Degree and Study Plan

College: Science
Department: Physics
Cohorts: 2010 - 2015
Degree: BSc. in Science
Major: Physics
Specialization:

Summary of Credits:

University Requirements (UR)	**6**
Arabic	3
Contemporary Omani Society	1
Oman & Islamic Civilization or Islamic Culture	2
University Electives (UE)	**6**
See List A	
College Requirements (CR)	**19**
See list B	
College Electives (CE)	**33**
See list C	
Departmental Requirements (DR)	**58**
See list D	
Departmental Electives	
See list E	
Major Requirements (AR)	
See list F	
Major Electives (AE)	
See list G	
Minor Requirements (IR)	
See list H	
Minor Electives (IE)	
See list I	
Specialization Requirements (SR)	
See list J	
Specialization Electives (SE)	
See list K	
TOTAL	**122**

For reference contact: HOD Ext. 1460
HoD Date
Dean's Office Date
Admission and Registration Date

BACHELOR OF SCIENCE IN PHYSICS

Department of Physics Study Plan: for Cohort 2010-2015

	CR
University Requirements (UR)	6
University Electives (UE)	6
College Requirements (CR) 4 Courses of 2101 (16 CR) + Communication in Science 3CR)	19
College Electives (CE)	33
Departmental Requirements (DR)	58
TOTAL	**122**

	Course	Course Title	Cr.	Pre-req./Co-req.*	Cat.
Semester 1 Fall	ARAB 1001	Arabic	3		UR
	PHYS2101 (Physics I)	General Physics I	4	FPEL 0560/ FPEL0600 / FPEL0603 / FPEL0604 & FPMT 0105/ FPMT0109	CR
	LANC2058	Communication in Science	3	FPEL 0560/ FPEL0600 / FPEL0603 /	CR
	MATH2107	Calculus I	4	FPEL 0560/ FPEL0600 / FPEL0603 / FPEL0604 & FPMT 0105/ FPMT0109	CR
		University elective	2		UE
	Total		**16**		

Semester2 Spring	MATH2108	Calculus II	3	MATH2107	DR
	PHYS 2102	General Physics II	4	PHYS2101	DR
	HIST 1010	Oman & Islamic Civilization or	2		UE
		College Requirement	4		CR
		University Elective	2		UE
	Total		**15**		

Semester 3 Fall	MATH3171	Linear Algebra & Multivariate	3	MATH2108	DR
	PHYS3103	Physics III	3	PHYS 2102+ Math2107	DR
	COMP2101	Introduction to Computer Science	4	FPEL 0560/ FPEL0600 / FPEL0603 / FPEL0604 & FPCS0101/0102	CR
		College Elective	3		CR
		College Elective	3		CR
	Total		**16**		

Semester 4 Spring	PHYS3101	Theoretical Methods of Physics I	3	MATH3171	DR
	PHYS3104	Modern Physics	3	PHYS3103	DR
	PHYS3100	Introduction to Computational Physics	2	PHYS2102+ COMP2101+	DR
	PHYS3005	Exper. Methods of Physics I	3	PHYS2102	DR
		Elective	3		CE
		University Elective	2		UE
	Total		**16**		

Semester 5 Fall	PHYS3001	Dynamics	3	PHYS2101+	DR
	PHYS3012	Electromagnetism	3	PHYS2102+MATH317	DR
	PHYS4105	Exper. Methods of Physics II	3	PHYS3005	DR
		Elective	3		CE
		Elective	3		CE
	Total		**15**		

Semester 6 Spring	PHYS4101	Quantum Mechanics	3	PHYS3104+	DR
	PHYS4018	Thermal & Statistical Physics	4	PHYS3104	DR
	PHYS3106	Electronics	4	PHYS2102	DR
	SOCI3320	Contemporary Omani Society	1		UR
		Elective	3		CE
	Total		**15**		

Semester 7 Fall	PHYS5003	Condensed Matter Physics I	3	PHYS4101+	DR
	PHYS5106	Nuclear & Particle Physics	3	PHYS4101	DR
	PHYS4107	Computational Methods of Physics	2	PHYS3100+ PHYS3001 PHYS4101	DR
		Elective	3		CE
		Elective	3		CE
	Total		**14**		

Semester 8 Spring	PHYS4100	Optics & Lasers	3	PHYS3103+	DR
	PHYS5105	Exper. Methods of Physics III	3	PHYS4105	DR
		Elective	3		CE
		Elective	3		CE
		Elective	3		CE
	Total		**15**		

Degree Plan : 122 credits			
Course code	***Cr***	***Course Title***	***Prerequisites (Co-requisites)***
University Requirements: 12 Credits			
ARAB 1001	*3*	*Arabic*	
HIST 1010	*2*	*Oman and Islamic Civilization*	
SOCI 3320	*1*	*Modern Oman Society*	
	6	*University electives*	

Department of Physics - Degree Plan: for cohort 2010-2015

LIST A: University Electives (6 credits)

Code	Title	Credits	College
ANVS2000	Omani Wildlife Wonders (Arabic)	2	AGR
CAMS2002	Health+ Safety & Environment	2	AGR
MASF2000	Sea World(Arabic)	2	AGR
SWAE2003	Water in Arid Environments	2	AGR
ARAB1040	Literature and Society	2	ART
ARCH1170	Development of Civilization in Oman.	2	ART
ARCH1535	Oman Towns and their Cultural Remains	2	ART
ARCH1551	Administering Archaeological Heritage in Oman	2	ART
GEOG2031	Urbanization in the Arabian Gulf	2	ART
HIST1040	Some Aspects of the History of Oman	2	ART
INFO4100	Children's Literature	2	ART
INFO4180	Research and Library	2	ART
MASS1011	Electronic Publishing	2	ART
MASS1020	Arts of Media Editing (U.E)	2	ART
MASS1080	Principles of Public Relations (U.E)	2	ART
MASS3013	Mass Media and Society	3	ART
MUSC4509	Music Appreciation	2	ART
PERS1010	Introduction to Persian	2	ART
PHIL1200	Research Methods in Speech Science	2	ART
PHIL2060	Ethics	2	ART
SOCI2014	Developing Societies	2	ART
SOCI2151	Medical Sociology	2	ART
THAR1011	Theatrical Appreciation	2	ART
THAR1012	Play Writing	2	ART
THAR1013	Oratory and Presentation	2	ART
THAR1016	Child's Theatre	2	ART
THAR1017	Theatre Scenography	2	ART
THAR1018	Theatre and Drama: The Major Intellectual+ Literary+ and Artistic Movements	2	ART
TOUR1050	Tourism in Oman	2	ART
BCOM1950	Varieties of Public and Professional Communication	3	COM
ECON1050	Introduction to Economics	2	COM
ARED1001	Contemporary Visual Arts	2	EDU
ARED1002	Appreciation of Islamic Arts and Arabic	2	EDU

CUTM1002	Environmental Education	2	EDU
CUTM1003	Principles of Teaching	2	EDU
ISLM1020	Human Rights in Islam	2	EDU
ISLM1140	Quran Recitation	2	EDU
ISLM2010	Prophets Biography	2	EDU
ISLM2030	The Miracle Of the Holy Quran	2	EDU
ISLM2040	Islamic Economy	2	EDU
ISLM2060	Family Systems in Islam	2	EDU
ISLM2070	Stories	2	EDU
ISLM2090	Islamic Ethics	2	EDU
PHED1000	Physical Fitness	2	EDU
PHED1000	Physical Fitness in Theory and Practice	2	EDU
PHED1260	Health Education and Physique	2	EDU
PSYC1001	Study of Human Behaviour	2	EDU
PSYC1005	Mental Health	2	EDU
TECH1000	Study Skills	2	EDU
CIVL2000	Remote Sensing and Geographic Information Systems	3	ENG
DRUG1001	Nutrients+ Medicines and Narcotics: Actions+ Interactions and Harmful Effects	2	MED
EPIS2140	Data Analysis using SPSS	2	MED
MEDI1000	History of medicine	2	MED
MEDI1001	Fundamental of Thinking and Creativity	2	MED
NURS1006	Human Relations in Health & Illness	2	NUR
CHEM1100	Everyday Chemistry	2	SCI
CHEM1200	Chemistry for a Better Life	2	SCI
COMP1210	Introduction to Web Site Development	2	SCI
ERSC1007	The Geological Wonders of Oman	2	SCI
PHYS2802	Exploring the Universe (Arabic)	2	SCI
PHYS2803	Nuclear Energy and Radiation (Arabic)	2	SCI
PHYS2901	Introductory Astronomy	3	SCI
PHYS3901	Mysteries of the Universe	3	SCI
	TOTAL	6	

Department of Physics - Degree Plan: for cohort 2010-2015

LIST B: COLLEGE REQUIRMENTS (19 credits)

Code	Title	Credits	Pre-Requisite / Co-req. *
LANC 2058	Communication in Science	3	FPEL 0560/ FPEL0600 / FPEL0603 / FPEL0604
COMP2101	Introduction to Computer Science	4	FPEL 0560/ FPEL0600 / FPEL0603 / FPEL0604 & FPCS0101/FPCS0102
MATH2107	Calculus I	4	FPEL 0560/ FPEL0600 / FPEL0603 / FPEL0604 & FPMT 0105/ FPMT0109
PHYS2101	General Physics I	4	FPEL 0560/ FPEL0600 / FPEL0603 / FPEL0604 & FPMT 0105/ FPMT0109
	1 out of the following 4 courses		
BIOL2101	General Biology I	4	FPEL 0560/ FPEL0600 / FPEL0603 / FPEL0604
CHEM2101	General Chemistry I	4	FPEL 0560/ FPEL0600 / FPEL0603 / FPEL0604 & FPMT 0105/ FPMT0109
ERSC2101	Introduction to Geology I	4	FPEL 0560/ FPEL0600 / FPEL0603 / FPEL0604
STAT1001	Introduction to Statistics	4	FPEL 0560/ FPEL0600 / FPEL0603 / FPEL0604
Total		**19**	

Department of Physics - Degree Plan: for cohort 2010-2015

LIST C: College Electives (33 credits)

At least 6 credits must be from other departments in the College of Science. Courses from other colleges may be taken with written approval of the HOD.

Department of Physics - Degree Plan: for cohort 2010-2015

LIST D Departmental Requirements (58 credits)

Code	Title	Credits	Pre-Requisite / Co-req. *
MATH2108	Calculus II	3	MATH2107
MATH3171	Linear Algebra & Multivariate Calculus	3	MATH2108
PHYS2102	General Physics II	4	PHYS2101
PHYS3001	Dynamics	3	PHYS2101+ PHYS3101
PHYS3005	Experimental Methods of Physics I	3	PHYS2102
PHYS3012	Electromagnetism	3	PHYS2102+ MATH3171
PHYS3100	Introduction to Computational Physics	2	PHYS2102+ COMP2101+ MATH2107
PHYS3101	Theoretical Methods of Physics I	3	MATH3171
PHYS3103	Physics III	3	PHYS2102+ MATH2107
PHYS3104	Modern Physics	3	PHYS3103
PHYS3106	Electronics	4	PHYS2102
PHYS4100	Optics & Lasers	3	PHYS3103+ PHYS3012
PHYS4101	Quantum Mechanics	3	PHYS3104+ PHYS3101
PHYS4105	Experimental Methods of Physics II	3	PHYS3005
PHYS4107	Computational Methods of Physics	2	PHYS3100+ PHYS3001+
PHYS4018	Thermal & Statistical Physics	4	PHYS3104
PHYS5105	Experimental Methods of Physics III	3	PHYS4105
PHYS5003	Condensed Matter Physics I	3	PHYS4101+ PHYS4018
PHYS5106	Nuclear & Particle Physics	3	PHYS4101
MATH2108	Calculus II	3	MATH2107
MATH3171	Linear Algebra & Multivariate Calculus	3	MATH2108
		58	

For reference contact: **Dr Cengiz Ercil** Ext. **1419**

Approved by Dean of Science: _____ Date:

Office of Admissions & Registration: _____

Confirmed: _____