓		
1 November 2021	<b>Trimester 1</b>	6	6	✓		
8 November 2021	<b>Trimester 1</b>	7	7	✓		
15 November 2021	<b>Trimester 1</b>	8	8	✓		<b>ASSESSMENTS</b>
22 November 2021	<b>Trimester 1</b>	9	9	✓		
29 November 2021	<b>Trimester 1</b>	10	10	✓		
6 December 2021	<b>Trimester 1</b>	11	11	✓		
13 December 2021	<b>Trimester 1</b>	12	12	✓		<b>Modelling of Physical Systems</b>
20 December 2021	<i>Christmas Vacation</i>				13	
27 December 2021	<i>Christmas Vacation</i>				14	
3 January 2022	<i>Christmas Vacation</i>				15	
10 January 2022	<b>Trimester 1</b>	13	16	✓	<b>EXAMS</b>	<b>MR &amp; Quantum Physics</b>
17 January 2022	<b>Trimester 1</b>	14	17	✓	<b>EXAMS</b>	<b>Maths + Ele, Mag &amp; Light</b>
24 January 2022	<i>Inter-trimester break</i>				18	
31 January 2022	<b>Trimester 2</b>	1	19	✓		
7 February 2022	<b>Trimester 2</b>	2	20	✓		
14 February 2022	<b>Trimester 2</b>	3	21	✓		
21 February 2022	<b>Trimester 2</b>	4	22	✓		
28 February 2022	<b>Trimester 2</b>	5	23	✓		<b>Laboratory (Skills Journal)</b>
7 March 2022	<b>Trimester 2</b>	6	24	✓		<b>Physics in Context</b>
14 March 2022	<b>Trimester 2</b>	7	25	✓		
21 March 2022	<b>Trimester 2</b>	8	26	✓		
28 March 2022	<b>Trimester 2</b>	9	27	✓		
4 April 2022	<i>Easter Vacation</i>				28	
11 April 2022	<i>Easter Vacation</i>				29	<i>(Bank Holiday Friday)</i>
18 April 2022	<i>Easter Vacation</i>				30	<i>(Bank Holiday Monday)</i>
25 April 2022	<b>Trimester 2</b>	10	31	✓		
2 May 2022	<b>Trimester 2</b>	11	32	✓	<i>(Bank Holiday Monday)</i>	<b>Physics in Context</b>
9 May 2022	<b>Trimester 2</b>	12	33	✓		<b>Lab(E) + Modelling of P Systems</b>
16 May 2022	<b>Trimester 2</b>	13	34	✓	<b>EXAMS</b>	<b>Electricity, Magnetism &amp; Light</b>
23 May 2022	<b>Trimester 2</b>	14	35	✓	<b>EXAMS</b>	<b>Maths + MR &amp; Quantum Phys</b>
30 May 2022	<i>inter-trimester break</i>				36	<i>(Bank Holiday Monday)</i>
6 June 2022	<b>Trimester 3</b>	1	37	✓		
13 June 2022	<b>Trimester 3</b>	2	38	✓		
20 June 2022	<b>Trimester 3</b>	3	39	✓		
27 June 2022	<b>Trimester 3</b>	4	40	✓		
4 July 2022	<b>Trimester 3</b>	5	41	✓		
11 July 2022	<b>Trimester 3</b>	6	42	✓		
18 July 2022	<b>Trimester 3</b>	7	43	✓		<b>Graduation Celebrations</b>
25 July 2022	<b>Trimester 3</b>	8	44	✓		
1 August 2022	<b>Trimester 3</b>	9	45	✓		
8 August 2022	<b>Trimester 3</b>	10	46	✓		
15 August 2022	<b>Trimester 3</b>	11	47	✓		
22 August 2022	<b>Trimester 3</b>	12	48	✓		
29 August 2022	<b>Trimester 3</b>	13	49	✓	<i>(Bank Holiday Monday)</i>	
5 September 2022	<b>Trimester 3</b>	14	50			
12 September 2022	<i>International/Early Arrivals Welcome 2022/23</i>					
19 September 2022	<i>Welcome/Induction</i>					

All events are subject to change

\*While resit exams may be scheduled during any week in a designated examination period, exams other than resits should not be scheduled during week 48

All teaching, revision and assessment shall take place within modules during the designated trimester periods. (Academic Regulations for Taught Programmes)