COLLEGE OF SCIENCE & MATHEMATICS
MAJOR: MATHEMATICS & COMPUTER SCIENCE
ACADEMIC YEAR: 2013-2014
DEGREE TYPE: B.A. or B.S.
REQUIRED DEGREE CREDITS TO GRADUATE: 122

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
A one-credit lab must be taken as a co-requisite with a general education science/technology course unless
the course includes an embedded lab experience equivalent to a one-credit course. Select from current
general education courses www.ndsu.edu/registrar/gened/

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/

MATH MAJOR REQUIREMENTS – 32 CREDITS (includes MATH 165)
• A grade of ‘C’ or better is required in MATH & CSCI courses used toward the major.
MATH 166 Calculus II 4 cr
MATH 265 Calculus III 4 cr
MATH 266 Intro to Differential Equations 3 cr
MATH 270 Intro to Abstract Mathematics 3 cr
MATH 429 Linear Algebra 3 cr
MATH 430 Graph Theory 3 cr
MATH 420/421 or Abstract Algebra I & II 6 cr
450/451 Real Analysis I & II 6 cr
MATH 491 Capstone Seminar 2 cr

COMPUTER SCIENCE MAJOR REQUIREMENTS – 35 CREDITS
• A grade of ‘C’ or better is required in MATH & CSCI courses used toward the major.
CSCI 160 Computer Science I 4 cr
CSCI 161 Computer Science II 4 cr
CSCI 213 Modern Software Development 3 cr
CSCI 313 Software Development for Games 3 cr
CSCI 336 Theoretical Computer Science II 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 445 Software Projects Capstone 3 cr
CSCI 467 Algorithm Analysis 3 cr
CSCI 489 Social Implications of Computers 3 cr

RELATED REQUIRED COURSES – 17-19 CREDITS
Not counted as part of major credits
Statistics
STAT 367 Probability 3 cr
STAT 368 Statistics 3 cr

Additional Course (Choose 1)
A grade of ‘C’ or better is required in MATH & CSCI courses used toward the major.
CSCI 418 Simulation Models 3 cr
CSCI 453 Linear Programming and Network Flows 3 cr
MATH 436 Combinatorics 3 cr
MATH 488 Numerical Analysis I 3 cr

Lab Science Sequence (Choose one sequence)
* Science and Technology General Education
BIOL 126/L Human Biology/Lab* 3/1 cr
220/L Human Anatomy & Physiology I/Lab* 3/1 cr
CHEM 121/L General Chemistry I/Lab* 3/1 cr
122/L General Chemistry II/Lab* 3/1 cr
CHEM 150/160 Principles of Chemistry I/Lab* 3/1 cr
151/161 Principles of Chemistry II/Lab* 3/1 cr
MICR 350/L General Microbiology/Lab* 3/1 cr
352/L General Microbiology II/Lab 3/1 cr
PHYS 211/L College Physics I/Lab* 3/1 cr
212/L College Physics II/Lab* 3/1 cr
PHYS 251/L University Physics I/Lab* 4/1 cr
252/L University Physics II/Lab* 4/1 cr

DEGREE REQUIREMENTS– UP TO 3 CREDITS TO REACH 122

Degree requirements continued on page two.
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, 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.