

Ruby On Rails

Course Outcome Summary

Course Information

Organization	Madison Area Technical College
Developers	Eric Knapp
Development Date	6/29/2007
Course Number	10-152-157
Instructional Level	College Parallel
Potential Hours of Instruction	54
Total Credits	3

Description

Introduces the student to dynamic web page development using the Ruby on Rails web development framework. The course will also use the popular MySQL open source database management system. Topics will include an introduction to the Ruby programming language, install Ruby and Ruby on Rails, an overview of the Rails framework, ActiveRecord basic, ActionController coding, Action Views, AJAX and the Web 2.0, ActionMailer basics, security, deployment, and scaling. Students will produce a very modern web application that can be adapted to many professional web development needs.

Target Population

Gives developers the skills needed to develop applications using Rails/Ruby on Rails

Types of Instruction

Instruction Type	Contact Hours	Credits
Classroom Presentation	54	3

Textbooks

Dave Thomas, with Chad Fowler and Andy Hunt. *Programming Ruby The Pragmatic Programmers Guide, Second Edition*. ISBN: 0-9745140-5-5.

Dave Thomas, and David Heinemeier Hansson with Leon Breedt, Mike Clark, James Duncan Davidson, Justi. *Agile Web Development with Rails*. Edition: 2nd. ISBN: 0-9776166-3-0.

Prerequisites

Grade of C or better in PHP and MySQL Development (10-152-155)

Competencies

- A. **Set up Rails environment**
You will demonstrate your competence:
A.1. on a project
Your performance will be successful when:
A.1. you demonstrate installed Rails environment to instructor

A.2. you compile Ruby program

B. Create Ruby on Rails project

You will demonstrate your competence:

B.1. by project

Your performance will be successful when:

B.1. you modify the appearance of a control

B.2. you demonstrate the appropriate usage of methods

B.3. you demonstrate the usage of variables and constants including data types

B.4. you demonstrate Ruby repetition structures including For Next, Do While, Do Until

B.5. you incorporate efficient logic

B.6. you explain the various methods used to bind data to Ruby controls

B.7. you produce proper output results

C. Adapt a web design to a Rails application

You will demonstrate your competence:

C.1. by project

Your performance will be successful when:

C.1. you demonstrate the usage of instance variables, properties, static variables, constructors, this reference, and scope identifiers

C.2. you demonstrate object-oriented programming concepts including polymorphism, inheritance, and data encapsulation within a Ruby program

C.3. you demonstrate the usage of Ajax to call Ruby code

C.4. you demonstrate Ruby repetition structures including For Next, Do While, Do Until

C.5. you demonstrate Ruby selection structures including Select/Case and If/Then/Else & Switch

C.6. you demonstrate creation of reports out to the web using Ruby

C.7. you produce proper output results

D. Complete the design and coding of a significant new web application

You will demonstrate your competence:

D.1. by project

D.2. by giving a project presentation to class

Your performance will be successful when:

D.1. you demonstrate the usage of instance variables, properties, static variables, constructors, this reference, and scope identifiers

D.2. you demonstrate object-oriented programming concepts including polymorphism, inheritance, and data encapsulation within a Ruby program

D.3. you demonstrate the usage of Ajax to call Ruby code

D.4. you demonstrate Ruby repetition structures including For Next, Do While, Do Until

D.5. you demonstrate Ruby selection structures including Select/Case and If/Then/Else & Switch

D.6. you demonstrate creation of reports out to the web using Ruby

D.7. you produce proper output results

D.8. you present your project to a group of users

E. Utilize latest documentation websites and software programs to gather relevant

information

You will demonstrate your competence:

E.1. by project

E.2. by blogs

Your performance will be successful when:

E.1. you create at least 4 favorites in Internet Explorer with custom folders

E.2. you utilize Ruby on Rails blogs and websites to find specific topic information

E.3. you utilize blogs to communicate ideas and problem areas by posting at least once a week

E.4. you operate Rails software program effectively