

La Roche College
MATHEMATICS PROGRAM GUIDE
 DEGREE: Bachelor of Science Department: Mathematics

Student Name _____
 I.D. Number _____

___ First Year Student
 ___ Change of Major

___ Transfer
 ___ Readmit

Unofficial Eval Completed by/date: _____

This is the **unofficial evaluation** of your credits to date including transfer credits (if applicable) in your chosen major. **This evaluation is official when all official transcripts for all previous college work are received; and reviewed and approved for transferability by the Registrar's Office.** Beginning with your first semester of enrollment, your Degree Audit Report in My.LaRoche will automatically track your progress toward your degree, and guide you in planning future class schedules. Review your updated Degree Audit Report with your advisor prior to registering each semester.

PURPOSE: The major in Mathematics introduces students to a field whose origins date from the dawn of history and whose ever-increasing pervasiveness and importance in science, engineering, business and finance renders it a veritable master-key in understanding the world about us. The degree in mathematics opens many doors to students upon graduation, to a job in business, industry or government, to certification as a teacher, to graduate study in mathematics, statistics and computer science, among many other fields, or to a professional school such as in business or law. Moreover, the major in mathematics serves as a gateway not only to a job and career, but also to a world where logic and imagination combine to create timeless beauty and truth.

What distinguishes the BS from the BA in Mathematics is the requirement of 7 credits in Computer Science and that of 4 additional credits in Physics. Although the number of general elective credits is thereby reduced by 11, the remaining 21 credits could still allow for a minor in many fields.

- REQUIREMENTS:** To successfully complete the Mathematics major, the following coursework is required:
- 65 credits as listed under "Major Component/Requirements" (46 in Mathematics, 7 in Computer Science and 12 in Physics)
 - 37 CORE credits
 - 18 General Elective Credits
 - A minimum number of 120 credits are required for degree, the last 30 of which, and 50% of the major must be earned at La Roche College. (Developmental course work does not count toward the minimum number of required credits for graduation.)

	<u>Credits</u>	<u>Transfer Course #/Comments</u>
<u>MAJOR COMPONENT/REQUIREMENTS: 65 CREDITS</u>		
<u>Mathematics Component</u>		
____ MATH1032 Analytic Geometry & Calculus I	4	Prerequisites: MATH1010 or equivalent, MATH1023
____ MATH1033 Analytic Geometry & Calculus II	4	Prerequisite: MATH1032
____ MATH2030 Analytic Geometry & Calculus III	4	Prerequisite: MATH1033
____ MATH2031 Ordinary Differential Equations	3	Prerequisite: MATH2030
____ MATH2050 Discrete Mathematics I	3	Prerequisite: MATH1033
____ MATH2051 Discrete Mathematics II	3	Prerequisite: MATH2050
____ MATH3015 Linear Algebra	3	Prerequisite: MATH2030
____ MATH3035 Complex Variables	3	Prerequisite: MATH2031
____ MATH3040 Probability & Statistics I	3	Pre- or Co- requisite: MATH2030
____ MATH3045 Probability & Statistics II	3	Prerequisite: MATH3040
____ MATH4003 History of Mathematics	3	Prerequisite: MATH2031
____ MATH4015 Modern Abstract Algebra	3	Prerequisite: MATH2031; Co-requisite: MATH3015
____ MATH4020 Geometry	3	Prerequisite: MATH2031
____ MATH4035 Real Analysis	3	Prerequisite: MATH2031
____ MATH4090 Junior-Senior Seminar	1	Prerequisite: Junior/Senior Status

Computer-Science Component

_____ CSCI1002	Introduction to Computer Science	3	_____
_____ CSCI1010	Programming I	3	Prerequisite: CSCI1002
_____ CSCI1010L	Programming I Lab	1	The lab component of CSCI1010

Physics Component

_____ PHYS1032	General Physics I	3	Recommended prerequisite: MATH1033
_____ PHYS1032L	General Physics I Lab	1	The lab component of PHYS1032
_____ PHYS1033	General Physics II	3	Prereq: PHYS1032; recommended prereq: MATH2030
_____ PHYS1033L	General Physics II Lab	1	The lab component of PHYS1033
_____ PHYS2030	General Physics III	3	Prerequisite: PHYS1033
_____ PHYS2030L	General Physics II Lab	1	The lab component of PHYS2030

ACADEMIC CORE CURRICULUM: 37 CREDITS

Fundamentals: 129 Credits

		<u>Credits</u>	<u>Transfer Course #/Comments</u>
_____ ENGL1011	College Writing I	3	_____
_____ ENGL1012	College Writing II	3	Prerequisite ENGL1011
_____ ISTC1005	Practical Computer Applications	3	_____
_____ MATH1010	College Algebra	3	_____

La Roche Experience: 4 Credits

_____ LRCX1001	Introduction & History	1	_____
_____ LRCX1002	Diversity/Discrimination	1	_____
_____ LRCX2001	Regions of Conflict	1	_____
_____ LRCX2002	Economic Justice	1	_____

Community/Global: 6 credits (or 6 credits in same Foreign Language for majors that do not require a language)

_____ COMM	Community	3	_____
_____ GLBL	Global	3	_____

Select Courses: 15 credits

18 credits are required with study within each of the following domains. Students can fulfill six domains with four courses (earning a total of 12 credits) by completing "dual-domain" SELECT courses SLDD. Student earns 3 credits only for each dual-domain course. The "lost" 3-6 credits can be fulfilled through a major or general elective. **PLEASE NOTE: Some "Select Courses" may be filled by meeting Major Requirements and if so, will be annotated as such.**

_____ SELECT Aesthetics (SLAE)		3	_____
_____ SELECT History (SLHS)		3	_____
_____ SELECT Literature (SLLT)		3	_____
_____ SELECT Religion/Philosophy (SLRS)		3	_____
_____ SELECT Science (SLSC)		0	Fulfilled in major
_____ SELECT Social and Cultural Systems (SLSO)		3	_____

GENERAL ELECTIVES: 18 credits

General electives may be applied to the requirements of a second major, or a minor, or a certificate program. In the past, students have often combined a major in mathematics and a minor in either computer science or finance.

Transfer Course # Credits

_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

FOR REGISTRAR USE ONLY:	<u>TOTAL</u>	<u>Completed</u>	<u>Need</u>	<u>COMMENTS:</u>
Major Component	65	_____	_____	_____
CORE	37	_____	_____	_____
General Electives	18	_____	_____	_____
Accepted in Transfer	_____	_____	_____	_____
La Roche College Credit	_____	_____	_____	_____
Total	120	_____	_____	_____

Registrar Signature _____

Date _____

Advisor Signature _____

Date _____

(When signed by Advisor, all required coursework/credits have been completed for graduation.)