

APPROVAL PAGE

for: CS4850. Faculty Directed Research (Course title and number) Date submitted online 9/25/14

For new course proposals, excluding Experimental and Variable Title courses, the following must be completed by the Library bibliographer:

☒ The WSU Library has adequate information resources to support this proposal.

\_\_\_\_\_. Currently, the WSU Library does not have adequate information resources to support this course. However, if this proposal is approved, a Library bibliographer will work closely with departmental faculty to acquire the information resources needed. Funding for the new resources will come from the library's budget.

Joan Hubbard WSU Librarian/Date 9/29/14

Approval Sequence:

Brian Pogue 9/26/14  
Department Chair/Date (or BIS Director)

Laura May Leod 11/4/14  
College Curriculum Committee/Date (Signature not needed on Experimental or Variable Title courses.)

\_\_\_\_\_. Career and Technical Education Director. (Needed on new or deleted courses required in a 2-year program.)

[Signature] 11/5/14  
Dean of College/Date

Courses required in programs leading to secondary undergraduate teacher certification must be approved by the University Council on Teacher Education before being submitted to the Curriculum Committee.

\_\_\_\_\_  
University Council on Teacher Education/Date

Graduate course proposals must be reviewed by the University Graduate Council before being submitted to the Curriculum Committee.

I have read the proposal and discussed it with the program director.

\_\_\_\_\_  
University Graduate Council Representative/Date

\_\_\_\_\_  
University Curriculum Committee/Date

Effective Date \_\_\_\_\_

Passed by Faculty Senate \_\_\_\_\_ Date

# Course Proposals

Welcome Brian Rague



## List of all proposals

Course Name: Faculty Directed Research  
Course Prefix: CS  
Course Number: 4850  
Submitted by: Brian Rague, [brague@weber.edu](mailto:brague@weber.edu)

Current Date: 9/24/2014 College: Applied Science & Technology  
Department: Computer Science  
From Term: Fall 2015

Substantive

new  
Current Course Subject: N/A  
Current Course Number:

### New/Revised Course Information:

Subject: CS  
Course Number: 4850

Check all that apply:

*This is for courses already approved for gen ed. Use a different form (<http://documents.weber.edu/catalog/forms.htm>) for proposing a new gen ed designation.*

☐ DV   ☐ CA   ☐ HU   ☐ LS   ☐ PS   ☐ SS   ☐ EN   ☐ AI   ☐ QL   ☐ TA   ☐ TB   ☐ TC   ☐ TD   ☐ TE

Course Title: Faculty Directed Research  
Abbreviated Course Title: Fac Dir Research  
Course Type: INV  
Credit Hours:  
or if variable hours: 1-4 to

Contact Hours:

Lecture:

Lab:  
Other: 1-4

Repeat Information:  
  
Limit: 3  
Max Hrs: 4  
Grading Mode: standard

This course is/will be:

- ☐ a required course in a major program
- ☐ a required course in a minor program
- ☐ a required course in a 1- or 2- year program
- ☒ elective

Prerequisites/Co-requisites:  
  
CS2420

Course description (exactly as it will appear in the catalog, including prerequisites):

The purpose of this course is to permit Computer Science majors to work closely and consistently with a faculty mentor on specific research related to current, experimental topics in Computer Science. The final grade and amount of credit awarded will be determined by the faculty mentor, depending on the complexity of the advanced, upper division work performed. Prerequisite: CS 2420. May be repeated 3 times up to 4 credit hours. Note: Only 4 credit hours of CS 4800 or CS 4850 or CS 4890 can apply to a CS degree as an elective course, and only a maximum of 6 hours of CS 4800, CS 4850 and CS 4890 may be taken to satisfy missing credits or to achieve full time academic status.

Justification for the new course or for changes to an existing course. (Note: Justification should emphasize academic rationale for the change or new course. This is particularly important for courses requesting upper-division status.)

The department currently has individualized project courses centered on cooperative work experience and independent study. There is currently no option for a student to pursue credit as a research assistant in close collaboration with a faculty mentor. This project course will allow for appropriate student/faculty alignment and effective mentorship in intensive team research efforts.

**INFORMATION PAGE  
for substantive proposals only**

1. Did this course receive unanimous approval within the Department?

true

If not, what are the major concerns raised by the opponents?

2. If this is a new course proposal, could you achieve the desired results by revising an existing course within your department or by requiring an existing course in another department?

This course fulfills a specific department need to offer credit to students who are faculty research assistants.

3. How will the proposed course differ from similar offerings by other departments? Comment on any subject overlap between this course and topics generally taught by other departments, even if no similar courses are currently offered by the other departments. Explain any effects that this proposal will have on program requirements or enrollments in other department. Please forward letters (email communication is sufficient) from all departments that you have identified above stating their support or opposition to the proposed course.

This course will have no impact on other department offerings.

4. Is this course required for certification/accreditation of a program?

no

If so, a statement to that effect should appear in the justification and supporting documents should accompany this form.

5. For course proposals, e-mail a syllabus to Faculty Senate (<mailto:kbrown4@weber.edu>) which should be sufficiently detailed that the committees can determine that the course is at the appropriate level and matches the description. There should be an indication of the amount and type of outside activity required in the course (projects, research papers, homework, etc.).

**Please mail a signed approval page (SignaturePage.PDF) to the Faculty Senate Office, MA 210J, MC 1033.**



## CS 4850: FACULTY DIRECTED RESEARCH

Department of Computer Science  
College of Applied Science & Technology  
Weber State University



### Course Syllabus

<b>Instructor:</b>	Dr. Brian Rague
<b>Office:</b>	TE-110C
<b>Phone:</b>	801-626-7377
<b>E-Mail:</b>	brague@weber.edu
<b>Office Hours:</b>	Tuesday, 09:00-12:30 (TE-110C) Thursday, 09:00-11:30 (TE-110C)
<b>Term:</b>	Fall 201X
<b>Class Meeting:</b>	There will be no formal meetings of this class. Progress reports should be submitted online through the Assignments section in Canvas. The Final Project Presentation will take place either in-person or virtually using conferencing software tools.

#### I. Welcome!

Welcome to an advanced exploration of research topics in Computer Science.

#### II. University Course Catalog Description

The purpose of this course is to permit Computer Science majors to work closely and consistently with a faculty mentor on specific research related to current, experimental topics in Computer Science. The final grade and amount of credit awarded will be determined by the faculty mentor, depending on the complexity of the advanced, upper division work performed.

#### III. Student Learning Outcomes

By the end of this course, students will:

- formulate research objectives and project milestones;
- develop a research project, program, system or paper;
- apply principles of computer science to research problems;
- work closely with faculty to achieve research objectives.

#### IV. Course Prerequisites and Additional Information

CS 2420 Introduction to Data Structures and Algorithms. This course may be repeated 3 times up to 4 credit hours. Note: Only 4 credit hours of CS 4800 or CS 4850 or CS 4890 can apply to a CS degree as an elective course, and only a maximum of 6 hours of CS 4800, CS 4850 and CS 4890 may be taken to satisfy missing credits or to achieve full time academic status.

#### V. Course Credits

1-4 credits

#### VI. Course Format and Grading Policy

**Enrollment Requirement:** Prior to enrollment in this class, the student must submit an admission request to the faculty mentor that provides the following: (1) Project description/abstract; (2) Justification for research activities; (3) Method description and objectives; and (4) Resource assessment.

**Credit:** Credit hours are assigned according to the following time commitment to the proposed research project:

- 1 Credit hour = 4 hours per week**
- 2 Credit hours = 8 hours per week**
- 3 Credit hours = 12 hours per week**
- 4 Credit hours = 16 hours per week**

**Project Proposal and Progress Reports:** Students are required to submit an initial formal project proposal and four progress reports. Progress reports are to be provided every 3 weeks. These reports should be between 2 to 3 pages in length and can be supplemented with diagrams and/or tables.

Student project proposals and progress reports will be graded on the following criteria:

- Appropriate English usage, expression, and spelling;
- Clear articulation of the objectives either projected or completed during the allotted report period
- Expected or demonstrated evidence (indicators) of completed objectives
- Sufficient and verifiable rationale for missing stated project deadlines if necessary

**Final Project Submission:** The final project will include both an oral and written component. The written report must satisfy the criteria given for the project proposal and progress reports above. The oral presentation will take place either in-person or virtually using conferencing software tools and must demonstrate satisfactory completion of the research objectives established in the initial formal project proposal. The student is responsible to make an appointment with the instructor for the final project presentation which should be scheduled during the last week of regular class for the semester.

**Late Policy:** It is your responsibility to make sure you meet the schedule due dates for this course. Late reports will be penalized according to the following schedule:

- < 1 week late = 25%
- < 2 weeks late = 50%
- < 3 weeks late = 75%
- > 3 weeks = 100%

Exceptions to this policy will only be granted in extreme circumstances, and must be arranged prior to the due date.

**Extra Credit Policy:** There are no options for extra credit in this class.

**Grades of "I":** Incomplete grades are given only in exceptional cases.

## **VII. Course Policies: Student Expectations**

**Disability Access:** Any student requiring accommodations or services due to a disability must contact Service for Student with Disabilities (SSD) in room 181 of the Student Services Center. The phone number is (801) 626-6413.

**Academic Conduct Policy:** Academic dishonesty in any form will not be tolerated. CS Department policy dictates that any verifiable evidence of student academic cheating, as defined and determined by the instructor, will result in: 1) an automatic failing grade for the class and 2) a report to the Dean of Students that will include the student's name and a description of the student's dishonest conduct. A description of cheating and possible sanctions may be found in the Student Code ([http://www.weber.edu/ppm/Policies/6-22\\_StudentCode.html](http://www.weber.edu/ppm/Policies/6-22_StudentCode.html))

## VIII. Basis for Final Grade

Assessment	Percent of Final Grade
Formal Project Proposal	20%
Progress Reports	40%
Final Project Presentation	40%
	100%

Scale (%)	Grade	Scale (%)	Grade
94 - 100	A	74 - 76	C
90 - 93	A-	70 - 73	C-
87 - 89	B+	67 - 69	D+
84 - 86	B	64 - 66	D
80 - 83	B-	60 - 63	D-
77 - 79	C+	0 - 59	E

See explanations of Projects and Reports above

## IX. Schedule

(All due dates and assignments are tentative, and may be changed at the discretion of the instructor)

Date	Deliverable
8/31	Formal Project Proposal
9/21	Progress Report 1
10/5	Progress Report 2
10/26	Progress Report 3
11/16	Progress Report 4
12/8	Final Project Submission