

THE PHYSICS MAJOR AT MANCHESTER COLLEGE - CURRICULUM

I. THE GENERAL EDUCATION COURSES

COURSE NUMBER	SEMESTER HOURS	COURSE TITLE OR CATEGORY	54 HOURS
IDIV 121	3	FIRST YEAR COLLOQUIUM	
ENG 110	3	WRITTEN COMMUNICATION	
COMM 110	3	ORAL COMMUNICATION	
MATH xxx	3	MATHEMATICS (PLACEMENT TEST USED)	
HIST 101	4	WESTERN CIVILIZATION	
CHOICE	3	CHRISTIAN TRADITION	
PE 100/101	2	PHYSICAL EDUCATION	
CPTR 101	1	INTRODUCTION TO COMPUTERS	
CHOICE	6	HUMANITIES (ARTS, PHILOSOPHY)	
CHOICE	6†	NATURAL SCIENCES (CHEMISTRY, EARTH/SPACE, BIOLOGY, PHYSICS)	
CHOICE	6	SOCIAL SCIENCES (ECONOMICS, POLITICAL SCIENCE, PSYCHOLOGY, SOCIOLOGY)	
CHOICE	3	CRITICAL CONNECTIONS	
CHOICE	9	CULTURAL CONNECTIONS	
	2	VALUES, IDEAS, AND ARTS (CONVOCATIONS)	

† THREE OF THESE CREDIT HOURS WILL BE FULFILLED BY GENERAL PHYSICS II (REQUIRED).

II. THE PHYSICS MAJOR

COURSE NUMBER	SEMESTER HOURS	COURSE TITLE	36 HOURS
PHYS 210	4	GENERAL PHYSICS I	
PHYS 220	4	GENERAL PHYSICS II	
PHYS 301	3	ELECTRICAL THEORY & MEASUREMENTS	
PHYS 310	3	MODERN PHYSICS	
PHYS 320	3	ANALYTICAL MECHANICS (W)	

TAKE TWO OF THE FOLLOWING THREE COURSES

PHYS 410	3	QUANTUM PHYSICS
PHYS 420	3	ADVANCED ELECTRICITY AND MAGNETISM
PHYS 430	3	ADVANCED TOPICS IN MECHANICS

TAKE TWO OF THE FOLLOWING FIVE LABORATORY COURSES

PHYS 301L	1	ELECTRICAL MEASUREMENTS LABORATORY
PHYS 310L	1	MODERN PHYSICS LABORATORY
PHYS 320L	1	MECHANICS LABORATORY
PHYS 330L	1	OPTICAL PHYSICS LABORATORY
PHYS 420L	1	ADVANCED ELECTRICITY AND MAGNETISM LABORATORY

TAKE 11 SEMESTER HOURS OF OTHER PHYSICS COURSES

PHYS xxx	1-6	(COURSES LISTED ABOVE, BEYOND REQUIREMENTS)
PHYS 231	3	ELECTRONICS FOR SCIENTISTS
PHYS 330	3	OPTICAL PHYSICS
PHYS 340	3	THERMAL PHYSICS
PHYS 380/480	1-4	SPECIAL PROBLEMS
PHYS 385/485	1-4	SEMINAR

III. GENERAL ELECTIVES

38 HOURS

MATH 122 (CALCULUS II, 4 SEMESTER HOURS) IS A PREREQUISITE OF MOST PHYSICS COURSES. MOST PHYSICS MAJORS ELECT SEVERAL OTHER MATH COURSES, ESPECIALLY AS THEY PREPARE FOR GRADUATE SCHOOL. TYPICALLY THESE COURSES INCLUDE LINEAR ALGEBRA I, DIFFERENTIAL EQUATIONS, AND MULTIVARIABLE CALCULUS.

MANCHESTER COLLEGE GRADUATION REQUIREMENTS INCLUDE A TOTAL OF 128 SEMESTER HOURS, TO INCLUDE AT LEAST 96 IN RESIDENCE. QUESTIONS? PLEASE CALL OR E-MAIL DR. GREGORY W. CLARK AT 260-982-5071 OR GWCLARK@MANCHESTER.EDU.