

**Proposal for a New/Revised  
Major, Minor, Emphasis, Certificate**

**INSTRUCTIONS:**

- Prepare your proposal according to the following outline. (Hand written forms will not be accepted.)
  - Attach the new/current catalog copy with all affected changes clearly noted. List all courses and requirements, indicate new courses, deleted courses and/or course changes.  
Note: *A form must be submitted for each change.*
  - Submit the signed proposal to the Office of Academic Affairs. All forms must be completed in full with appropriate signatures to be added to the agenda. You will be contacted by the Curriculum Committee Coordinator with a date and time to present the proposal.
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I. Identification of Department(s)/Program(s): Web Site Development Minor

II. Is this a New or Revised Proposal?  New  Revised

Type of proposal:  Major  Minor  Emphasis  Certificate

Title of Proposal: \_\_\_\_\_

III. Rationale for the proposal:

- a. What research/evidence supports the need for the proposal?
- b. How will it support departmental philosophy/mission and existing curriculum? How will it support the philosophy/mission and existing curriculum of your School/College and the University?
- c. List the learning objectives/outcomes:
- d. How will these outcomes be assessed?
- e. Why is this being proposed?
- f. Will this proposal have an impact on other Webster departments, schools/colleges or campuses (including overseas)?  Yes  No. If yes, please provide a brief explanation.
- g. What Campus(es) will offer this?
- h. Does this proposal require a new course?  Yes  No. If yes, what course(s)?

- i. Does this proposal require a new prefix?  Yes  No. If yes, what prefix? \_\_\_\_\_

Note: A New Course Proposal Form and/or Course Change Form must be submitted with this proposal for any course(s) affected by this change (including those that are converting to the new prefix.)

**IV. Staffing Information:**

- a. What additions or changes in staffing are necessary for this proposal?
- b. How will this be coordinated?
- c. Who will coordinate this program? (name, title and department)

**V. Feasibility information:**

- a. What are the resources necessary for this proposal? (space, equipment, etc)
- b. What are the projections for enrollment and growth for this upon implementation?

**VI. Endorsements & Approvals:**

Please have the Chair of the Department/Committee, Dean of each School/College and other programs that may be affected by this proposal, review prior to submission to the Office of Academic Affairs.

Martha Smith  
Petitioner

Feb. 01, 2010  
Date

G. E. Cawms  
Chair of the Department/Committee

2/5/10  
Date

Benj. Akers  
Dean of the School/College

2/19/10  
Date

Shirley Bell  
Chair of the Curriculum Committee

2-16-10  
Date

**Distribution:**

Academic Affairs  
Registrar

Dean, School/College  
Chair, Department

Chair, Committee  
Academic Advising (UG)

# Mathematics and Computer Science

mation in a usable and understandable way. They combine their IT techniques with web and Internet skills to make the information accessible in a user-friendly format. Web information is often drawn from a database which insures that the information is always current.

Students in this program will learn how to design and implement databases and how to plan for new and modified information systems. Project management skills are introduced, which enable a project to be kept on-budget and on-time. Students will also learn how to organize data to provide managers the tools to make better decisions.

Graduates from this program will be comfortable talking with the most technical professionals and the people who are producing the content that is being presented on the web. Their skills will enable them to make decisions about using the right web technology in the right business setting. They will produce results that move the organization forward and will become key professionals in making it successful.

## Program Learning Outcomes

- Students will demonstrate critical thinking skills.
- Students will demonstrate the ability to solve problems related to the program content.
- Students will demonstrate an understanding of the concepts and principles of computer information systems.
- Students will be able to analyze, design and implement an information systems component using techniques and models from the information systems program.
- Students will be able to document an information system design including both user documentation and technical documentation.
- Students will be able to make a formal presentation of an information systems project including logical and physical modeling.

## Degree Requirements

57 required credit hours  
12 general education credit hours  
59 elective credit hours

At least 18 of the required 36 computer science credit hours must be taken at Webster University.

All upper-level courses must be taken at Webster University.

## Required Courses

COSC 1550 Computer Programming I	3 hours
COSC 1560 Computer Programming II	3 hours
COSC 1570 Math for Computer Science	3 hours
COSC 2610 Operating Systems	3 hours
COSC 2670 Telecommunications	3 hours
COSC 2810 Systems Analysis and Design	3 hours
COSC 3410 Computer Security	3 hours
COSC 3500 IT Project Management	3 hours
COSC 3750 Decision Support Systems Concepts	3 hours
COSC 4110 Database Concepts	3 hours
COSC 4120 Database Applications	3 hours
COSC 4810 Information System I	3 hours
COSC 4820 Information System II	3 hours

Students who do not have a second minor or certificate in web site design or web site development are required to take one set of the following courses:

### Set 1

COAP 2100 Web Technology Principles	3 hours
COAP 2130 Web Scripting	3 hours
COAP 2180 Introduction to XML	3 hours
COAP 3000 Dynamic HTML	3 hours
COAP 3110 Interactive Site Development	3 hours

COAP 3180 Web Databases 3 hours

### Set 2

COAP 2000 XHTML Programming	3 hours
COAP 2110 Web Animation	3 hours
COAP 2120 Web Editors	3 hours
COAP 2150 Design Principles I	3 hours
COAP 3120 Designing with Style Sheets	3 hours
COAP 3150 Design Principles II	3 hours

## Minor in Computer Applications

A minor in computer applications is defined as 18 credit hours of courses from the computer applications COAP course listings taken at Webster University.

Some courses from the computer science course listings may also be taken as part of the 18 credit hours with the permission of the department. Courses may not be used for both a minor and a certificate.

## Program Learning Outcomes

- Students will demonstrate critical thinking skills.
- Students will demonstrate the ability to solve problems related to the program content.
- Students will demonstrate a basic understanding and ability to use several common computer applications.
- Students will be able to create documents, worksheets or other work tools using computer applications from the program.

## Required Courses

Credit hours of COAP courses 18 hours

## Minor in Computer Science

A minor in computer science is defined as 18 credit hours of courses from the computer science COSC course listings taken at Webster University.

## Program Learning Outcomes

- Students will demonstrate critical thinking skills.
- Students will demonstrate the ability to solve problems related to the program content.
- Students will demonstrate a basic understanding of major concepts and principles of computer systems.
- Students will be able to design and build a simple computer program using techniques and models from the computer science program.
- Students will be able to document a computer program.

## Required Courses

Credit hours of COSC courses 18 hours

## Minor in Web Site Design

A minor in Web Site Design is defined as 18 credit hours of courses from the Web Site Design certificate program course listings taken at Webster University. This minor may be taken in lieu of the certificate program. Students may choose to receive either the minor or certificate but not both.

## Minor in Web Site Development

A minor in Web site development is defined as 18 credit hours of courses from the Web site development certificate program course listings taken at Webster University. This minor may be taken in lieu of the certificate program. Students may choose to receive either the minor or certificate but not both.

*see attached*

# Mathematics and Computer Science

## Certificate in Web Site Design

18 required credit hours

The courses offered in the Web site design certificate provide students with the skill necessary to design sites that are visually attractive and emphasize the human-computer interface aspects of Web sites. The content of the program emphasizes basic principles of attractive design and teaches students the techniques for using graphics on interactive, presentation, and commerce Web sites. Students are encouraged to use their creative skills and artistic ability to design pages that are unique, attractive, and effectively use both text and graphics for navigation and linking. The program includes practical experience with numerous hands-on and real-life projects.

As businesses and organizations are developing and maintaining Web sites at an astonishing rate, more artistic and design expertise is required for those who develop and maintain these sites. The Web site design certificate is intended to meet that presentation need.

### Course Requirements

COAP 2000 XHTML*	3 hours
COAP 2150 Design Principles I	3 hours
COAP 2170 Web Usability and Accessibility	3 hours
COAP 3120 Designing with Style Sheets	3 hours
COAP 3150 Design Principles II	3 hours

### Electives

COAP 2100 Web Technology Principles	3 hours
COAP 2110 Web Animation	3 hours
COAP 2120 Web Editors	3 hours
COAP 2160 Advanced Web Animation	3 hours

\*Students that can demonstrate HTML proficiency may choose a course substitute from the approved elective list.

All courses available via the Internet.

### Program Learning Outcomes

- Students will demonstrate critical thinking skills.
- Students will demonstrate the ability to solve problems related to the program content.
- Students will be able to explain the concepts and features necessary for Web site development and deployment.
- Students will design and build Web sites.
- Students will be able to demonstrate the ability to create user-centered Web sites.

## Certificate in Web Site Development

18 required credit hours

The courses offered in the Web site development certificate provide students with basic knowledge and skills necessary to design and develop professional Web sites. The content of the program emphasizes the technical development of the site, including the use of HTML programming, additional markup and scripting languages, and other tools to manipulate data on a Web site.

Students are encouraged to use their creative skills and artistic ability as well, to design pages that are unique, attractive, and effective in communicating information. The program includes practical experience with numerous hands-on and real-life projects.

As businesses and organizations are developing and maintaining Web sites at an astonishing rate, more technical and programming expertise is required for those who develop and maintain these sites. The Web site development certificate is designed to meet that particular need.

### Course Requirements

COAP 2000 XHTML Programming (Prerequisite)	3 hours
COAP 2100 Web Technology Principles	3 hours
COAP 2150 Web Scripting	3 hours
COAP 2180 Introduction to XML	3 hours
COAP 3000 Dynamic HTML	3 hours
COAP 3110 Interactive Site Development	3 hours
COAP 3180 Web Databases	3 hours

All courses available via the Internet.

### Program Learning Outcomes

- Students will demonstrate critical thinking skills.
- Students will demonstrate the ability to solve problems related to the program content.
- Students will demonstrate an understanding of the concepts and principles of Web application development and deployment.
- Students will be able to design and implement Web applications using the knowledge gained from the program.
- Students will be able to test and document a Web application.

## Computer Applications Course Listings

### COAP 1010 Beginning Application Topics (3)

Introduces a variety of topics under different subtitles. May be repeated for credit if content differs.

### COAP 1020 Introduction to Computer Applications (3)

This course is appropriate for any student interested in using computer applications in an academic, professional, or personal setting. It provides an introduction to word processing, electronic spreadsheet, and database management software.

### COAP 1040 Graphic Utilities I (3)

Gives the student hands-on experience with a variety of graphics software. Students generate computer art of various types and evaluate software packages.

### COAP 1140 Graphic Utilities II (3)

Builds on the knowledge gained in COAP 1040 Graphic Utilities I. Focuses on animation and/or graphics suitable for the publishing industry. Prerequisite: COAP 1040 or permission of the instructor.

### COAP 1200 Introduction to Computers in Education (3)

Examines the equipment, the uses, and the potential of computers in K-12 education. The material is presented by a combination of hands-on practice, demonstrations, lectures, and discussions.

### COAP 2000 XHTML Programming (3)

HTML is the programming language used to develop home pages on the Internet. This course covers the most current tools available for developing HTML documents and posting pages on the World Wide Web. This course covers the basics of XHTML (Extensible HTML).

### COAP 2010 Applications Topics (3)

Covers a variety of computer applications and Web topics appropriate for students with some computer experience. May be repeated for credit when content differs. Prerequisites vary by topic.

### COAP 2020 Desktop Publishing (3)

Designed to develop proficiency in page layout and design by utilizing the latest desktop publishing software, including related word processing and graphics tools. Emphasizes successful completion of a publication by the student. Prerequisite: COAP 1020.

### COAP 2100 Web Technology Principles (3)

This course will focus on the core technologies students need to know