

# Intro to Ruby Programming

GoSkills online course syllabus

Thursday, January 23, 2025

**Skill level**

Beginner

**Lessons**

41

**Accredited by**

CPD

**Pre-requisites**

None

**Video duration**

2h 39m

**Estimated study time**

21h for all materials

**Instructor**

John Elder

## Introduction

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- 1** **Course Introduction**  
What to expect from this course.
- 2** **Install Sublime and Git Bash**  
How to install Sublime Text and Git Bash Terminal for your development environment.
- 3** **Install Ruby**  
Installing Ruby is easy with RubyInstaller.org
- 4** **Hello World and c9 Transition**  
In this lesson we'll create our first Ruby program!

## Ruby Programming Basics

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- 5** **Comments and Errors**  
How to comment code and deal with errors.
- 6** **Arithmetic Operators**  
How to do basic math with Ruby.
- 7** **Floats and Integers**  
Understanding the difference between floats and integers and when to use each.

8 Comparison Operators  
How to compare two or more items with Ruby.

9 Variables  
Storing information in variables is easy!

10 Assignment Operators  
How to assign items to variables (and other things).

11 Getting User Input with Gets  
Allowing the user to interact with your program.

12 Conditional Statements  
How to use if/else/elsif statements in Ruby.

13 Multiple Conditional Comparison Operators  
Sometimes you need to compare more than two things, here's how.

14 String Manipulation  
Modifying a string is simple with these string manipulation tips.

## Intermediate Ruby Concepts

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15 Arrays  
What are arrays and how do we create and use them?

16 Multi-Dimensional Arrays  
An array of other arrays is multi-dimensional.

17 While Loops  
Using while loops in Ruby.

18 Until Loops  
Looping until a condition is met using until loops.

19 For and Each Loops  
Understanding for and each loops, and when to use them.

20 FizzBuzz!  
Fizzbuzz! is a popular interview question/quiz. Let's build it!

21 Hashes  
What is a hash, and how do you create and use it?

22 Hash Manipulation  
Adding and removing items from a hash.

23 Methods  
Understanding methods in Ruby.

24 Methods Part 2  
More on methods...

25 Random Numbers  
How to generate random numbers with Ruby.

## Advanced Ruby Concepts

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26 Classes  
What is a class and how do we use them?

27 Classes Part 2  
More on classes and how to use them.

28 Instance Variables  
What is an instance variable and how is it different from a regular variable?

29 Class Getters  
What is a getter and how do we use it?

30 Class Setters  
How to create a class setter and why you should.

31 Understanding Attr\_accessor  
Let Ruby create your getters and setters automatically with attr\_accessor.

- 32** **Class Inheritance**  
Inheriting information from other classes.
- 33** **Opening a File**  
How to open another file in your Ruby file.
- 34** **Open a File into an Array**  
We'll learn to output the contents of a file into an array.
- 35** **Open File Modes**  
There are several "modes" for opening files. Learn them all here.
- 36** **Write to a File**  
We'll learn to write and append data to a file.
- 37** **Adding Third-party Functionality with Gems**  
How to install and use a third-party gem in your program.

## Fun with Ruby - Build a Math Flashcard Game!

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- 38** **Building a Flashcard Game**  
Let's use what we've learned to build a math flashcard game!
- 39** **Flashcard Addition Method**  
How to handle the addition flashcards.
- 40** **Flashcard Subtraction, Multiplication, Division Methods**  
How to handle subtraction, multiplication and division flashcards.
- 41** **Creating a Menu**  
Allow the user to choose which type of flashcard game to play with a menu.

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