ITEM 111-1901-R0501 ATTACHMENT **MAY 17-18, 2001**

BOARD OF REGENTS
STATE OF MONTANA

PROPOSAL

TO INITIATE A NEW, EXPANDED, COOPERATIVE, OR
OFF-CAMPUS INSTRUCTIONAL PROGRAM

SUBMITTED BY:

THE UNIVERSITY OF MONTANA - MISSOULA

Helena College of Technology
Name of College, School, or Division

Business Department
Name of Department(s) or Area

A NEW, EXPANDED, COOPERATIVE, OR OFF-CAMPUS
INSTRUCTIONAL PROGRAM LEADING TO:

Associate of Applied Science Option
Certificate, Associate, Bachelor's,
Master's, or Doctoral Degree
(Give complete name of degree)

Computer Technology Webmaster
Academic Specialty or Area

Spring Semester 2001
Proposed Starting Date

THIS PROPOSAL HAS BEEN APPROVED BY:

Department or Division Head Date

VP Administration and Finance Date

Dean of College or School Date

Graduate Dean Date
(for graduate proposals)

Provost/VP Academic Affairs Date

Assoc Provost Graduate Studies Date
(for graduate proposals)

President Date

(Resides on file in President's Office at UM)

PROGRAM DESCRIPTION

Brief Description of Proposed Program

The proposed Webmaster Option is an additional option under the existing Computer Technology Program leading to the Associate of Applied Science (AAS) degree in Computer Technology.

The current Computer Technology Program has three options students may pursue: Microcomputer Applications, Network Administration, and Programming. A request is currently before the Board of Regents for a option in Network Architecture. Students take courses leading to the successful attainment of the two-year AAS degree in Computer Technology with any one or a combination of the offered options.

The proposed Webmaster option is a 69-credit option also delivered in the four-semester sequence. It is designed for individuals wanting to specialize in Internet web applications development or Internet web server maintenance. The proposed Webmaster option has been developed in response to three influences: (1) the increasing number of job announcements seeking applications for webmasters; (2) advice from our Computer Technology advisory

committee members; and (3) the direction stated by state government officials to offer more web-based services via the Internet.

Needs Assessment

As stated above, the need for the new Webmaster program has been established in several venues. First, there are an increasing number of job announcements on the State job board for job applicants possessing specialized knowledge and skills related to web server maintenance and web applications development. Second, our Computer Technology advisory committee members - representing both state government and private business - strongly support a sequence of instruction leading to specialization in web techniques. Third, there is a general increase in eBusiness, eCommerce and eGovernment throughout the nation with complementary direction set by State of Montana information technology officials for department directors to make services available to State citizens via the Internet. This announcement has increased the need for web-knowledgeable technicians.

Relationship to the Role and Scope of the Institution

The addition of a new Webmaster option within the existing Computer Technology program remains consistent with program objectives and the Helena College of Technology mission of providing academic (transfer), occupational, and developmental education which, in turn, is part of the role and scope of The University of Montana.

Impact on Administrative Structure

The proposed Webmaster option is to be incorporated under the existing Computer Technology program within the existing Business Department. As such, there is no need for any change in administrative structure.

Similar Programs in Montana

Only the Great Falls College of Technology offers a similar web-related option.

Program Accreditation

The new Webmaster option is to be housed within the Computer Technology program. All programs at the Helena College of Technology were recently re-accredited by the Northwest Accreditation team in 2000.

Proposed Curriculum

The proposed curriculum is appended to this proposal. Curriculum design is the result of input from the Computer Technology Advisory Committee and current faculty. The proposed Webmaster option builds on the core courses already offered in the Computer Technology degree. Three new courses and one upgraded course complete the course requirements for this proposal.

FACULTY AND STAFF REQUIREMENTS

Current Faculty

Current faculty in the Computer Technology program are:

Name	Rank
Kirsten Graham	Level III
Dave Marshall	Level III
Gwyn Daniels	Level II
Kevin Brockbank	Level I
Susan Engle	Level II

New Faculty

There is no need for new faculty to implement the Webmaster option. However, there will be a need for adjunct faculty with specialization in web server maintenance. It is anticipated that one new full-time faculty member will be added during the third year.

Support Personnel

There is no need to add new support personnel to implement the Webmaster option.

CAPITAL OUTLAY, OPERATING EXPENSES, AND PHYSICAL FACILITIES

Operating Expenditure Needs

No new operating expenditures are needed to implement the new Webmaster option in the Computer Technology program.

Library Resources

No new library resources are needed to implement this new Webmaster option. Current library resources are adequate.

Clinical, Laboratory, and/or Computer Equipment

There is no new need for additional computer equipment. Existing classrooms and computer labs will suffice. A dedicated computer "web" server and requisite Internet Protocol "IP" address has already been identified for student use.

Facilities and Space

There is no need for additional facilities and space to implement this proposal other than to incorporate existing classroom and computer lab resources in semester course scheduling.

EVALUATION OF PROPOSED PROGRAM

Faculty Committee/Council Review

The Helena College of Technology Academic Affairs Committee has reviewed and recommended approval of this proposed new Webmaster option as an addition to the Computer Technology program.

Outside Consultants

There have been no outside consultants employed in the preparation of this proposal.

FISCAL IMPACT AND BUDGET INFORMATION

	FY 2002 First Year		FY 2003 Second Year		FY 2004 Third Year		FY 2005 Fourth Year		FY 2006 Fifth Year	
	FTE	Head-count	FTE	Head-count	FTE	Head-count	FTE	Head-count	FTE	Head Cour
I. Planned Student Enrollment										
A. New enrollment			10	15	20	25	20	25	20	25
B. Shifting Enrollment	10	15	20	25	20	25	20	25	20	25
GRAND TOTAL PLANNED STUDENT ENROLLMENT	**10**	**15**	**30**	**40**	**45**	**50**	**45**	**50**	**45**	**50**

	First Year		Second Year		Third Year		Fourth Year		Fifth Year	
	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cos
II. EXPENDITURES										
A. Personnel Costs										
1. Faculty					1.0	33,110	1.0	33,110	1.0	33,110
2. Administrators										
3. Adjunct Faculty			.5	7,200	.5	7,200	.5	7,200	.5	7,200
4. Graduate/Instr. .Asst.										
5. Research Personnel										
6. Support Personnel										

7. Fringe Benefits			2,016		11,287		11,287		11,287
8. Other									
Total Personnel FTE and Cost		**.5**	**9,216**	**1.5**	**51,597**	**1.5**	**51,597**	**1.5**	**51,597**

B. Operating Expenditures	**First Year**	**Second Year**	**Third Year**	**Fourth Year**	**Fifth Year**
1. Travel for Faculty Training					
2. Professional Services					
3. Other Services					
4. Communications					
5. Utilities					
6. Materials and Supplies					
7. Rentals					
8. Repairs and Maintenance					
9. Materials – Resale					
10. Miscellaneous					
Total Operating Expenditure					
C. Capital Outlay					
1. Library Resources					
2. Equipment					
Total Capital Outlay					
D. Physical Facilities					
1. Construction/Renovation					
2. Rental					
E. Indirect Costs (overhead)					
GRAND TOTAL EXPENDITURES		**9,216**	**51,597**	**51,597**	**51,597**
III. REVENUES					
A. Source of Funds					
1. Appropriated Funds (Reallocation)		9,216	51,597	51,597	51,597
2. Appropriated Funds/New					
3. Federal Funds					
4. Other Grants					
5. Fees					
6. Other ( )					
Total Source of Funds					
B. Nature of Funds					
1. Recurring		9,216	51,597	51,597	51,597
2. Non-Recurring					
GRAND TOTAL REVENUES		**9,216**	**51,597**	**51,597**	**51,597**

PROPOSED WEBMASTER OPTION

1st Sem	2nd Sem	3rd Sem	4th Sem
Intro to Micros (3) or Electives	Presentations (2)	Object Oriented Programming - Java (4)	Capstone (2)
Intro to CT (4)	Spreadsheets (2)	Intro to SQL/Oracle (4)	*Web Applications (4)
Keyboarding (2)	Accounting I (4)	English (2)	*Web Databases (4)
Tech Comm (3)	Internet (2)	PC Config (3)	Electives (Int DB, Cisco I, Cisco II) (4)
Fundamentals of Algebra (3)	Visual Basic (4)	*Web Servers & Security (4)	Career Development (3)
Word Proc (2)	*Adv Web Pages (2)		
	DBMS (Access) (2)		
TOT CRED: 17	**TOT CRED: 18**	**TOT CRED: 17**	**TOT CRED: 17**

Courses in shaded cells contribute to knowledge and skills directly related to Webmaster. Courses with an asterisk (*) are new and unique to the Webmaster option.

TOTAL CREDITS FOR OPTION: 69

Goals for Webmaster option:

- Have practical hands-on experience with web development application software (Notepad, FrontPage, MS InterDev, DreamWeaver); be able to select the best tool for the job at hand; be able to create attractive and effective, static and dynamic web pages.
- Be able to write both client-side and server-side scripting using Java Applets, Javascript, VBScript, and Active Server Pages.
- Be able to provide Internet services involving server-side files and relational databases (Access and Oracle).
- Be able to manage an MS Internet Information Services (IIS) or Unix Apache web server.
- Know security functions (ie, firewalls).

*New courses (14 credits unique to the option):

- Adv Web Pages: thorough knowledge and understanding of HTML tags.
- Web Apps: A change of +2 credits from the current Web Apps course. This is where they get JavaScript, VBScript, and ASP scripting.
- Web Servers and Security: Hands-on practical application administering both the MS IIS and the Unix Apache web servers. Practice with web security (firewalls).
- Web Databases: Create a major interactive Oracle application on the web.

NEW COURSE DESCRIPTIONS

CT-1XX: Advanced Web Pages.
Credits: 2
Prerequisites: CT145 (Internet, may be taken concurrently).

This is a follow-on course to the basic Internet course. Students will create complex web pages using state-of-the-art software development tools while emphasizing a thorough knowledge of HTML tags with particular attention to TABLE, INPUT and FORM tags. Students will also be exposed to XML web pages as well as cascading style sheets.

CT-2XX: Web Servers and Security.
Credits: 4
Prerequisites: CT240 (PC Configuration, may be taken concurrently), or consent of the Instructor.

The goal of this course is to give students hands-on experience with both the Windows IIS and Unix Apache web servers and to give them a solid understanding of what is going on behind the scenes of a web site. Students will learn the strengths and weaknesses of each. Students will learn what comprises a web server and will actively administer the various server components, to include server security.

CT-2XX: Developing Web Applications.
Credits: 4 (upgrade from 2 credits)
Prerequisites: CT131 (Visual Basic) and CT216 (Object-Oriented Programming), or consent of the Instructor.

Previous web-related courses concentrate on developing static web pages that run with Internet browser software. This course carries the concept another step forward by creating dynamic web pages and responding server programs that manipulate data submitted by the client browsers. Students will learn more about HTML tags, JavaScript and Active Server Pages using VBScript.

CT-2XX: Web Databases.
Credits: 4
Prerequisites: CT255 (SQL/Oracle), or consent of the Instructor.

Students will create a major interactive Internet application using the Oracle database. Concepts of eCommerce, eBusiness and eGovernment will be emphasized.