COLLEGE OF SCIENCE & MATHEMATICS
MAJOR: COMPUTER SCIENCE & PHYSICS
ACADEMIC YEAR: 2013-2014
DEGREE TYPE: B.A. or B.S.
REQUIRED DEGREE CREDITS TO GRADUATE: 134

GENERAL EDUCATION REQUIREMENTS – 40 CREDITS

Lower Division Requirements – 37 Credits
First Year Experience (F) - 1 Credit
UNIV  189 Skills for Academic Success  1 cr
Students transferring in 24 or more credits do not need to take UNIV 189.

Communication (C) - 9 Credits
ENGL  110 College Composition I  3 cr
ENGL  120 College Composition II  3 cr
COMM  110 Fund of Public Speaking  3 cr

Quantitative Reasoning (R) - 3 Credits
MATH  165 Calculus I  4 cr

Science & Technology (S) - 10 Credits
PHYS  251/L University Physics I/Lab  4/1 cr
PHYS  252/L University Physics II/Lab  4/1 cr

Humanities & Fine Arts (A) - 6 Credits
Select from current general education courses www.ndsu.edu/registrar/gened/

Social & Behavioral Sciences (B) - 6 Credits
Select from current general education courses www.ndsu.edu/registrar/gened/

Wellness (W) - 2 Credits
Select from current general education courses www.ndsu.edu/registrar/gened/

Cultural Diversity (D)
Select from current general education courses www.ndsu.edu/registrar/gened/

Global Perspectives (G)
Select from current general education courses www.ndsu.edu/registrar/gened/

Upper Division Requirements - Writing – 3 Credits
Select from current general education courses www.ndsu.edu/registrar/gened/

COMPUTER SCIENCE MAJOR REQUIREMENTS – 35 CREDITS
• A grade of ‘C’ or better is required for all CSCI prefix courses.
CSCI  160  Computer Science I  4 cr
CSCI  161  Computer Science II  4 cr
CSCI  213  Modern Software Development  3 cr
CSCI  336  Theoretical Computer Science I  3 cr
CSCI  366  Files for Database Systems  3 cr
CSCI  372  Comparative Programming Languages  3 cr
CSCI  374  Computer Organization & Architecture  3 cr
CSCI  467  Algorithm Analysis  3 cr
CSCI  474  Operating Systems Concepts  3 cr
CSCI  Electives*  6 cr
*CSCI 313 and/or any 400-level CSCI course that is not already used.

PHYSICS MAJOR REQUIREMENTS – 43- 45 CREDITS (includes PHYS 251/L and 252/L)
• A grade of ‘C’ or better is required for all PHYS and AST prefix courses.
PHYS  171  Introductory Projects in Physics  1 cr
PHYS  251R  Univ. Physics I Recitation  1 cr
PHYS  252R  Univ. Physics II Recitation  1 cr
PHYS  350  Modern Physics  3 cr
PHYS  360  Modern Physics II  3 cr
PHYS  361 or  Electromagnetic Theory  3 or 4 cr
PHYS  370  Intro to Computational Physics  3 cr
PHYS  455 or  Classical Mechanics  3 or 4 cr
PHYS  462  Heat & Thermodynamics  3 cr
PHYS  485  Quantum Mechanics I  3 cr
PHYS  486  Quantum Mechanics II  3 cr
PHYS  Electives**  6 cr
**Choose from: PHYS 215, 411, 413, 415, 463, 481, 489 (unless used to satisfy project requirement) OR MSUM AST courses with departmental permission.

RELATED REQUIRED COURSES – 19- 20 CREDITS
MATH  129 or  Basic Linear Algebra  2 or 3 cr
        429  Linear Algebra  4 cr
MATH  166  Calculus II  4 cr
MATH  265  Calculus III  4 cr
MATH  266  Introduction to Differential Equations  3 cr
CSCI  222 or  Discrete Mathematics  3 cr
MATH  270  Introduction to Abstract Math  3 cr
CSCI  445 or  Software Projects  3 cr
PHYS  489  Physics Projects  3 cr

DEPARTMENT AND COLLEGE REQUIREMENTS:
• Except for courses offered only as pass/fail grading, no course may be taken Pass/Fail.
Bachelor of Science (BS) Degree – An additional 6 credits in Humanities or Social Sciences***
Bachelor of Arts (BA) Degree – An additional 12 credits Humanities and Social Sciences*** and proficiency at the second year level in a modern foreign language.
***Humanities and Social Sciences may be fulfilled by any course having the following prefix: ADHM, ANTH, ARCH, ART, CJ, CLAS, COMM, ECON, ENGL, FREN, GEOG, GERM, HDFS, HIST, LA, LANG, MUSC, PHIL, POLS, PSYC, RELS, SOC, SPAN, THEA, WGS, or any course from the approved list of general education courses in humanities and social sciences (general education categories A and B). These credits must come from outside the department of the student’s major.