

Name: _____

ID: _____

NORTH DAKOTA STATE UNIVERSITY

College of Science and Mathematics

Physics

Fall 2012

GENERAL EDUCATION REQUIREMENTS - 40 Credits Required

MAJOR REQUIREMENTS - 39 Credits Required

Course	Number	Course Title	Credits	Grade	Course	Number	Course Title	Credits	Grade
First Year Experience (F) 1 credit					MAJOR REQUIREMENTS - 39 Credits Required				
UNIV	189 ¹	Skills for Academic Success	1		PHYS	251R	Univ. Physics I Recitation	1	
Communication (C) 12 credits					PHYS	252R	Univ. Physics II Recitation	1	
ENGL	110	College Composition I	3		PHYS	350	Modern Physics	3	
ENGL	120	College Composition II	3		PHYS	330 or 455	Interm Mechanics (MSUM) OR Classical Mechanics (NDSU)	4 or 3	
COMM	110	Fundamentals of Public Speaking	3		PHYS	360	Modern Physics II	3	
ENGL		(Upper-Division Writing)	3		PHYS	361 or 370	Electromag. Theory (NDSU) OR Electromag. Theory (MSUM)	3 or 4	
Quantitative Reasoning (R) 3 credits					PHYS	370	Intro to Computational Physics	3	
MATH	165	Calculus I	4		PHYS	411/L	Optic for Scientists & Engineer/L	3/1	
Science & Technology (S) (One course w/ co-requisite lab) 10 credits					PHYS	462	Heat & Thermodynamics	3	
PHYS	251/L	Univ. Physics I/Lab	4/1		PHYS	485	Quantum Mechanics I	3	
PHYS	252/L	Univ. Physics II/Lab	4/1		PHYS	486	Quantum Mechanics II	3	
Humanities & Fine Arts (A) (Max of 3 cr in FA performance) 6 credits					PHYS	489	Sr. Project/Capstone	3	
			3		ELECTIVES - 6 Credits Required				
			3		PHYS	215	Research for Undergraduates	1-3	
Social & Behavioral Sciences (B) 6 credits					PHYS	413	Lasers for Scientists & Engineers	3	
			3		PHYS	415	Elements of Photonics	3	
			3		PHYS	463	Statistical Mechanics	3	
Wellness (W) 2 credits					PHYS	481	Intro to Solid State Physics	3	
			2		Courses at MSUM - (Tri-College)				
Cultural Diversity (D)					AST	365	Cosmology	3	
					AST	380	Celestial Mechanics	3	
Global Perspectives (G)					PHYS	410	Astrophysics	3	
					RELATED REQUIRED COURSES - 31 Credits Required				
COLLEGE REQUIREMENTS for a BS or BA Degree					MATH	166	Calculus II	4	
The College of Science & Mathematics requires an additional 6 credits in Humanities or Social Sciences for the BS degree and an additional 12 credits for the BA degree and two years proficiency of a modern foreign language.					MATH	265	Calculus III	4	
					MATH	266	Intro to Differential Equations	3	
					BA Degree Requirements:				
2nd Yr Lang Proficiency					400 Level MATH Elective: 6 Credits Required (488 & 489 recommended)				
HUM or Soc Sci			3		CHEMISTRY: 8 Credits Required (150 sequence recommended)				
HUM or Soc Sci			3		CHEM	150/160 or 121/121 Lab	Principles of Chemistry I and Lab or General Chemistry I and Lab	3/1	
HUM or Soc Sci			3		CHEM	151/161 or 122/122 Lab	Principles of Chemistry II and Lab or General Chemistry II and Lab	3/1	
HUM or Soc Sci			3		COMPUTER SCIENCE: 6 credits Required (may include ECE 173)				
BS Degree Requirements:					CSCI	160 or ECE 173	Computer Science I OR Intro to Computing	4 or 3	
HUM or Soc Sci			3		CSCI			3	
HUM or Soc Sci			3						
NOTES/COMMENTS - Additional Notes on Page Two									
¹ Students transferring in 24 or more credits do not need to take UNIV 189.									
A grade of 'C' or better is required for all PHYSICS and AST prefix courses.									
NR = Not Required IP = In Progress T = Transfer Credit									

UNIVERSITY GRADUATION REQUIREMENTS

ELECTIVES - Up to 5 Credits to Reach 122

Residency at NDSU (15 cr. @ NDSU):	36 Credits		NOTES/COMMENTS		
Credits at 4-year University:	60 Credits		Courses taken to fulfill gen ed, college and major requirements may NOT be taken P/F		
Courses numbered 300+ (Min. 15 cr @ NDSU):	37 Credits		C++ is recommended as a preparation for industrial employment while FORTRAN sees wide use in universities.		
Total Credits Required:	122 Credits		ALL COURSES ON THIS CURRICULUM ARE REQUIRED FOR THE MAJOR		