



2009-2010 PETITION/PROGRAM SHEET
Degree: Bachelor of Science
Major: Computer Science
www.mesastate.edu/academics/programs.html

About This Major . . .

Computer science is the study of algorithms and the issues involved in implementing them. A wide variety of exciting professional and academic opportunities exist for graduates of computer science including software engineering, 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 masters and doctoral studies in computing-related fields. Our graduates have continued on to advanced degrees in top tier schools and are employed for IBM, Microsoft, Sun, Lockheed-Martin, and many other technical companies. The starting salary for our graduates is very competitive.

The Computer Science program at Mesa State College includes core courses in algorithms, data structures, logic, programming languages, software design, and advanced mathematics. Electives in web page design, artificial intelligence, computer graphics, game theory, databases, 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.

Our Computer Science program benefits from small class sizes and close interaction between faculty and students. Upper level students are often involved in independent research with faculty or internships in local businesses. A student chapter of the ACM (Association for Computing Machinery) has monthly meetings where information about new software and computer hardware is presented and there are talks by guest speakers. Mesa State usually has several teams of students who compete in the regional programming contest sponsored by the ACM and in the past has competed in the national programming contest.

POLICIES:

1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the MSC 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 MSC)
- 40 upper division credits (A minimum of 15 taken within the major at MSC)
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- 2.00 cumulative GPA or higher in all MSC 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 MSC 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 Mesa State College catalog for additional graduation information.

GENERAL EDUCATION REQUIREMENTS (31 semester hours)

See the current Mesa State College 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 |
|-----------|-------|---------|-------|-----------|
|-----------|-------|---------|-------|-----------|

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* | _____ | _____ |
|----------|------------|----|-------|-------|

*3 credits apply to the General Ed requirements and 2 credits apply to elective credit

Humanities (3 semester hours)

Social and Behavioral Sciences (6 semester hours)

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

History (3 semester hours)

| | | | | |
|------|-------|-------|-------|-------|
| HIST | _____ | _____ | _____ | _____ |
|------|-------|-------|-------|-------|

Computer Science Choice List:

- CSCI 306 Web Page Design III (3)
- CSCI 333 UNIX Operating Systems (3)
- CSCI 337 User Interface Design (3)
- CSCI 375 Object Oriented Programming (3)
- CSCI 380 Operations Research (3)

| Course No | Title | Sem.hrs | Grade | Term/Trns |
|-----------|-------|---------|-------|-----------|
|-----------|-------|---------|-------|-----------|

Fine Arts (3 semester hours)

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)

BACHELOR OF SCIENCE DEGREE DISTINCTION

REQUIREMENTS (6 semester hours) Must receive a grade of "C" or better.

| | | | | |
|----------|----------------------------|---|-------|-------|
| STAT 200 | Probability and Statistics | 3 | _____ | _____ |
|----------|----------------------------|---|-------|-------|

Humanities or Social/Behavioral Sciences: (3 semester hours)

COMPUTER SCIENCE MAJOR REQUIREMENTS

(52-53 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 111 | Computer Science I | 4 | _____ | _____ |
| CSCI 112 | Computer Science II | 4 | _____ | _____ |
| CSCI 241 | Computer Architecture | 3 | _____ | _____ |
| CSCI 250 | Data Structures | 3 | _____ | _____ |
| CSCI 321 | Assembly Language Programming | 3 | _____ | _____ |
| 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 | _____ | _____ |
| MATH 152 | Calculus II | 5 | _____ | _____ |

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.) (24-25 semester hours; 7 hours of upper division may be needed.)

| | | | | |
|-----------|----------|---|-------|-------|
| *MATH 151 | Calculus | 2 | _____ | _____ |
|-----------|----------|---|-------|-------|

| | | | | |
|-------|-------|-------|-------|-------|
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |

- 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 Mesa State website for course availability.

FRESHMAN YEAR

| Fall Semester | Hours | Spring Semester | Hours |
|---|----------|---|----------|
| CSCI 111 Computer Science I | 4 | CSCI 112 Computer Science II | 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 (2 courses) | <u>2</u> |
| | 16 | | 17 |

SOPHOMORE YEAR

| Fall Semester | Hours | Spring Semester | Hours |
|--|----------|--|----------|
| CSCI 250 Data Structures | 3 | CSCI 241 Computer Architecture | 3 |
| General Education History | 3 | STAT 200 Probability and Statistics | 3 |
| Elective | 3 | General Education Natural Science | 3 |
| General Education Natural Science with Lab | 4 | Elective | 3 |
| General Education Applied Studies | <u>3</u> | General Education Humanities | <u>3</u> |
| | 16 | | 15 |

JUNIOR YEAR

| Fall Semester | Hours | Spring Semester | Hours |
|---|----------|---|------------|
| CSCI 321 Assembly Language Programming | 3 | CSCI 470 Operating Systems Design | 3 |
| CSCI 330 Programming Languages | 3 | Computer Science Choice | 3 |
| General Education Fine Arts | 3 | Computer Science Choice | 3 |
| Elective | 3 | General Education Social/Behavioral Science or Humanities | 3 |
| MATH 369 Discrete Structures | <u>3</u> | Elective | <u>2-3</u> |
| | 15 | | 14-15 |

SENIOR YEAR

| Fall Semester | Hours | Spring Semester | Hours |
|---------------------------------|----------|------------------------------------|----------|
| CSCI 484 Computer Networks | 3 | CSCI 490 Software Engineering | 3 |
| Computer Science Choice | 3 | Computer Science Choice | 3 |
| Computer Science Choice | 3 | Elective | 3 |
| Upper Division Elective | 3 | Elective | <u>3</u> |
| Elective | <u>3</u> | | 12 |
| | 15 | | |