

Internet Developer Certificate – IDC

Program Number: 90-152-11

Certificate

Information Technologies Program Cluster

School of Agriscience and Technologies

Program offered at Madison Campuses

For information call: (608) 246-6800
(800) 322-6282 ext. 6800

About the Program

The Internet Developer Certificate is a sequence of connected courses exploring Internet software development, including Javascript, PHP/MySQL, Java, Ajax, Drupal, Android, and Flash development. This certificate is open to graduates of a computing program or anyone with equivalent field experience.

These are three-credit courses, meeting two hours in the classroom and two hours in the lab each week for 17 weeks. All sections are in the late afternoon and evening. Class work stresses hands-on programming through projects, and students are welcome to work on assignments at home or at work if they have the tools, which are mostly free (the Android SDK or PHP, for example).

Completing the certificate takes two years taking one course per semester. The express track allows completion in one year taking two courses per semester.

Although four courses must be taken to obtain the certificate, qualified "special students" are welcome to take individual classes, room permitting (a certain number of seats are reserved for certificate students). Applications are being accepted on a rolling basis.

Obtaining the certificate requires taking four courses. Intro to Internet Programming is required and should be taken first.

For more information, please contact [Mike Bertrand](#).

Curriculum

Courses	Credits	Hrs/week	
		Lec	Lab
10-152-187 Drupal Development – IDC	3	2	2
10-152-188 Intro to Internet Programming – IDC	3	2	2
10-152-189 Android Applications Development – IDC*	3	2	2
10-152-190 Java Programming – IDC*	3	2	2
10-152-192 Ajax, XSLT, and JQuery – IDC	3	2	2
10-152-195 Advanced Android Development – IDC**	3	2	2
10-152-196 PHP and MySQL Programming – IDC**	3	2	2
10-152-199 Flash and Flex Programming – IDC**	3	2	2
Total	12		

Complete 4 courses (12 credits) from the list of courses above.

*Offered fall semester only

**Offered spring semester only

Pre-Admission Skills

Certificate students are expected to have some experience in software development.

Unique Requirements for Admission

The certificate is open to graduates of a computing program or anyone with equivalent field experience.

Certificate Application Process

To apply, see: Apply Online (on the Madison College website). [Create an ApplyWeb account](#) and follow the [instructions](#) to complete the [Online Certificate Application](#) before the [application deadline](#). Submit the \$15 non-refundable fee (payable by credit card, debit card or electronic check) with your application. Applicants may submit more than one certificate application per term using the Online Certificate Application; the same fees apply for each additional application.

Unique Requirements for Completion

The certificate will be awarded upon completion of the requirements with a minimum of a 2.0 grade average and no course grade lower than a C. The certificate will be awarded when completion of all requirements is verified after the semester the last course has been completed.



Courses

10-152-187 Drupal Development – IDC 3 credits

This course takes up all aspects of Drupal Open Source development, starting with installation, configuration, and base features. Core functions and modules are addressed, including users, content types, themes, menus, and jQuery. Module development with PHP is the central topic of this class, including with the form API against MySQL. Students should be familiar with HTML and CSS and be ready to program in PHP. This course is an elective for the Internet Developer Certificate.

10-152-188 Intro to Internet Programming – IDC 3 credits

Introduction to HTML programming and client-side scripting. HTML topics include basic webpage layout and design, graphics, tables, forms, style sheets and the Document Object Model/DHTML. JavaScript programming is covered intensively, including scripting basics, dynamic HTML production, arrays and validating user input. After these foundations, students study Cascading Style Sheets (CSS), XML, Ajax, and ASP. This course is required for the Internet Developer Certificate and should be taken first.

10-152-189 Android Applications Development – IDC 3 credits

This course introduces developing applications for Android devices. All the required software is free, including the Android emulator. It is not necessary to own an Android device, though the applications developed in the course can be deployed to one. Basic familiarity with Java and Eclipse (or willingness to learn them quickly) is assumed. After preliminaries with Google Docs and Google Maps, we take up Android layout and input widgets, both in XML and programmatically; menus and dialogs; gesture detection; graphics and the Android drawing API; database access with SQLite and file IO; location-based services (geo-location); and device dependency issues. Note: This course is an elective for the Internet Developer Certificate. Prerequisite: Must have obtained a grade of 'C' or better in one of the following: Advanced Visual Basic.NET Programming, 10-152-102; Advanced Java Programming, 10-152-112; C# Programming in Visual Studio.NET, 10-152-141; Ruby on Rails Development 10-152-157; or Java Programming - IDC, 10-152-190.

10-152-190 Java Programming – IDC 3 credits

Introduction to the Java programming language from an object-oriented point of view. Students start with Java basics: data types, class construction, control structures, method writing and elementary event handling. Further topics include Java components and layout, mouse handling, graphics, string manipulation, remote data access, file I/O, network programming and database work. Java 2 and Swing are covered extensively. Students write device independent applications as well as Internet applets. This course is an elective for the Internet Developer Certificate.

10-152-192 Ajax, XSLT, and JQuery – IDC 3 credits

This course takes up programming web pages with Javascript, including through the XML DOM API and jQuery. Ajax is a special focus, including against MySQL and server-side PHP scripts. The central role of CSS is emphasized throughout. Additional topics include Web Services, XSLT, RSS, and Google maps. Note: This course is an elective for the Internet Developer Certificate.

10-152-195 Advanced Android Development – IDC

This is a second course in Android application development, assuming a background in Android development and taking up more advanced topics, including geo location, web services and network programming generally, game programming, HTML 5 strategies, and graphics programming. More complex user interfaces are considered, including multi-activity applications. Note: This course is an elective for the Internet Developer Certificate. Prerequisite: 10-152-189 Android Applications Development.

10-152-196 PHP and MySQL Programming – IDC 3 credits

This course is an introduction to PHP and MySQL and develops the basics of PHP programming, including variables, control, functions, arrays, classes and file I/O. Intermediate level SQL is taken up as well. Students develop a robust shopping cart application for an online bookstore, including initial database construction using web services, a web search engine, user authentication, payment handling through Paypal's sandbox and transaction storage. Note: This course is an elective for the Internet Developer Certificate.

10-152-199 Flash and Flex Programming – IDC 3 credits

This course introduces ActionScript 3.0 programming in Adobe Flash and Flex. After a brief introduction to the drawing tools, we take up writing event handlers and drawing with ActionScript. All major programming constructs are considered, including variables, loops, functions, object-oriented concepts, and file I/O (including XML). Programmatic Flash animation is a continuing thread. Additional topics include Flash forms, games, and drag-and-drop techniques. Note: This course is an elective for the Internet Developer Certificate.

More detailed and updated information on this program may be available at: madisoncollege.org. The college reserves the right to make changes in the regulations and courses announced in this publication without notice.

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Rev. 03/12*