

Bossier Parish Community College  
Master Syllabus

**Course Prefix and Number:** CIT 259

**Credit Hours:** 3-3-0

**Course Title:** Modern Web Application Development

**Course Prerequisites:** CIT 102 and CIT 149 and CIT 130

**Textbook(s):** *Programming Ruby (2<sup>nd</sup> Edition): The Pragmatic Programmer's Guide*. Dave Thomas, Chad Fowler, Andy Hunt. ISBN 978-0-9745-1405-5.

**E-Book:** <http://pragprog.com/book/ruby/programming-ruby>

**Course Software:** All course software is provided with the book.

**Course Description:** Students will learn the fundamentals of web development, such as Relational Database Management Systems (RDBMS like MySQL, PostgreSQL, etc) and modern web programming patterns primarily focusing on the Model View Controller pattern. Other fundamentals such as working in a distributed team environment using modern source control, deployment mechanisms, and an overview of cloud computing will also be taught. Because of the web-based nature of the course, JavaScript will also be covered for creating interactive web views.

**Learning Outcomes:**

At the end of this course, the student will:

- A. recognize the elements of the Ruby programming language;
- B. use distributed source control systems;
- C. recognize the basics of front end development with HTML and CSS;
- D. perform with the Rails web framework; and
- E. identify elements of the JavaScript programming language.

To achieve the learning outcomes, the student will or will be able to:

(The letter designations at the end of each statement refer to the learning outcome(s).)

- 1. create, build, and execute a Ruby program using object oriented programming (A);
- 2. use various control structures such as loops and conditional statements (A);
- 3. (read-evaluate-print-loop) using a Ruby REPL run and test code (A);
- 4. use and package libraries for use and created by others (gem) (A);
- 5. manage a personal source code repository (B);
- 6. manage multiple development branches of said repository (B);
- 7. create web pages using HTML5 elements (C);
- 8. layout elements of a web page using CSS (C);
- 9. understand the MVC paradigm as a means to design apps (D);
- 10. create, retrieve, and update information from databases for their apps (D);
- 11. manage library dependencies in their Rails apps (D);
- 12. create interactive web views (E);
- 13. programmatically change styling of elements on a web page; (E); and

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14. execute asynchronous request between web pages and servers to retrieve and send content (E).

**Course Requirements:**

1. A student must successfully complete the course with an average of 70% or above on the combined learning outcomes.
2. Each student is expected to attend classes regularly; excessive unexcused absences constitute grounds for suspension (refer to the student handbook for attendance policies).

**Course Grading Scale:**

90 – 100 = A  
80 – 89 = B  
70 – 79 = C  
60 – 69 = D  
0 – 59 = F

**Attendance Policy:** The college attendance policy is available at <http://www.bpcc.edu/catalog/current/academicpolicies.html>

**Course Fees:** This course is accompanied with an additional fee for supplemental materials.

**Nondiscrimination Statement:** Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

**COORDINATOR FOR SECTION 504 AND ADA**

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**Equity/Compliance Coordinator**

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