MICHIGAN STATE UNIVERSITY | Lyman Briggs College

BACHELOR OF SCIENCE DEGREE
COMPUTATIONAL MATHEMATICS
COORDINATE MAJOR
FOR ADDITIONAL INFORMATION, PLEASE CONTACT THE MATHEMATICS DEPARTMENT

(1) UNIVERSITY REQUIREMENTS

Writing Requirement
Tier I: LB 133 4
Tier II: Satisfied by completing the Lyman Briggs College History, Philosophy and Sociology of Science and Senior requirements listed below.

Integrative Studies in Arts & Humanities (IAH)
IAH 201-210* 4
IAH 211-241* † 4

Integrative Studies in Social, Behavioral & Economic Sciences (ISS)
ISS 200-level course* 4
ISS 300-level course* ‡ 4

*National, International, & Multicultural Diversity
Students must include at least one "N" course and one "I" course in their Integrative Studies programs. A "D" course may meet either an "N" or an "I" requirement, but not both.

†Beginning Summer 2013, LB 331, 333, and 336 will fulfill the IAH "B" university requirement (IAH 211 or higher). Please consult your LBC advisor for specific details for your program.

‡Beginning Summer 2013, LB 332, 334, and 335 will fulfill the ISS 300-level university requirement. Please consult your LBC advisor for specific details for your program.

Mathematics, Biological and Physical Sciences
Satisfied by the Lyman Briggs College requirements in Mathematics, Biological and Physical Sciences (see below).

Minimum number of credits required: 120

Minimum cumulative and major grade point average: 2.0

(2) LYMAN BRIGGS COLLEGE REQUIREMENTS

Biological Sciences (9 cr.)
Complete ONE of the following groups of courses
(1) LB 144 & 145 9
(2) BS 161, 162, 171, & 172 10

Chemistry (8-9 cr.)
Complete ONE of the following groups of courses
(1) LB 171, 171L, 172, & 172L 9
(2) CEM 141, 142, & 161 8

Physics (8 cr.)
Complete ONE of the following groups of courses
(1) LB 273, 274 8
(2) PHY 183 & 184 8

Mathematics (6-7 cr.)
Complete ONE of the following groups of courses
(1) LB 118 & 119* 8
(2) MTH 132 & 133* 7

History, Philosophy & Sociology of Science (11-12 cr.)
LB 133 4
LB 330-336, 355, 490E; ENG 473A; HST 425; SOC 368 7-8

Senior Seminar (4 cr.)
LB 492 4

Students may consult with their Lyman Briggs advisor regarding a possible substitution for the Lyman Briggs Senior Seminar for this major.

*Mathematics courses also meet graduation requirements for major

(3) MAJOR REQUIREMENTS

Complete ALL of the following courses (34 cr.)

LB	220	Calculus III	4*
MTH	309	Linear Algebra	3
MTH	310	Abstract Algebra I and Number Theory	3
MTH	320	Analysis I	3
MTH	451	Numerical Analysis I	3
MTH	481	Discrete Mathematics I	3
MTH	496	Capstone in Mathematics (W)	3
CSE	231	Intro to Programming I	4
CSE	232	Intro to Programming II	4

*MTH 234 can be substituted for LB 220

Complete ONE of the following courses (3 cr.)

MTH	235	Differential Equations	3
MTH	340	Ordinary Differential Equations I	3

Complete ONE of the following courses (3 cr.)

MTH	452	Numerical Analysis II	3
MTH	482	Discrete Mathematics II	3

Complete ONE of the following courses (3 cr.)

CSE	331	Algorithms and Data Structure	3
CSE	440	Intro to Artificial Intelligence	3
MTH	360	Theory of Mathematical Interest	3
MTH	415	Applied Linear Algebra	3
MTH	416	Intro to Algebraic Coding	3
MTH	441	Ordinary Differential Equations II	3
MTH	452	Numerical Analysis II (If not used above)	3
MTH	457	Introduction to Financial Mathematics	3
MTH	472	Mathematical Logic	3
MTH	482	Discrete Mathematics II (if not used above)	3
STT	351	Probability and Statistics for Engineering	3
STT	430	Introduction to Probability and Statistics	3
STT	441	Probability and Statistics I: Probability	3
STT	455	Actuarial Models	3
STT	461	Computation in Probability and Statistics	3

Foreign Language Requirement

Complete the following courses (6-8 cr.)

FL	101	Foreign Language I	3-4
FL	102	Foreign Language II	3-4

Foreign language 1st year equivalency may be met through placement testing.

TE professional education sequence may be substituted for the 1st year foreign language requirement.
Students in the Teacher Certification program are required to complete MTH 330 or 432 and STT 430.

IMPORTANT: These guidelines are presented for planning purposes only. Students MUST consult a department advisor for confirmation of major requirements.