LEVEL I FORM (4/15)

Please attach/submit additional documents as needed to fully complete each section of the form. See information about Level I Proposals.

I. DEPARTMENT / PROGRAM

Computer Science

II. SUMMARY

This certificate recognizes a student’s achievement in completing three challenging computer programming courses plus an additional elective. This 12 credit certificate can be completed in less time than the 18 credit minor in Computer Science.

IV. ENDORSEMENTS AND APPROVALS

Requestor: Douglas Raiford

Phone/Email: douglas.raiford@umontana.edu 406-243-5605

Program Chair: Douglas Raiford

*Other Affected Programs: None

Signature Date 9/18/2015

Dean: Jenny McNulty

Provost’s Office: 

Signature Date 10/14/15

* Are affected because of: (a) required courses including prerequisites or corequisites, (b) perceived overlap in content areas, or (c) cross-listing of coursework.

After the Faculty Senate approves the proposal on a consent agenda the Provost’s Office forwards the item for Board of Regents approval at the next possible meeting.
V. TYPE OF LEVEL I PROPOSAL

☐ Retitling existing majors, minors, options, or certificates
☐ Eliminating existing majors, minors, or options. (submit with BOR program termination checklist)
☐ Adding new minors or certificates where there is a major or an option in a major*
☒ Campus Certificates: Adding, retitling, terminating or revising a certificate of 29 or fewer credits
☐ Revising a program* (for minor modifications use the program modification form)
☐ Distance or online delivery of previously authorized degree or certificate program
☐ Adding option within an existing major or degree *
☐ Consolidating existing programs and/or degrees *
☐ Placing a program into moratorium
☐ Withdrawing a program from moratorium
☐ Adding BAS/AA/AS Area of Study

*Must submit with BOR Curriculum Proposal Form

III. JUSTIFICATION

Computer software is ubiquitous in our digital world. The ability to write programs and to think computationally is useful for a student in any major. This 12 credit certificate encourages non-computer-science students to learn to program.

IV. CATALOG LANGUAGE

Attach the current or proposed catalog language with any changes clearly identified.

Certificate in Computer Programming

Programming is an essential skill for solving problems in many fields. Programming gives maximum flexibility in processing and understanding data, constructing computational models, and building user friendly applications. Programming skills are in high demand in the marketplace. Completing this certificate could be the first step towards a career that involves software development.

Students will apply object-oriented principles to develop software systems. Students will learn to apply and program data structures like lists, trees, and hash tables. The elective course allows to student to learn about software engineering, web programming, mobile device programming, or user interface design.
Certificate in Computer Programming Requirements

Required Courses (9 credits)

CSCI 135 Fundamentals of Computer Science I or CSCI 250 Computer Modeling/Science Majors
CSCI 136 Fundamentals of Computer Science II
CSCI 231 Data Structures

Elective course (3 credits) student must complete one of the following courses

CSCI 205 Programming Languages
CSCI 323 Software Science
CSCI 340 Database Design
CSCI 411 Advanced Web Programming
CSCI 412 Game and Mobile App
CSCI 443 User Interface Design

VI SUBMISSION

Submit the complete Level I proposal to the Provost’s Office for initial review. After all signatures have been obtained, submit original, and an electronic file to the Faculty Senate Office, UH 221, camie.foos@msu.umont.edu

Level 1 proposals also require Board of Regents approval. The appropriate BOR forms must be submitted with this form.