

Honours Modules 2011-12

Currently (18.7.11, updated 15.8.11) we expect to run the following honours modules in session 2011-12.

There is a new level-five module on solar power which is designed primarily for taught postgraduate students, but which may also be of interest to MPhys students. Much of the work of this module takes place in reading week in semester one.

PH4028 Quantum Mechanics 3 has been renamed Advanced Quantum Mechanics, and the content changed. Much of the quantum scattering has been removed, with a small part of this taken to Nuclear and Particle Physics instead. This leaves space in PH4028 for additional material on quantum degenerate gases and quantum information, including the quantum physics of the electromagnetic field. We note that this is an advanced module aimed at those who have demonstrated a priory mastery of quantum mechanics and mathematics, ideally through grade 15 style results in Maths for Physicists, QM1 and QM2.

PH5014 The Interacting Electron Problem is running again in 2011-12.

The School's honours module synopses will soon be updated to note the above changes. It is possible that there will be changes in teaching staff and module availability between now and the start of a module.

Module Code	Brief Title	Credits	Teaching Staff
	Semester One		
AS3015	Nebulae	15	KW
AS4025	Observational Astro	15	ACC/JSG
AS5001	Advanced Data Analysis	15	KDH
AS5002	Magnetofluids & Space Plasmas	15	MMJ
AS5003	Contemporary Astrophysics	15	HSZ/CH/JSG
ID4001	Communicating and Teaching Science	15	BDS+
PH3012	Thermal & Statistical Physics	15	PASC/SLL
PH3061	Quantum Mechanics 1	10	ASK
PH3066	Mathematics for Physicists	10	CAH
PH3074	Electronics	15	PASC
PH3075	Applied Vector Calculus	5	CAH
PH4021	Physics of Atoms	15	DC
PH4027	Optoelectronics & Nonlinear Optics 1	15	IDWS/MM
PH4031	Fluids	15	MMJ
PH4032	Special Relativity and Fields	15	NVK
PH4034	Laser Physics 1	15	FEWK
PH4036	Physics of Music	15	Jkemp
PH4105	Physics Laboratory 2	15	CFR+
PH5002	Foundations of Quantum Mechanics	15	KKW
PH5003	Group Theory	15	JFC

PH5005	Laser Physics 2	15	BDS/MHD/TFK/WS
PH5018	Laser Physics 2 (extended)	20	BDS/MHD/TFK/WS
PH5011	General Relativity	15	MD'k
PH5012	Quantum Optics	15	NVK/FEWK
PH5014	Interacting Electron Problem	15	APM
PH5015	Applications of Quantum Physics (new name for Exp Q.Phys at the Limit)	15	KD/MM
PH5016	Biophotonics	15	KD/TFK
PH5183	Photonics Applications (MSc & Hons)	15	TFK/KD
PH5021	Organic Elect & App'ns (inc summer schl)	15	GAT
PH5208	DL Semicond' Physics & Devices DL	10	GAT (MatSci only)
PH5265	EMSP Solar Power	6	IDWS/TFK
	Semester Two		
AS3011	Galaxies	10	VW
AS3012	Exoplanetary Science	10	ACC/CH
AS3013	Computational Astrophysics	10	PW/ChH/
AS4022	Cosmology	10	HSZ
AS4023	Stars	15	ACC
PH3002	Solid State Physics	15	FB
PH3007	Electromagnetism	15	GMS
PH3062	Quantum Mechanics 2	10	DC
PH3073	Lagrangian & Hamiltonian Dynamics	10	UL
PH3101	Physics Laboratory 1	15	CFR+
PH4022	Nuclear & Particle Physics	10	ASK
PH4025	Physics of Electronic Devices	15	GAT
PH4026	Signals and Coherence	15	PASC/JCGL
PH4028	Advanced QM (revised QM3)	10	UL/DC/TP
PH4030	Computational Physics	10	ADG/GMS/MM
PH4035	Principles of Optics	15	FEWK
PH5004	Quantum Field Theory	15	JMJK
	Whole Year		
AS4103	Astrophysics BSc Project	30	ACC+
AS5101	Astrophysics MPhys Project	60	ACC+
PH3014	Transferable Skills for Physicists	15	BDS+
PH4111	Physics BSc Project	30	DC+
PH5101	Physics MPhys Project	60	DC+
PH5102	Theoretical Physics MPhysProject	45	CAH+

Revised 15.8.11 to show change to staffing of PH5004 and PH3062