

**Proposal to Offer a Two-Year Associate of Applied
Science Degree in Web Development at
Dawson Community College**

Program Summary

Dawson Community College requests approval to offer a two year Associate of Applied Science degree in Web Development.

This proposal presents the effort of Dawson Community College to fulfill the employment needs of the individual and the economic development needs of business entities within the local service areas.

The curriculum will provide students with the essential training and skills for obtaining employment or advancement in their fields in the area of Web development and E-commerce. This program includes traditional classroom delivery methods and a capstone Web development project in cooperation with local non-profit businesses providing them with services which might otherwise be cost prohibitive.

Program Description and Objectives

The Web Development program prepares students for employment in the fast-growing and exciting field of the Web site development and E-Commerce.

Upon successful completion of the program requirements, the students will be able to:

- Create a Web site that is aesthetically pleasing and demonstrates acceptable design principles
- Create a Web site that is dynamic and varies according to users' responses
- Create a Web application that uses shopping carts
- Manage the Web server security for E-commerce transactions
- Develop Web sites that utilize JavaScript, XML, and other Web programming techniques
- Create a Web site using the current versions of Dreamweaver, Fireworks, Flash, and Cold Fusion
- Understand ethical responsibilities in maintaining a Web or intranet/Internet site and the potential chances of misuse
- Collaborate with clients and co-workers to constantly improve sites with the latest Internet technology
- Effectively market Web and E-commerce sites
- Investigate the employment opportunities for Web developers, and be aware of self-employment opportunities

Specify the objectives to be reached by the addition of this program.

Dawson Community College is committed to addressing the educational needs of individuals and business entities within the local service area. Web Development and E-commerce have become critical to the survival and success of business and industry in eastern Montana.

In its mission statement, Dawson Community College is committed to creating and continuously improving accessible and effective learning environments for the lifelong educational needs of the diverse communities we serve. Web Development addresses two of our four purpose statements, specifically:

- Acquiring necessary occupational skills
- Promoting and providing life-long learning opportunities as outlined in the college mission and purpose statement

Specify in detail present faculty, facilities and equipment, and library holdings in support of this program, and compare them to known or anticipated minimum standards for accreditation.

Currently, DCC has four full-time instructors teaching computer application courses. Two of these instructors will teach the majority of the Web development computer courses. Each instructor will devote approximately half of his or her time to this program's courses. DCC has always had a strong art program, and is further strengthening the program with the addition of graphic design for the Web program.

Of the two Web development instructors, one currently holds an M.B.A. and the other a B.S. degree and has completed a Montana 4A Vocational Certificate in Computers. The instructors have strong computer and Web development work experience, and over ten years DCC or college teaching experience each. Some faculty training will be necessary to stay abreast of new technologies in the rapidly advancing area of Web development and E-commerce.

Computer equipment for all of DCC's faculty is replaced every three years with funds provided by the Technology Fees paid by students. Student computer labs are equipped with new computers on a three year rotation. DCC currently maintains an in-house Web server available for student Web projects.

The DCC's library and staff are exceptional and were commended in our recent report from Northwest Accreditation. Part of the current DCC building project includes a library expansion. Computers are available in the library for student use.

The library subscribes to a wide variety of on-line databases including the computer database on InfoTrac and LexisNexis. E-books about computer topics are available from NetLibrary, and the Proquest database includes further computer resources. All of these databases are available on campus as well as to DCC students online.

Detail additional faculty requirements as to qualifications, salary, and recruitment.

No additional faculty will be required at this time.

Submit budget information that describes estimated incremental revenues and expenditures associated with the program for a three- to five-year period; and estimated student enrollments for the same period of time.

The final page of this proposal presents the projected budget for the Web Development program.

Specify the number of students expected to graduate over a ten-year period.

Over a ten year period approximately 100 - 125 students can be expected to graduate.

List the new courses this program will add to the curriculum and specify the course requirements for the degree.

Following is the Plan of Study for this degree. ** new courses

Freshman Year

AR101	Foundations of Art	3
CA125	Intro to Computer Technology**	3
CA215	Intro to Effective Web Site Development	3
CM110	Information Literacy	1
CS151	Intro to Programming	4
MA100	Mathematics component	3
AR170	Graphic Design I**	3
BU125	Technical Writing**	3
CA140	Graphics Applications	3
CA235	Data Base Applications	3
CS160	Markup Languages and Scripts**	3

Sophomore Year

CA270	Intro to Flash Animation**	3
CA272	Web Page Aesthetics	3
CA276	Secure Transactions**	3
CS220	JAVA I- Object Oriented Programming**	3
CS230	Web Data Base Connectivity**	3
BU236	E-Commerce & E-Marketing**	4
BU206	Business Communication	3
CA278	Capstone Project/Certification Prep**	4
CA273	Web Server Administration**	3
PY/SOC	Psych, Soc, or Human Relations	3
Degree Total		64

Indicate the inter-departmental implications of additions to this program or supporting courses in departments which contribute to the new program of studies.

Web Development program majors are required to complete two art courses, one of which currently exists. The new Graphic Design course will be taught by an instructor with substantial industry experience.

Explain how the recommendation to submit this proposal to the Board of Regents was made: Include information about process followed, faculty involvement, employer or community input, market demand for graduates, employment prospects and starting salaries, as well as other justifications.

DCC has offered a semester course in Web Development since 1997, and recently included a second semester in response to student interest. The Web Development program was developed in response to service area employer requests including those from the agricultural community interested in value-added marketing opportunities. The vocational advisory committees for Office Technology and Computer Support have encouraged the development of this program. The members of the Management and Technology Department, the Academic Affairs Committee and the Board of Trustees of DCC have reviewed and approved the current program format.

Unique to Montana, the rural eastern counties must develop and rely on E-commerce and E-marketing for survival and growth. Given the population decline in eastern Montana, businesses are demanding the specialized training delivered through this program.

Web Development will provide value-added employment skills for rural, place-bound or agricultural producers seeking supplemental income. The Montana Department of Labor and Industry reports a projected increase of 28 percent for Computer Support Specialists in Montana by the year 2012. Web Development positions range up to \$46,000 per year. Self-employed Web Developer's hourly billing rate depends on region and qualifications with a range of \$10 to \$50 per hour.