



UMSL is a NSA/DHS National Center of Academic Excellence in Cyber Defense Education



College of Arts and Sciences

Department of Mathematics and Computer Science

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## Undergraduate Certificate in Internet and Web

The undergraduate Certificate in Internet and Web is a six-course (18 credit hours) program. It is designed to provide a broad training in technologies related to the Internet and Web, with flexibility allowing a student to satisfy specific interests. A minimum GPA of 2.5 is required for admission.

A minimum of four courses must be taken in residence in the [Department of Mathematics and Computer Science at UMSL](#). Courses may be substituted with the permission of the program director.

In addition to university scholarships, the department awards about \$40k annually in mostly [merit-based scholarships](#).

<b>Required core courses</b>		<b>4</b>
<a href="#">CMP SCI 3010</a>	Web Programming	
<a href="#">CMP SCI 4010</a>	Advanced Web Development with Java	
<a href="#">CMP SCI 4011</a>	Client-Side Technologies	
<a href="#">CMP SCI 4012/5012</a>	Introduction to Enterprise Web Development	
<b>Choose two of the electives</b>		<b>2</b>
<a href="#">CMP SCI 4020/5020</a>	Introduction to Android Apps: Android Fundamentals	
<a href="#">CMP SCI 4030/5030</a>	Introduction to Intelligent Web	
<a href="#">CMP SCI 4610</a>	Database Management Systems	
<a href="#">CMP SCI 4730</a>	Computer Networks and Communications	
<a href="#">CMP SCI 4750/5750</a>	Introduction to Cloud Computing	
<a href="#">INFSYS 3846</a>	E-Commerce	
<b>Total courses (credit hours)</b>		<b>6(18)</b>

For more information visit [umsl.edu/cs](http://umsl.edu/cs).

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For electronic version of this document and more info visit <http://www.umsl.edu/cs/certificates>

UMSL|NOW : All courses available in the evening - some every semester some on rotation.