

2005-06 CATALOG

PHYSICS

B.S. Degree Requirements
130 Credits

GENERAL REQUIREMENTS

COMMUNICATIONS:- (9)

Engl 111X (3)____
Engl 211X or 213X (3)____
Comm 131X or 141X (3)____

PERSPECTIVES ON THE HUMAN CONDITION:- (18-22)

Complete the 6 courses listed **OR** 4 of those listed plus 2 semester length courses in a single AK Native or other non-English language or 3 semester length courses (9 credits) in American Sign Language.

Anth 100X/Soc 100X (3)____
Econ/PS 100X (3)____
Hist 100X (3)____
Art/Mus/Thr 200X or Hum 201X or
Ans 202X (3)____
Engl/FL 200X (3)____
BA 323X or Comm 300X or Just 300X or Nrm 303X or
Phil 322X or PS 300X (3)____
Language option as listed above:
_____ () _____ () _____ () _____

MATHEMATICS:- (24)

Math 200X (4)____ Math 202X (4)____
Math 201X (4)____ Math 302 (3)____
Complete 9 Math credits at the 300 level or above:
_____ () _____ () _____ () _____
_____ () _____ () _____ () _____

NATURAL SCIENCE:- (8)

Complete any two 4-credit Core Natural Science Courses (only one course may be PHYS)
_____ (4) _____ (4) _____

LIBRARY & INFO SKILLS:- (0-1)

LS competency test _____ OR
LS 100X or 101X (1)_____

UPPER DIVISION CREDITS:- (39)

Transfer Credits _____
UAF Credits (24)* _____
TOTAL TO DATE: _____
TO BE COMPLETED: _____

*a minimum of 24 UAF credits
(phys-1)

*Designates only grades of "C" or better may be used to fulfill this requirement.

*MAJOR REQUIREMENTS

Complete the following:- (53)

Phys 113 (1)____
Phys 211X (4)____+
Phys 212X (4)____+
Phys 213X (4)____+
Phys 311 (4)____
Phys 312 (4)____
Phys 313 (4)____
Phys 331 (3)____
Phys 332 (3)____
Phys 381 (3)____(W/O)
Phys 382 (3)____(W)
Phys 411 (4)____
Phys 412 (4)____
Phys 445 (4)____
Phys 462 (4)____

+May be used to meet one year sequence requirement.

ELECTIVES (for a total of 130 credits):**

_____ () _____ () _____
_____ () _____ () _____
_____ () _____ () _____
_____ () _____ () _____
_____ () _____ () _____

COMPLETE 2 DESIGNATED (W) COURSES AND 1 COURSE DESIGNATED (O) OR 2 COURSES DESIGNATED (O/2) AT THE UPPER DIVISION LEVEL:

_____ (W) _____ (W)
_____ (O) OR _____ (O/2) _____ (O/2)

Credits for core/general requirements:	60
Credits required for major:	53
Elective credits:	13-17
Total credits required for degree:	130

Physics BS schedules:

Begins with math placement in Math 108 - Trigonometry

First Year: Fall

CHEM 105X - General Chemistry I	4	
ENGL 111X - Intro to Academic Writing	3	
LS 101- Library Info and Research	1	
MATH 108 - Trigonometry	3	
PHYS 113 - Concepts of Physics	1	
Core Perspectives (1 of 6)	3	15

Second Year: Fall

ENGL 211X or 213X	3	
MATH 201X - Calculus II	4	
PHYS 211X - General Physics I	4	
Core Perspectives (3 of 6)	3	
Core Perspectives (4 of 6)	3	17

Third Year: Fall

MATH 302 - Differential Equations	3	
PHYS 311- Mechanics	4	
PHYS 331- Electricity and Magnetism	3	
PHYS 381- Physics Laboratory	3	13

Fourth Year: Fall

MATH 421 (or other 300+ level math elective)	4	
PHYS 313- Thermodynamics and Statistical Phys	4	
PHYS 411- Modern Physics	4	
PHYS 462- Geometrical and Physical Optics	4	16

First Year: Spring

CHEM 106X - General Chemistry II	4	
Comm 131X/141X	3	
MATH 200X - Calculus I	4	
Core Perspectives (2 of 6)	3	14

Second Year: Spring

MATH 202X - Calculus III	4	
MATH 314 (or other 300+ level math elective)	3	
PHYS 212X - General Physics II	4	
PHYS 213X - Elem. Modern Physics	4	15

Third Year: Spring

PHYS 312- Mechanics	4	
PHYS 332- Electricity and Magnetism	3	
PHYS 382- Physics Laboratory	3	
Core Perspectives (5 of 6)	3	13

Fourth Year: Spring

MATH 422 (or other 300+ level math elective)	4	
PHYS 412- Modern Physics	4	
PHYS 445- Solid St. Physics and Phys Elect	4	
Core Perspectives (6 of 6)	3	15

This totals 118 credits. Suggested electives for a total of 130 credits:

PHYS 220 (4)	CS 201 (3)	CS 202 (3)	MATH 305 (3)
MATH 308 (3)	MATH 310 (3)	MATH 412 (3)	ENGL 314 (3)

Begins with math placement in Math 200X - Calculus I

First Year: Fall

CHEM 105X - General Chemistry I	4	
ENGL 111X - Intro to Academic Writing	3	
LS 101- Library Info and Research	1	
MATH 200X - Calculus I	4	
PHYS 113 - Concepts of Physics	1	13

Second Year: Fall

ENGL 211X or 213X	3	
MATH 202X - Calculus III	4	
PHYS 212X - General Physics II	4	
Core Perspectives (1 of 6)	3	
Core Perspectives (2 of 6)	3	17

Third Year: Fall

MATH 421 (or other 300+ level math elective)	4	
PHYS 311- Mechanics	4	
PHYS 331- Electricity and Magnetism	3	
PHYS 381- Physics Laboratory	3	14

Fourth Year: Fall

PHYS 313- Thermodynamics and Statistical Phys	4	
PHYS 411- Modern Physics	4	
PHYS 462- Geometrical and Physical Optics	4	
Core Perspectives (5 of 6)	3	15

First Year: Spring

CHEM 106X - General Chemistry II	3	
Comm 131X/141X	3	
MATH 201X - Calculus II	4	
PHYS 211X - General Physics I	4	15

Second Year: Spring

MATH 302 - Differential Equations	3	
MATH 314 (or other 300+ level math elective)	3	
PHYS 213X - Elem. Modern Physics	4	
Core Perspectives (3 of 6)	3	
Core Perspectives (4 of 6)	3	16

Third Year: Spring

MATH 422 (or other 300+ level math elective)	4	
PHYS 312- Mechanics	4	
PHYS 332- Electricity and Magnetism	3	
PHYS 382- Physics Laboratory	3	14

Fourth Year: Spring

PHYS 412- Modern Physics	4	
PHYS 445- Solid St. Physics and Phys Elect	4	
PHYS 488- Undergraduate Research	1-3	
Core Perspectives (6 of 6)	3	12-14

This totals 116-118 credits. Suggested electives for a total of 130 credits:

PHYS 220 (4)	CS 201 (3)	CS 202 (3)	MATH 305 (3)
MATH 308 (3)	MATH 310 (3)	MATH 412 (3)	ENGL 314 (3)