La Roche
COLLEGE

La Roche College
COMPUTER SCIENCE PROGRAM GUIDE
Degree: Bachelor of Science   Department: Computer Science

Student Name _____   ___ **First-Year Student**   ___ **Transfer**
I.D. Number   _____   ___ **Change of Major**   ___ **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:	A major in Computer Science is meant to prepare students for jobs and careers in the computer industry or for further study at the graduate level in computer science, telecommunications, or related fields, or to provide students with a background in a fundamental science.
REQUIREMENTS:	To successfully complete the Computer science major, the following coursework is required:

- 55 Major Component credits (33 Computer Science, 14 Mathematics, 8 Physics)
- 9 Computer Science elective credits
- 37 Core credits
- 19 General Electives
- A <u>minimum</u> of 120 credits is 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.)

COMPUTER SCIENCE COMPONENT: 34 CREDITS

		Credits	Transfer Course #/Comments
___CSCI1002	Introduction to Computer Science	3	
___CSCI1010	Programming I	3	Prerequisite: CSCI 1002 or SLSC1005
___CSCI1010L	Programming I Lab	1	Co-requisite CSCI 1010
___CSCI 2010	Programming II	3	Prerequisite: CSCI1010/L
___CSCI2010L	Programming II Lab	1	Co-requisite CSCI2010
___CSCI2020	Algorithm Analysis	3	Prerequisite: CSCI 2010/L, MATH 2050
___CSCI2025	Systems Programming	3	Prerequisite: CSCI 2010/L
___CSCI2025L	Systems Programming Lab	1	Co-requisite: CSCI 2025
___CSCI2035	Computer Organization & Design	3	Prerequisite: CSCI 2025
___CSCI2035L	Computer Organization & Design Lab	1	Prerequisite: CSCI 2025; Co-requisite CSCI2035
___CSCI2055	Database Systems Theory **OR**	3	Prerequisite: CSCI 1010/L
____ISTC2045	Database Management Systems		Prerequisite: CSCI 1002
___CSCI3040	Operating Systems	3	Prerequisite: CSCI 2035
___CSCI4098	CS Capstone Experience I	3	Prerequisite: Junior/Senior Status
___CSCI4099	CS Capstone Experience II	3	Prerequisite: CSCI4098 Capstone I

COMPUTER SCIENCE ELECTIVES: SELECT ANY 3 COURSES (9 CREDITS)

___CSCI3042	Intro to Computer Security	3	
___CRIM4030	Computer Forensics Investigation	3	
___CSCI4xxx	Any 4000-level CS course	3	
___ISTC3005	Intro to Intellectual Property	3	Prerequisite: Junior/Senior Status
___ISTC3008	Web Page Usability & Programming	3	Prerequisite: CSCI 2010, CSCI 2055
___ISTC3015	Human-Computer Interaction	3	Prerequisite: CSCI1010, CSCI 2055 or ISTC 2045
___CSCI4051	Internship	3	

MATHEMATICS COMPONENT: 14 CREDITS

___MATH1032	Analytical Geometry & Calculus I	4	*Prerequisite: Math Placement Exam or MATH1010*
___MATH1033	Analytical Geometry & Calculus II	4	*Prerequisite: MATH 1032*
___MATH1040	Probability & Statistics	3	*Prerequisite: MATH 1010*
___MATH2050 OR	Discrete Mathematics I	3	*Prerequisite: MATH 1032*
CSCI2017	Discrete Structures		*Prerequisite: MATH1010*

PHYSICS COMPONENT: 8 CREDITS

___PHYS1032	Physics I	3	_____
___PHYS1032L	Physics I Lab	1	*Co-requisite PHYS 1032*
___PHYS1033	Physics II	3	_____
___PHYS1033L	Physics II Lab	1	*Co-requisite PHYS 1033*

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ACADEMIC CORE COURSES – 37 CREDITS

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Fundamentals: 12 credits

___ISTC1005	Practical Computer Applications	3	_____
___ENGL1011	College Writing I	3	_____
___ENGL1012	College Writing II	3	_____
___MATH1010	College Algebra	3	_____

La Roche Experience: 4 credits

___LRCX1001	Intro & History	1	_____
___LRCX1002	Diversity/Discrimination	1	*Prerequisite: LRCX 1001*
___LRCX2001	Regions of Conflict	1	*Prerequisite: LRCX 1001*
___LRCX2002	Economic Justice	1	*Prerequisite: LRCX 1001*

***Note to transfer students:** Students transferring more than 15 credits must attend an LRC Experience orientation session in lieu of LRCX1001. They will be expected to complete the remainder of the LRC Experience series of courses*

SELECT: *The Select courses are designed to introduce students to different disciplines of study. Students select courses within each of the domains below. Computer Science majors are exempt from the Select Science requirement as this domain is fulfilled by the major. Note: The remaining five domains can be fulfilled with only four courses (earning a total of 12 credits) by completing "dual-domain" SELECT courses (SLDD). Student earns 3 credits only for each SLDD course. An additional major or general elective course may be necessary to meet the degree minimum credit requirements.*

___SELECT Aesthetics (SLAE)_____	3	_____
___SELECT Religion/Philosophy (SLRS)_____	3	_____
___SELECT Literature (SLLT)_____	3	_____
___SELECT History (SLHS)_____	3	_____
___SELECT Science		Fulfilled by major
___SELECT Soc/Cult (SLSO)_____	3	*ISTC 2005 IT: A Global Perspective: recommended*

All students at LRC are required to have been exposed to a modern language either here or in high school. Any student who did not have a modern language in high school must take one modern language course to graduate and can count this as their SELECT Social/Cultural course. Bilingual and adult students are exempt from this requirement. Other than this, SELECT course substitutions may be made only in extreme circumstances and must be approved in advance by completion of a Core substitution form.

Community/Global: 6 *credits required*. **(or 6 credits in same Foreign Language)**

___COMM___ _____	3	_____
___GLBL____ _____	3	_____

General Electives: 19 Credits: *Electives may be used to fulfill a second major, minor or certificate program. Recommended programs are: Accounting, Computer Information Technology, Computer Security and Forensics, Criminalistics, Criminal Justice, English, Information Technology, Management, Marketing, and Web Design and Development. A minor in Mathematics is highly recommended for graduate study in CS.*

Course #	Credits	Course #	Credits
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

_____ _____

NOTE TO TRANSFER STUDENTS: Credits earned at technical schools may not be accepted for upper-level Computer Science courses. All transfer decisions will be determined by the Department Chair.

FOR REGISTRAR USE ONLY	TOTAL	Completed	Need	Comments:
Major Component	55	_____	_____	_____
Major Electives	9	_____	_____	_____
CORE	37	_____	_____	_____
General Electives	19	_____	_____	_____
Accepted into transfer	_____	_____	_____	_____
La Roche College Credit	_____	_____	_____	_____
TOTAL	**120**	_____	_____	_____

Registrar's Signature _____ *Date* _____

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

BACHELOR OF SCIENCE IN COMPUTER SCIENCE
RECOMMENDED FULL-TIME COURSE SEQUENCE

YEAR I

Fall Semester

		Credits	Comments
___CSCI1002	Introduction to Computer Science	3	_____
___ISTC1005	Practical Computer Apps.	3	_____
___ENGL1011/L	College Writing I/Lab	3	_____
___MATH1032	Analytical Geometry & Calculus I	4	*Prerequisite: Math Placement Exam or MATH1010_____*
___LRCX1001	LRC Experience: Intro & History	1	_____
		14	

Spring Semester

___CSCI1010/L	Programming I/Lab	4	*Prerequisite: CSCI1002 or SLSC1005_____*
___ENGL1012	College Writing II	3	*Prerequisite: ENGL1011_____*
___MATH1033	Analytical Geometry & Calculus II	4	*Prerequisite: MATH1032_____*
___SELECT	(AE, HS, LT, RS, SO)	3	_____
___LRCX1002/2001/2002		1	_____
		15	

YEAR II

Fall Semester

		Credits	
___CSCI2010/L	Programming II/Lab	4	*Prerequisite: CSCI1010/L_____*
___CSCI2055/ISTC2045	Database course*	3	*Prerequisite: CSCI1010/L_____*
___SELECT	(AE, HS, LT, RS, SO)	3	_____
___MATH2050	Discrete Mathematics I*	3	*Prerequisite: MATH1032_____*
_____	General Elective	3	_____
		16	

Spring Semester

___CSCI2020	Algorithm Analysis	3	*Prerequisite: CSCI2010/L, MATH2050_____*
___MATH1040	Probability & Statistics	3	*Prerequisite: MATH1010_____*
___SELECT	(AE, HS, LT, RS, SO)	3	_____
_____	General Elective	3	_____
_____	General Elective	3	_____
___LRCX1002/2001/2002		1	_____
		16	

YEAR III

Fall Semester

		Credits	
___CSCI2025/L	Systems Programming/Lab*	4	*Prerequisite: CSCI2010/L_____*
___PHYS1032/L	Physics I/Lab	4	_____
___COMM____	_____	3	_____
_____	General Elective	3	_____
		14	

Spring Semester

___CSCI2035/L	Computer Organization & Design*	4	*Prerequisite: CSCI2025_____*
___PHYS1033/L	Physics II/Lab	4	*Prerequisite: PHYS1032_____*
_____	CS Elective	3	_____
_____	General Elective	3	_____
___LRCX1002/2001/2002		1	_____
		15	

YEAR IV

Fall Semester

		Credits	
___CSCI3040	Operating Systems*	3	*Prerequisite: CSCI2035_____*
___CSCI4098	CS Capstone I*	3	*Prerequisite: Junior/Senior Status_____*
___SELECT	(AE, HS, LT, RS, SO)	3	_____
___GLBL____	_____	3	_____
_____	CS Elective	3	_____
		15	

Spring Semester

___CSCI4099	CS Capstone II*	3	*Prerequisite: CSCI4098_____*
_____	CS Elective	3	_____
___SELECT	(AE, HS, LT, RS, SO)	3	_____
_____	General Elective	4	_____
_____	General Elective	3	_____
		16	

*These courses are offered only every 2 years. You should take these courses at your earliest opportunity after fulfilling prerequisites.

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