

## Program Structure of Dual Degree B.Sc. Program in collaboration with the University of Melbourne:

**Bachelor of Science (Honours with Research)-Physics/Chemistry/Mathematics, Manipal University Jaipur, India**

**Bachelor of Science Advanced (Honours), University of Melbourne, Australia**

**Duration of the Program: 4 years (2yrs MUJ+2 yrs UoM)**

Year	First Semester						Second Semester					
	Course Code	Course Name	L	T	P	C	Course Code	Course Name	L	T	P	C
I	MAS1103	Calculus	2	1	2	4	MAS1243	Algebra	2	1	2	4
	PHY1111	Introductory Classical Physics	2	1	2	4	PHY1211	Modern Physics	2	1	2	4
	CHY1110	Introductory and Organic Chemistry	2	1	2	4	CHY1210	Inorganic and Physical Chemistry	2	1	2	4
	BIO1146	The Diversity of Life	2	1	2	4	BIO1246	Biology of Cells	2	1	2	4
	LLC1110	English, Critical Thinking & Communication	2	0	0	2	PHY1212	Scientific Computation and Modelling: Introduction to Simple Models and Programming	2	0	0	2
	CHY1003	Environmental Sciences	2	0	0	2	MAS1224	Research Methodology	2	0	0	2
	CAP1180	Fundamentals of Computer	2	0	0	2	PHY1213	Renewable Energy and Energy Harvesting	2	0	0	2
	<b>Total Credits</b>					22						22
II	<b>Third Semester</b>						<b>Fourth Semester</b>					
	MAS2118	Vector Calculus and Differential Equations	2	1	2	4	MAS2227	Probability and Statistics	2	1	2	4
	PHY2111	Quantum Mechanics and Thermodynamics	2	1	2	4	PHY2211	Electricity, Magnetism, Special Relativity, and Optics	2	1	2	4
	CHY2110	Chemistry: Reactions and Synthesis	2	1	2	4	CHY2210	Chemistry: Structure and properties	2	1	2	4
	BIO2146	Functional Biology of Organisms	2	1	2	4	BIO2246	Genetics, Evolution and Ecology	2	1	2	4
	PHY2114	Scientific Computation and Modelling: Projects*	0	2	0	2	MAS2228	Data Science: A Brief Introduction	2	0	0	2
	PHY2115	Scientific Writing	2	0	0	2	CHY2275	Publication Ethics	2	0	0	2
	CHY2175	Seminar Presentation I	2	0	0	2	PHY2216	Seminar Presentation II	2	0	0	2
	<b>Total Credits</b>					22						22

\*After completing 2 years at MUJ (1st to 4th semester) as per the above scheme, students will complete their remaining coursework for the requirement of Bachelor of Science Advanced (Honours) degree at University of Melbourne, Australia.