

COMPUTER SCIENCE GRADUATION WORKSHEET

2005-2006 SEMESTER CATALOG

Revised 31 October 2005

Student Name: _____

Advisor Name: _____

- This worksheet is intended for students who begin their studies at MSU in **2005 Fall Semester** or later.
- Keep this worksheet up to date and bring it with you each time you meet with you advisor. It will help you advisor give you better advice when you register for classes.
- Substitute courses are sometimes allowed. Normally, the substitute course column is to be used for courses transferred in from another university. However, sometimes one MSU course can be substituted for another. See your advisor for specific questions. In either case, enter the substituted courses in the substitution column and enter the credits in the blank credits column. *Your advisor must initial each substitution.* Do not assume that a substitution will be allowed.
- You may not use pass/fail courses except in the *unrestricted electives* section. You must receive a letter grade of C- or higher in all courses that are used in sections one (1) through six (6).
- Read you *cs.montan.edu* e-mail account and the **Announcements** section of <http://cs.montana.edu/forum> on a daily basis. We will communicate important information to you via these two mechanisms on an as needed basis.
- From time to time, this form will be revised. The revision date appears at the top of this page. The Computer Science Office will always have copies of the latest worksheet.
- If you would like to see a typical semester-by-semester schedule of classes for a Computer Science major, please consult the 2004-2006 Undergraduate Bulletin or check out www.montana.edu/wwwcat/programs/cs.html.
- This is a complex form and is sure to contain a few errors. If you notice any, please notify Hunter Lloyd (hunter@cs.montana.edu).

COMPUTER SCIENCE GRADUATION WORKSHEET

2005-2006 SEMESTER CATALOG

Revised 31 October 2005

1. Required Computer Science Courses

Total Credits: _____

Course	Title	Credits	Substitute Course	Substitute Credits	Grade	Advisor Initials
CS 160	Introduction to Computer Science	4				
CS 201	Program Design in C	3				
CS 215	Social and Ethical Issues in Computing	3				
CS 221	Advanced Programming	4				
CS 222	Discrete Mathematics	3				
CS 223	Data Structures and Algorithms	4				
CS 324	Design and Analysis of Algorithms	3				
CS 330	Computer Organization and Architecture	4				
CS 350	Theory of Computation	3				
CS 351	Software Engineering I	3				
CS 355	Concepts of Programming Languages	3				
CS 418	Operating Systems	3				
ENGR 499	Engineering Program Assessment	0				

2. Computer Science Senior Requirements

Total Credits: _____

- You must take two (2) of the following courses.
- If you take more than two (2) of these classes you can use the extra class in Section 3.

Course	Title	Credits	Substitute Course	Substitute Credits	Grade	Advisor Initials
CS 440	Computer Networks	4				
CS 450	Compilers	4				
CS 451	Software Engineering II	3				

COMPUTER SCIENCE GRADUATION WORKSHEET

2005-2006 SEMESTER CATALOG

Revised 31 October 2005

3. Computer Science Elective Courses

Total Credits: _____

- You must take three (3) of the following courses.
- If you took three courses in Section 2 of this work sheet, you may count the third class in this section.
- There may be some special courses that can also be counted here.
- Seniors may petition to use CS graduate courses in this section.
- If you take CS 460, you must also take CS 461.

Course	Title	Credits	Substitute Course	Substitute Credits	Grade	Advisor Initials
CS 422	Introduction to Simulation	3				
CS 425	Computer Graphics	4				
CS 430	Image Processing	3				
CS 432	Cumputational Biology	2				
CS 435	Database Systems	3				
CS 436	Artificial Intelligence	3				
CS 445	Embedded Systems	3				
CS 460R	Senior Design Project I	3				
CS 461R	Senior Design Project II	3				

COMPUTER SCIENCE GRADUATION WORKSHEET

2005-2006 SEMESTER CATALOG

Revised 31 October 2005

4. Computer Science and Related Elective Courses

Total Credits: _____

- You must take enough elective credits in Computer Science or in related courses to get your total credits from Section 3 and Section 4 to total twelve (12) or greater.
- Any Computer Science course not already counted in the first three sections may be used here, such as CS150, CS304, CS309, and CS474. However, you may not use CS150 **unless** it was taken before you took CS160.
- Your Courses may also be used from the following list. This list is meant to be suggestive. Speak to your advisor if there is a course related to Computer Science that is not on the list and you wish to take.

EE 261 Introduction to Logic Circuits
 EE 262 Logic Circuits Laboratory
 EE 367 Logic Design
 EE 371 Microprocessor HW & SW System
 EE 414 Introduction to VLSI Design
 EE 465 Real Time Microcontroller Applications
 EE 466 Computer Architecture & System Organization

EE 467 Advanced Embedded Systems Lab
 EE 475 HW & SW Engineering for Embedded Systems
 MATH 394R SW for Mathematical Computation
 MATH 441 Numerical Linear Algebra & Optimization
 MATH 442 Numerical Solution of Differential Equations
 PHIL 231 Introduction to Logic
 STAT 420 Probability

Course	Title	Credits	Substitute Course	Substitute Credits	Grade	Advisor Initials

COMPUTER SCIENCE GRADUATION WORKSHEET

2005-2006 SEMESTER CATALOG

Revised 31 October 2005

5. Required Non-Computer Science Courses

Total Credits: _____

- You must take a total of fourteen (14) credits of science courses. Eight (8) of these credits must be either the complete Physics sequence PHYS 211 and PHYS 212 or complete Chemistry sequence CHEM 131 and CHEM 132. The other six (6) credits should have an IN designation. You may **not** count the following in this section at all. CHEM 121, PHYS 103, PHYS 205, or PHYS 206
- You may substitute six (6) credits of Statistics courses for I&ME 354.
- You may substitute MATH 224Q and MATH 225 for both I&ME 354 and MATH 221. This is an all or nothing substitution.

Course	Title	Credits	Substitute Course	Substitute Credits	Grade	Advisor Initials
ENGL 223	Technical Writing	3				
CHEM 131	General Chemistry I	4				
CHEM 132	General Chemistry II	4				
I&ME 354	Engineering Probability and Statistics I	3				
MATH 181Q	Calculus and Analytic Geometry I	4				
MATH 182Q	Calculus and Analytic Geometry II	4				
MATH 221	Matrix Theory	3				
PHYS 211	General and Modern Physics I	4				
PHYS 212	General and Modern Physics II	4				
IN		3				
IN		3				

COMPUTER SCIENCE GRADUATION WORKSHEET

2005-2006 SEMESTER CATALOG

Revised 31 October 2005

6. Core 2.0/Computer Science Accreditation Core

Total Credits: _____

- You may satisfy the R course by taking an RA, RH, RS, or R course that appears somewhere else on this form. If you have done that, list the course again in this section by change the credits in the R section below to zero (0).
- To meet Computer Science accreditation requirements, you must list twenty-seven (27) credits on this page that come from a department that offers an IA, RA, IH, RH, IS, RD, or D course. The Core 2.0 required US, W, IA, IH, IS, and D courses will give you eighteen(18) of these credits. If you took a separate RA, RH, or RS, you will have twenty-one (21) of these credits. Thus, you will need to take either an additional six (6) or (9) credits from a department that offers IA, RA, IH, RH, IS, RS, or D course. List these credits in the "Accreditation Core" category below. These credits do not themselves need to be core designated.

Course	Title	Credits	Substitute Course	Substitute Credits	Grade	Advisor Initials
ENGL 121W	College Writing I	3				
D		3				
IA		3				
IH		3				
IS		3				
R		3				
US		3				
Accreditation Core		3				
Accreditation Core		3				
Accreditation Core		3				

COMPUTER SCIENCE GRADUATION WORKSHEET

2005-2006 SEMESTER CATALOG

Revised 31 October 2005

7. Unrestricted Elective Courses

Total Credits: _____

- You might need to take additional credits of elective courses to bring your credit total to 120. Add up the credit totals in the other sections and subtract from 120 to determine exactly how many unrestricted elective credits you need.
- Any university course may be used in this section if it has not been used in another section on this worksheet.
- You must accumulate at least forty-two (42) credits in courses with designation 300 or above. If you have taken courses at this level that are not listed in any other section on this worksheet, and if you need to count these courses in order to meet the forty-two (42) credit requirement, list them here.

Course	Title	Credits	Substitute Course	Substitute Credits	Grade	Advisor Initials

COMPUTER SCIENCE GRADUATION WORKSHEET

2005-2006 SEMESTER CATALOG

Revised 31 October 2005

8. Checklist for Graduation

- _____ Total Credits from worksheet. The total must be at least 120.
- _____ Total Credits of 300+ level. The total must be at least forty-two (42).
- Yes No All courses listed in Sections 1 through 6 have a grade of C- or higher.
- Yes No Either both or neither of CS 460 and CS 461 have been counted.
- Yes No Advisor's initials appear on all courses listed in substitution columns.
- Yes No Advisor's signature below.

Advisor

Date

Certification Officer

Date

Assistant/Associate Dean

Date

9. Graduation Application Instructions

Applications for the baccalaureate degree are due at the end of the semester one year prior to when you plan to graduate. For example, if you intend to graduate after 2008 Spring Semester, you would need to apply for graduation at the end of 2007 Spring Semester.

1. Print out a copy of your current, unofficial transcript.
2. Fill everything out with clear handwriting.
3. Obtain the blue *Application for Baccalaureate Degree* from the Computer Science Office.
4. Fill out this *Computer Science Graduation Worksheet* with all courses you have completed using non-red ink.
5. Fill out this *Computer Science Graduation Worksheet* with all courses that you are currently taking or that you plan to take with red ink.
6. Fill out the entire rest of the *Computer Science Graduation Worksheet* using non-red ink. Double check to see that you are meeting all of the requirements!
7. Fill out the *Application for Baccalaureate Degree* form using non-red ink. Fill out completely the Please Print in Ink or Type section, the Departmental and College Requirements section and the To Be Completed By The Student section on the back.
8. Take your transcript, your completely filled out *Application for Baccalaureate Degree*, and this completely filled out *Computer Science Graduation Worksheet* to your advisor.
9. Your advisor will check that everything is filled out properly (grades, credit tallies, etc.). Once the forms are checked, the advisor will sign in the appropriate places and then keep the forms to pass on to the Computer Science Secretary.