

Plan of Study – Bachelor of Science, Mathematics

This suggested plan of study is based on the assumption that the student enters the program ready to start the integrated science curriculum. If this is given, then the four tables below represent a possible outline of the four years of study at Louisiana Tech University. Delayed entry can delay this schedule, higher entry can accelerate it.

The first two years of study will be in the integrated science curriculum. MATH, BIO, CHEM and PHYS courses in the freshman and sophomore years must be taken in the order that is indicated. Other courses in the first two years are suggestions.

Quarter 1			Quarter 2			Quarter 3		
Course, Description, Prerequisites	taken	grade	Course, Description, Prerequisites	taken	grade	Course, Description, Prerequisites	taken	grade
Math 240 (3) Calculus up to limits and definition of derivative integrated with precalculus.			Math 241 (3) Single variable differential calculus with integrated precalculus.			Math 242 (3) Single variable integral calculus, elementary differential equations.		
Chem 100 (2) Measurement, atomic symbols, chemical formulas.			Chem 101 (2) Atomic and molecular structure, bonding mechanisms.			Chem 102 (2) Rates of reaction, equilibria, introductory electrochemistry.		
Bio 130 (3) Biomolecules, cells, metabolism, genetics, evolution, ecology.			Integr. Science Lab (Chem 103) (1) Experiments connecting chemistry and mathematics, plus biology.			Integr. Science Lab (Chem 104) (1) Experiments connecting chemistry, mathematics and biology.		
University Seminar 100 (1)			General Education Requirement (3) Suggested: ENGL 101			General Education Requirement (3) Suggested: ENGL 102		
Integr. Science Lab (Bio 131) (1) (suggested elective) Experiments connecting biology, chemistry, mathematics, physics.			General Education Requirement (3) Suggested: History 101/201			General Education Requirement (3) Suggested: History 102/202		

Quarter 4			Quarter 5			Quarter 6		
Course, Description, Prerequisites	taken	grade	Course, Description, Prerequisites	taken	grade	Course, Description, Prerequisites	taken	grade
Math 243 (3) Elementary statistics, multivariable integration.			Math 244 (3) Vector analysis.			Math 245 (3) Laplace transform, sequences, series, series solutions of differential equations		
Phys 201 (3) Newtonian mechanics.			Phys 202 (3) Electrodynamics.			MATH 307 (3) Foundations of Mathematics (suggested to be taken here) prereq.: MATH 243		
Integr. Science Lab (Phys 261) (1) Experiments connecting mechanics and mathematics with biological implications.			Integr. Science Lab (Phys 262) (1) Experiments connecting electrodynamics and mathematics with connections to chemistry.			General Education Requirement (3) Suggested: arts: Art 290, MUGN 290, Speech/Theatre 290, Health/PE 280		
General Education Requirement (3) Suggested: ENGL 201/202			General Education Requirement (3) Suggested: CSC 120			Curriculum Elective for minor/conc. (3) Course:		
General Education Requirement (3) Suggested: social science			General Education Requirement (3) Suggested: social science					

Quarter 7			Quarter 8			Quarter 9		
Course, Description, Prerequisites	taken	grade	Course, Description, Prerequisites	taken	grade	Course, Description, Prerequisites	taken	grade
Mathematics/Statistics Elective (3) Suggested: MATH 311 Discrete Mathematics prereq.: MATH 242			MATH 308 (3) Introduction to Linear Algebra prereq.: MATH 244			Mathematics/Statistics Elective (3) Suggested: STAT 405 Statistical Methods prereq.: MATH 242		
Mathematics/Statistics Elective (3) Suggested: MATH 407 Partial Diff. Eq. Prereq.: MATH 245			General Education Requirement (3) Suggested: ENGL 303			General Education Requirement (3) Suggested: Speech 110		
Curriculum Elective for minor/conc. (3) Course:			Curriculum Elective for minor/conc. (3) Course:			Curriculum Elective for minor/conc. (3) Course:		

Quarter 10			Quarter 11			Quarter 12		
Course, Description, Prerequisites	taken	grade	Course, Description, Prerequisites	taken	grade	Course, Description, Prerequisites	taken	grade
MATH 318 (3) Abstract Algebra prereq.: MATH 307			MATH 482 (previously MATH 340) (3) Introduction to Real Analysis prereq.: MATH 244 and 307 or 311			Mathematics/Statistics Elective (3) Suggested: MATH 405 Linear Algebra prereq.: MATH 308		
Curriculum Elective for minor/conc. (3) Suggestion: course in minor or MATH 414 (Numerical Analysis, prereq. MATH 245) Course:			Curriculum Elective for minor/conc. (3) Suggestion: course in minor or MATH 401, 415 Course:			Science Elective (3) Course:		
Foreign Language (3) Course:			Foreign Language (3) Course:			General Education Requirement (3), Social Science Course:		

General mathematics related career information: <http://www.ams.org/careers>

Research Experiences for Undergraduates:

http://www.nsf.gov/crssprgm/reu/list_result.cfm?unitid=5044 (mathematics)

http://www.nsf.gov/crssprgm/reu/reu_search.cfm (all)