Name	ID#	Date

Planning Sheet: BACHELOR OF SCIENCE in COMPUTER SCIENCE

(Effective Fall 2012. This major consists of 16 courses)

Computer Science Core Requirements:

Term	Grade	Course #	AugCore	Title
____	____	CSC 160		Introduction to Computer Science & Communication (Prereq: MPG 3)
____	____	CSC 170		Introduction to Programming (Prereq: Waived from or passed GST 100, MPG 3, & CSC 160; MAT 171 recommended)
____	____	CSC 210		Data Structures (Prereq: Waived from or passed GST 100, MPG 4, CSC 170, MAT 145 or 171)
____	____	CSC 240		Introduction to Networking & Communications (Prereq: CSC 160 & MPG 3)
____	____	CSC 320		Algorithms (Prereq: Waived from or passed GST 100, MPG 4, CSC 210, & MAT 145 or 171)
____	____	CSC 345		Principles of Computer Organization (Prereq: CSC 210 and MPG 4)
____	____	CSC 385		Formal Logic and Computation Theory (Prereq: CSC 210 and MAT 145 or MAT 171)
____	____	CSC 450		Programming Languages & Compilers I (Prereq: ENL 111 or 112 or HON 111, CSC 320 and CSC 385 or concurrent registration)
____	____	CSC 451	KC	Programming Languages & Compilers II (Prereq: CSC 345, 385 & 450)
____	____	MAT 145	NSM	Calculus I (Prereq: MPG 4)
____	____	MAT 146	NSM	Calculus II (Prereq: MAT 145)

Select & complete two (2) of the following four (4) MAT courses:

____	____	MAT 245		❒ Calculus III (Prereq: MAT 146)
____	____	MAT 246		❒ Linear Algebra (Prereq: MAT 245 or MAT 271)
		MAT 271		❒ Discrete Mathematical Structures (Recommended. Prereq: Waived from or passed GST 100; MAT 146 or MAT 145 and one of MAT 163, MAT 164, MAT 252 or MAT 287)
		MAT 369		❒ Modeling & Differential Equations in Biological and Natural Sciences (Prereq: MAT 245, ENL 111 or 112 or HON 111, and COM 111 or 115 or MAT 201)

Computer Science Electives (BS option): Complete 3 courses from the following (at least 2 must be upper division)

____	____	CSC 272		❒ UNIX & C (Prereq: CSC 170 or other programming language course)
____	____	CSC 352		❒ Database Management and Design (Prereq: CSC 210)
____	____	CSC 353		❒ Database Architecture and Design (Prereq: CSC 210, Recommended CSC 352)
____	____	CSC 373		❒ Symbolic Programming & Artificial Intelligence (Prereq: Waived from or passed GST 100 and CSC 210)
____	____	CSC 399	AE	❒ Internship (P/N grading only)
____	____	CSC 431		❒ Introduction to AI Robotics (Prereq: CSC 210)
____	____	CSC 440		❒ Advanced Networking & Operating Systems (Prereq: CSC 240 & CSC 345)
____	____	CSC 457		❒ Computer Graphics (Prereq: CSC 210 & MPG 4)
____	____	CSC 495		❒ Advanced Topics in Computer Science (Prereq: instructor consent) (Refer to instructor to determine if topic satisfies core or graduation requirements)
____	____	CSC 499		❒ Independent Study/Research
____	____	MAT 355		❒ Numerical Mathematics and Computation (Prereq: MAT 146 and CSC 160, ENL 111 or 112 or HON 111, and COM 111 or 115 or MAT 201)
____	____	MIS 475		❒ Systems Analysis & Design (Prereq: MIS 260, 270, and 375)
____	____	PHY 261		❒ Electronics (Prereq: MAT 146 and PHY 116 or PHY 122)

Notes:

- **Keystone:** CSC 451 will satisfy the senior Keystone requirement.
- **GPA: Students must earn grades of 2.0 or above in each course applicable to the Computer Science major.** Students must also earn a minimum overall grade point average of 2.0 to qualify for graduation.
- **Abbreviation Key:** ML = Modern Language; SC = Signature Curriculum; EM = Engaging Minneapolis; AE = Augsburg Experience; KC = Senior Keystone Course; NSM = Natural Science & Mathematics - no lab; NSM-L = Natural Science & Mathematics-with lab; SBS = Social & Behavioral Science; FA = Fine Arts; HUM = Humanities

See back for information on graduation skills requirements

Planning Sheet: GRADUATION SKILLS REQUIREMENTS

These requirements were implemented for Fall 2008. Please talk with your faculty advisor for information.

Graduation skills, including the Quantitative Reasoning requirements, are completed as follows. Graduation skills in Critical Thinking, Writing, Speaking, and Quantitative Reasoning are required for graduation. Critical Thinking is embedded in all majors. Plans for completion of other graduation skills are determined by the major department. Consult your department chair or faculty advisor to select appropriate courses to meet the Quantitative Reasoning (QR) graduation skill. QR is satisfied by completing one (1) Quantitative Foundational course (QF) and one (1) Quantitative Application course (QA), or one (1) combined QFA course. The most current information on Graduation Skills can be found in the Augsburg College catalog at www.augsburg.edu/catalog/.

Transfer students must consult an advisor about potential adjustments to their course requirements to fulfill each graduation skill.

Designated Major Course	GRADUATION SKILLS – Computer Science B.S.		Completed
Embedded in major	**Writing Requirements** TWO (2) Writing courses		
Embedded in major			
COM 111 or 115 or consult your faculty advisor	**Speaking** One (1) Speaking course		
Designated Major Course	**QUANTITATIVE REASONING**		Completed
Embedded in major	**Quantitative Foundations & Applications** One (1) QFA course (Prereq: MPG3)	QFA course	
– OR –			
Embedded in major	**Quantitative Foundations and Quantitative Applications** One (1) QF course (Prereq: MPG 3) **and** one (1) QA course	QF course	
Embedded in major		QA course	

Graduation Tally Checklist

These requirements were implemented in April 2003 and remain in effect until further notice.

Requirement	Progress Towards Completion	
Cumulative Course Credits ▪ Minimum number of course credits needed for graduation = **32** ▪ At least 8 credits completed at Augsburg. ▪ 6 of last 8 credits completed in residence. ▪ Second degree – minimum of 8 credits completed in residence.	Transfer Credits Earned	
	+ Aug. Credits Earned	
	= Total Credits Earned	
	# Credits Needed	

Grade Point Average (GPA) ▪ Minimum 2.0 GPA required in major, minor, & overall. ▪ Some majors require higher GPA. ▪ Latin Honors GPA requirements: ○ Summa cum laude: 3.9-4.0 ○ Magna cum laude: 3.80-3.89 ○ Cum laude: 3.60-3.79	Cumulative GPA	
	Major 1 GPA	
	Major 2 GPA	
	Minor GPA	

Other Limits	Minimum/Maximum	Your Total
Overall maximum courses graded Pass/No Pass (P/N) ▪ Grade of 2.0 or above required to Pass and earn credit for course. ▪ Maximum of 2 of 6 credits P/N may be in major.	Maximum of 6	
Major Courses graded Pass/No Pass (P/N)	Maximum of 2	
Latin Honors courses graded Pass/No Pass (P/N)	Maximum of 2	
Latin Honors traditionally graded courses	Minimum of 14	
Internships	Maximum of 4	
Independent/Directed Studies	Maximum of 2	

Sample Four-Year Plan (B.S.)

This is a possible plan for the Bachelor of Science in Computer Science, though there are many configurations of courses. Students may want to consider a second major or minor. Please see a Computer Science faculty for more information.

Freshman Year

Fall Term (4)	Spring (4)
CSC 160	CSC 170
MAT 145	MAT 146
ENL 111	REL 100
LAF Course	LAF Course
AugSem	HPE 001

Sophomore Year

Fall Term (4)	Spring (4)
CSC 210	CSC 240
REL 200	CSC 320
MAT Elective	MAT Elective
LAF Course	LAF Course

Junior Year

Fall Term (4)	Spring (4)
CSC 345	CSC 385
COM 115	CSC Elective
LAF Course	Modern Language
Modern Language	Major/Minor or Elective

Senior Year

Fall Term (4)	Spring (4)
CSC 450	CSC 451
CSC Elective	CSC Elective
LAF Course	Major/Minor or Elective
Major/Minor or Elective	Major/Minor or Elective
HPE Skill	

Notes:

- COM 111 or COM 115 will meet a Humanities requirement in the Core Curriculum.
- Approved MAT Electives are: MAT 245, MAT 246, MAT 247, or MAT 271.
- The Computer Science Department has approved CSC electives, of which 2 of 3 must be upper division.

What can I do with a Computer Science major?

The following jobs are some of the positions that Computer Science majors could pursue. Some may require professional or graduate school or certification.

Chief Information Officer	CIA Agent
Computer Programmer	Consultant
Database Manager	Entrepreneur
FBI Agent	Network Administrator
Network Analyst	Professor
Researcher	Software Design
Software Engineer	Systems Analyst
Systems Development	Teacher
Web Designer	Webmaster

For more information on possible careers in computer science, please talk with your faculty advisor, and also the Center for Service, Work and Learning.

Computer Science Department

The Computer Science Department is located on the second floor of George Sverdrup Hall. You may contact the following faculty for more information on the computer science major requirements, and also check out the website at: www.augsburg.edu/cs.

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