



2012-2013 PETITION/PROGRAM SHEET

Degree: Bachelor of Science

Major: Computer Science

About This Major . . .

Computer science is the study of algorithms and the issues involved in implementing them. The program includes core courses in algorithms, data structures, logic, programming languages, software design, and advanced mathematics. Electives in web page design, artificial intelligence, robotics, computer graphics, video game design, databases, security, multimedia, and networks are also possible. The program and course offerings are constantly evolving to keep up with the latest changes in the Computer Science field. The small class sizes allow for close interaction between faculty and students, with independent research projects and internships available.

A wide variety of exciting professional and academic opportunities exist for graduates of computer science including software engineering, software testing, computational finance, game design, computer graphics, robotics, artificial intelligence, internet systems and technology, security, hardware development, animation, medicine, biotechnology, business management and consulting, modeling, as well as master's and doctoral studies in computing-related fields. Our graduates have continued on to advanced degrees in top-tier schools and are employed at IBM, Microsoft, Sun, Lockheed-Martin, and many other technical companies.

For more information on what you can do with this major, go to http://www.coloradomesa.edu/career/whatmajor.html and/or http://www.coloradomesa.edu/cs .

POLICIES:

- 1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the Catalog for a complete list of graduation requirements.
2. You must turn in your "Intent to Graduate" form to the Registrar's Office by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December.
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.
4. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature.
5. Finally, the Department Head or the department administrative assistant will take the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
6. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
7. NOTE: The semester before graduation, you will be required to take a Major Field Achievement Test (exit exam).

NAME: \_\_\_\_\_ STUDENT ID # \_\_\_\_\_

LOCAL ADDRESS AND PHONE NUMBER: \_\_\_\_\_

\_\_\_\_\_ ( ) \_\_\_\_\_

I, (Signature) \_\_\_\_\_, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

Signature of Advisor \_\_\_\_\_ Date \_\_\_\_\_ 20\_\_

Signature of Department Head \_\_\_\_\_ Date \_\_\_\_\_ 20\_\_

Signature of Registrar \_\_\_\_\_ Date \_\_\_\_\_ 20\_\_

**Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.**

**Degree Requirements:**

- 120 semester hours total (A minimum of 28 taken at CMU in no fewer than two semesters).
- 40 upper division credits (A minimum of 15 taken at the 300-400 course levels within the major at CMU).
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- 2.00 cumulative GPA or higher in all CMU coursework
- 2.50 cumulative GPA or higher in coursework toward the major content area. No more than one "D" may be used in completing major requirements.
- When filling out the program sheet a course can be used only once.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

**GENERAL EDUCATION REQUIREMENTS** (31 semester hours)

See the current catalog for a list of courses that fulfill the requirements below. If a course is on the general education list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the general education requirement.

Course No	Title	Sem.hrs	Grade	Term/Trns
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**English** (6 semester hours, must receive a grade of "C" or better and must be completed by the time the student has 60 semester hours.)

ENGL 111	English Composition	3	_____	_____
ENGL 112	English Composition	3	_____	_____

**Math:** (3 semester hours, must receive a grade of "C" or better, must be completed by the time the student has 60 semester hours.)

MATH 151	Calculus I	5*	_____	_____
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\*3 credits apply to the General Ed requirements and 2 credits apply to Foundation Courses

**Humanities** (3 semester hours)

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\_\_\_\_\_

**Social and Behavioral Sciences** (6 semester hours)

\_\_\_\_\_

\_\_\_\_\_

**Natural Sciences** (7 semester hours, one course must include a lab)

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\_\_\_\_\_

\_\_\_\_\_

**History** (3 semester hours)

HIST \_\_\_\_\_

Course No	Title	Sem.hrs	Grade	Term/Trns
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**Fine Arts** (3 semester hours)

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\_\_\_\_\_

**OTHER LOWER DIVISION REQUIREMENTS** (6 semester hours)

**Kinesiology** (3 semester hours)

KINE 100	Health and Wellness	1	_____	_____
KINA 1	_____	1	_____	_____
KINA 1	_____	1	_____	_____

**Applied Studies** (3 semester hours)

\_\_\_\_\_

\_\_\_\_\_

**FOUNDATION COURSES** (18 semester hours):

CSCI 111	CS1: Foundations of Computer Science	4	_____	_____
CSCI 112	CS2: Data Structures	4	_____	_____
MATH 151	Calculus I	2*	_____	_____
MATH 152	Calculus II	5	_____	_____
STAT 200	Probability & Statistics	3	_____	_____

**COMPUTER SCIENCE MAJOR REQUIREMENTS**

(41-42 semester hours) A 2.50 GPA is required in the major courses.

No more than one "D" may be used in completing major requirements.

CSCI 241	Computer Architecture & Assembly Language	4	_____	_____
CSCI 250	CS3: Intro to Algorithms	3	_____	_____
CSCI 310	Advanced Programming:	4**	_____	_____
CSCI 330	Programming Languages	3	_____	_____
CSCI 470	Operating Systems Design	3	_____	_____
CSCI 484	Computer Networks	3	_____	_____
CSCI 490	Software Engineering	3	_____	_____
MATH 369	Discrete Structures I	3	_____	_____

\*\*CSCI 310 is offered for different languages for 1-3 credit hours. A student may meet the required in any combination number of languages/courses/hours, to reach a total minimum of 4 hrs taken. No language may be counted for credit more than once.

**Five courses from Computer Science Choice List below:**

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

**Electives** (All college level courses appearing on your final transcript, **not listed above** that will bring your total semester hours to 120 hours.) (23-24 semester hours; 5-6 hours of upper division may be needed.)

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

**Computer Science Choice List:**

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CSCI 306 Web Page Design III (3)  
CSCI 322 Embedded Systems (3)  
CSCI 333 UNIX Operating Systems (3)  
CSCI 337 User Interface Design (3)  
CSCI 345 Video Game Design (3)  
CSCI 370 Computer Security (3)  
CSCI 375 Object Oriented Programming (3)  
CSCI 380 Operations Research (3)  
CSCI 445 Computer Graphics (3)  
CSCI 450 Compiler Structure (3)  
CSCI 460 Database Design (3)  
CSCI 480 Theory of Algorithms (3)  
CSCI 486 Artificial Intelligence (3)  
MATH 361 Numerical Analysis (4)

## SUGGESTED COURSE SEQUENCING FOR A MAJOR IN COMPUTER SCIENCE

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

### FRESHMAN YEAR

Fall Semester	Hours	Spring Semester	Hours
CSCI 111      CS1: Foundations of Computer Science	4	CSCI 112      CS2: Data Structures	4
MATH 151      Calculus I	5	MATH 152      Calculus II	5
ENGL 111      English Composition	3	ENGL 112      English Composition	3
KINE 100      Health and Wellness	1	General Education Social/Behavioral Science	3
General Education Social/Behavioral Science	<u>3</u>	KINA            Activity	<u>1</u>
	16		16

### SOPHOMORE YEAR

Fall Semester	Hours	Spring Semester	Hours
CSCI 250      CS3: Intro to Algorithms	3	CSCI 241      Computer Architecture Language & Assembly	4
General Education History	3	STAT 200      Probability and Statistics	3
Elective	3	General Education Natural Science	3
General Education Natural Science with Lab	4	KINA            Activity	1
General Education Applied Studies	<u>3</u>	CSCI 310      Advanced Programming:	1
	16	General Education Humanities	<u>3</u>
			15

### JUNIOR YEAR

Fall Semester	Hours	Spring Semester	Hours
CSCI 310      Advanced Programming: ()	3	Computer Science Choice	3
CSCI 330      Programming Languages	3	Computer Science Choice	3
General Education Fine Arts	3	Elective	3
Elective	<u>3</u>	MATH 369      Discrete Structures	3
	15	UD Elective	<u>2-3</u>
			14-15

### SENIOR YEAR

Fall Semester	Hours	Spring Semester	Hours
CSCI 484      Computer Networks	3	CSCI 470      Operating Systems Design	3
Computer Science Choice	3	CSCI 490      Software Engineering	3
Computer Science Choice	3	Computer Science Choice	3
Upper Division Elective	3	Elective	<u>3</u>
Elective	<u>3</u>		12
	15		