

ACADEMIC AFFAIRS COUNCIL

AGENDA ITEM: 4.A (1) (c)

DATE: June 19, 2013

SUBJECT: New Program: DSU Minor in Web Development

Dakota State University has submitted a proposal for a baccalaureate minor in Web Development. The University has related majors in Information Systems, Computer Game Design, Computer Science, and Computer and Network Security. The proposed minor requires 18 credit hours.

DSU notes that the migration of application development to a web-based environment is occurring throughout the software industry. The University designed the minor to improve the web development skills of students who complete degree programs in computer science, computer information systems or computer game design degree programs, thereby making them more marketable.

DSU does not request new state resources to implement the minor. The courses are offered for the University's existing programs

RECOMMENDED ACTION

Move forward. Provide comments and concerns to Paul Gough.

**South Dakota Board of Regents
New Baccalaureate Degree Minor**

University:	Dakota State University
Title of Proposed Minor:	Web Development
Degree(s) in which minor may be earned:	B.S.
Existing related majors or minors:	BS Computer Game Design; BS in Information Systems; BS in Computer Science
Proposed Implementation (term):	Fall 2013
Proposed CIP Code:	11.0201

University Approval

To the Board and the Executive Director: I certify that I have read this proposal, that I believe it to be accurate, and that it has been evaluated and approved as provided by university policy.



April 29, 2013

President of the University

Date

After approval by the President, a signed copy of the proposal should be transmitted to the Executive Director. Only after Executive Director review should the proposal be posted on the university web site and the Board staff and the other universities notified of the URL.

1. Do you have a major in this area? X Yes No

Dakota State University is requesting authorization to offer a minor in Web Development. This minor will prepare students for careers that require web development and application programming skills. It is intended to improve the web development skills of students who complete degree programs in computer science, computer information systems or computer game design degree programs, thereby making them more marketable.

DSU does not intend to request new state resources as all of the courses are already being taught and the university has already invested in the hardware and software needed to deliver the courses included in the minor.

2. If you do not have a major in this area, explain how the proposed minor relates to your mission.

DSU currently offers these related degree programs:

- B.S. in Information Systems
- BS in Computer Game Design
- B.S. in Computer Science
- B.S. in Computer and Network Security

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The continued migration of application development to a web-based environment is occurring throughout the software industry. It is essential that students with career goals in software development be well versed in the practical aspects of designing for the web.

3. How will the proposed minor benefit students?

The minor is intended to provide students in other majors with the opportunity to enhance their career options with this Web Development minor. This minor will focus on the development of web applications which reflects one of the most significant current and future trends in software development.

Students in B.S. in computer information systems, computer game design and computer and network security can complete the major using open electives, without taking more than 120 credits to graduate. Students in computer science would need to take one additional course (3 credits) to complete the minor because there aren't sufficient open electives in their degree program.

4. Provide estimated enrollments and completions in the table below and explain how the estimates were developed.

	Fiscal Years*			
	1st	2nd	3 rd	4th
Estimates	FY12	FY13	FY14	FY15
Students in the minor	5	5	5	5
Continuing students	0	5	5	5
Total students in program	5	10	10	10
Completions by graduates		5	5	5

It is expected that minor will be of greatest interest to current DSU students. Enrollment estimates are based on the average number of students currently enrolled in other minors at DSU.

5. What is the rationale for the curriculum?

DSU has a specialization in Web Development in the B.S. degree program in Information Systems but this specialization focuses more broadly on the web environment (networking, database, etc.) and does not have a strong focus on application development. As part of this curriculum change, this more general specialization is being removed and students will be encouraged to enroll in this proposed minor instead. The stand-alone minor will be accessible to more students than is the specialization within the Information Systems major.

The core sequence of three web development courses will ensure that students have been exposed to multiple development environments. By including object-oriented programming, the students will have a sufficient programming foundation to utilize modern programming environments. The line between mobile and web is blurring, so the inclusion of a mobile development course prepares students for the inevitable task of designing software for both.

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6. Complete the tables below. Explain any exceptions to BOR policy being requested.

A. Distribution of Credit Hours

Minor in Health Information Management	Credit Hours	Percent
Requirements in Minor	18	100%
Electives in the Minor	0	
Total	18	100%

B. Required Courses in the Minor

Prefix	Number	Course Title	New*	Hours
CIS	275	Web Programming I	No	3
CIS	375	Web Programming II	No	3
CIS	476	Web Development Environment	No	3
CIS	484	Database Management Systems	No	3
CSC	260	Object Oriented Design	No	3
CSC	451	Mobile Development Environments:	No	3
		Subtotal, required		18

C. Elective Courses in the Minor: List courses that may be taken as electives in the minor. Indicate any new courses to be added specifically for the minor.

There are no elective courses in the minor.

7. What outcomes will be expected for all students who complete the minor? How will these outcomes be achieved?

Students will be fluent in multiple programming languages, able to utilize a variety of development environments, and capable of deploying an application in any of the modern web server infrastructure types. Student will gain hands-on experience with modern environments and be able to adapt to the rapidly changing web standards.

8. What instructional technologies will be used to teach courses in the minor?

There are no new courses in the minor.

9. Is the University requesting authorization to provide the minor to students at an off-campus location or by distance delivery? If yes, explain. If off-campus or distance delivery authorization is not requested, enter "None."

None

10. Costs, Budget & Resources: Explain the amount and source(s) of any one-time and continuing investments in personnel, professional development, release time, instructional technology and software, other O&M, facilities, etc needed to implement the minor.

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No new resources are required to offer the proposed minor. All courses required for this minor are already offered and the university has already invested in the hardware and software needed to support course delivery.