

GRADUATION CHECKSHEET
COLLEGE OF SCIENCE

Bachelor of Science: Mathematics Major
 Applied Computational Mathematics Option
 Effective for Students Graduating in Calendar Year 2009

I. University Core Curriculum (30 – 36 credits): All courses used for the core curriculum must be on the approved University Core Curriculum list. Area 2 and Area 3 each requires 6 hours. Area 4 requires a single 8 hour laboratory sequence in Biology, Chemistry, Geology or Physics, but the 2 hour lab portion of this requirement is currently waived by the Provost. Mathematics majors must take Math 1205-1206 or its equivalent to satisfy the Area 5 core requirement.

Area 1: Writing and Discourse (6 credits) _____ 3 ()
 _____ 3 ()

Area 2: Ideas, Cultural Traditions and Values (6 credits) _____ 3 ()
 _____ 3 ()

Area 3: Society and Human Behavior (6 credits) _____ 3 ()
 _____ 3 ()

Area 4: Scientific Reasoning and Discovery (6 credits) _____ 3 ()
 _____ 3 ()

Area 5: Quantitative and Symbolic Reasoning (met by major)

Area 6: Creativity and Aesthetic Experience (3 credits) _____ 3 ()

Area 7: Critical Issues in a Global Context (3 credits) _____ 3 ()

For students entering prior to Fall 2005: Writing Intensive (6 credits) MATH 3034 3 ()
 _____ 3 ()

For students entering Fall 2005 or later: ViEWS Requirement (met by major)

Foreign languages: The equivalent of three years of one foreign language _____ 3 ()
 in secondary school. ¹ _____ 3 ()

II. Required Mathematics Courses (49 Credits – 3 credits of which also listed above)

A. Calculus

MATH 1205 3 ()
 MATH 1206 3 ()
 MATH 1224 2 ()
 MATH 2224 3 ()

B. Linear Algebra, ODE's

MATH 1114 2 ()
 MATH 2214 3 ()
 MATH 3144 3 ()

C. Proofs, Advanced Calculus

MATH 3034² 3 ()
 MATH 3214 3 ()
 MATH 3224 3 ()

D. Computational Mathematics

MATH 4445 3 ()
 MATH 4446 3 ()
 MATH 4414 3 ()

E. Fourier Series and PDE's

MATH 4425 3 ()

F. Mathematics Electives³

_____ 3 ()

MATH 4426

3 ()

3 ()

III. Applied Areas (15 credits)

A. Computer Science: CS 1044, CS 1054 or CS 1705 3 ()

B. Application Area (12 credits) (Must be approved by ACM Faculty Committee)

_____ 3 () _____ 3 ()
_____ 3 () _____ 3 ()

IV. Free Electives (sufficient to achieve 120 credit graduation requirement)

_____ _____
_____ _____
_____ _____
_____ _____

V. Outcomes Assessment

Each student is required to participate in the department's Outcomes Assessment procedures as determined by each year's Undergraduate Program Committee and approved by the Head.

VI. Satisfactory progress toward the B.S. in Mathematics

Upon having attempted 36 semester credits, the student must have completed 12 credits of the University Core. Upon having attempted 72 credits (including transfer, advanced placement, advanced standing, credit by examination and freshman rule), the student must have completed 24 credits of the University Core, and, in addition, must have completed Required Courses II. A and B above (except for MATH 3144) as well as MATH 3034. Upon having attempted 96 semester credits, students must have an in-major grade point average of 2.00 or above.

VII. Minimum hours required for graduation: 120 credits

VIII. Minimum GPA required for graduation

Students are required to have a 2.00 GPA and a 2.00 in-major GPA for graduation. All mathematics courses count toward the in-major GPA for this option except MATH 1015, 1016, 2015, 2016 and any undergraduate mathematics course with second digit a 5 or a 6 ie., MATH x5xx or MATH x6xx.

1 Students who completed three years of a single foreign language in high school have satisfied the University language requirement. Students who completed two years of a single foreign language in high school are strongly urged to complete the second semester (1106) of that foreign language very early in their program of study. Students who will be taking first and second semesters (1105-1106) of a foreign language are encouraged to schedule it in their freshman or sophomore years. NOTE: Students who completed fewer than two years of a single foreign language in high school must complete six semester hours of one foreign language at the college level and these six credits do not count toward the 120 hours required to graduate in the College of Arts and Sciences.

2 In order to enroll in 3034, a mathematics student must either (a) obtain a C or better in the final attempt of each of 1114, 1205, 1206, 1224, and (2224 or 2214); or (b) have at least a 2.2 GPA in these five courses with at most one grade of C- and no D's in the last attempt in each

3 The six hours of math electives must be chosen from Mathematics courses numbered between 4024 and 4454, with the following exceptions: (a) MATH 3124 can be used to satisfy three of the six hours required. (b) No more than 3 hours from MATH 4044, 4334, 4344 can be used to satisfy the six hour requirement.