

# **SYLLABUS: COURSE # 04:547:202-04**

## **OBJECT-ORIENTED PROGRAMMING**

### **FALL 2015**

## **Course Overview**

### **Instructor**

Instructor: Ismael Lara

Email address: [Ismael.Lara@rutgers.edu](mailto:Ismael.Lara@rutgers.edu) (preferred)

Phone number: 646-389-5722

Office hours: By appointment and 30 minutes after class

### **Course Delivery**

This face-to-face course meets in Room CI-119 on Tuesdays from 7:40 PM – 10:30 PM. We will also have a course site in Sakai to supplement the course. To access the Sakai site, please visit [sakai.rutgers.edu](http://sakai.rutgers.edu). For more information about course access or support, contact the Sakai Help Desk via email at [sakai@rutgers.edu](mailto:sakai@rutgers.edu) or call 848-445-8721.

### **Course Description**

This course introduces students to the principles of object-oriented analysis, design and programming. The focus is on developing creative thinking for analyzing a problem domain and designing a solution, and on using the Java programming language (or other appropriate programming language) to implement it.

### **Prerequisites**

ITI 202 is one of the four required courses for the ITI major.

Prerequisites for this course include ONE of the following:

- [04:547:201 Introduction to Computer Concepts] OR
- [01:198:111 Introduction to Computer Science] OR
- [01:198:170 Computer Applications for Business]

## Important Dates

Officially, the Fall semester at Rutgers University begins on 9/1/2015 and ends on 12/22/2015, which includes the Reading and Final Exam periods.

Since this course has no final exam, our last class will be on 12/8/2015.

The last day to DROP this course WITHOUT a “W” grade is 9/8/2015.

The last day to ADD a class is 9/9/2015.

The last day to DROP this course WITH a “W” grade is 10/26/2015.

The last day to WITHDRAW from the semester is 11/23/2015.

## Course Learning Objectives

By the end of this course, students should successfully be able to:

- Apply critical thinking to analyze the requirements of a simple application and build a model of the problem;
- Use the Unified Modeling Language (UML) and object-oriented design principles to develop a conceptual solution;
- Use the Java programming language (or other appropriate programming language) to implement the designed solution;
- Use visual programming tools to sketch and build simple user interfaces;
- Apply testing and debugging to ensure the correctness and efficiency of the application.
- Apply critical thinking to analyze the requirements of a simple application and build a model of the problem;
- Use the Unified Modeling Language (UML) and object-oriented design principles to develop a conceptual solution;
- Use the Java programming language to implement the designed solution;
- Use visual programming tools to sketch and build simple user interfaces;
- Apply testing and debugging to ensure the correctness and efficiency of the application.

## Course Materials

### Required Text(s)

Java Concepts: Early Objects (7th Edition). Cay S. Horstmann. ISBN 978-1-118-43112-2.

## Technology Requirements

### Technology skills necessary for this specific course

- Navigating Sakai to access supplementary course site
- Downloading and installing the Eclipse Integrated Development Environment (IDE)

### Required Equipment

- While some of the work in this course will be completed in class, there will be a significant amount of work required outside of class time. In order to complete that work, you will either need access to a computer lab (that already has the Eclipse IDE installed), or you will need to complete the work on your personal computer.
- If using a personal computer, it should be either a current Mac (OS X) or PC (Windows 7 or newer) with high-speed Internet connection.

### Required Software

- Microsoft Word
- PDF Reader, such as [Adobe Reader](#)
- [Eclipse IDE for Java Developers](#)
- Recommended Internet Browsers: [Mozilla Firefox](#) or [Google Chrome](#)

## Assessment

### Assignment Summary

Below are the assignments required for this course and the value of each assignment to the course grade as a whole. Please refer to the course schedule (below) for specific due dates.

Assignment	Percentage
Weekly Individual Assignments	35
Quizzes	25
Final Team Project + Presentation	25
In-Class Group Assignments	10
Class Participation	5

<b>Total</b>	<b>100</b>
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See course schedule, below, for due dates.

## Assignment Overview

### Weekly Individual Assignments

- These weekly assignments will be a combination of theoretical questions and programming exercises. It is expected that you will complete these assignments on your own.
- Any programming components will be graded using the Programming Assignment rubric available in Sakai.

### Quizzes (2)

- There will be a total of 2 Quizzes during the semester. Please see the Schedule at the end of this Syllabus for exact dates.

### Final Team Project + Presentation

- In the final weeks of the course, you will assemble into teams and write a text adventure game similar to Colossal Cave Adventure or Frotz (both available on iOS and Android). On the last day of class, you will present your projects to the class. Both your presentation and code together will count towards your Final Team Project grade.
- The code will be graded using the Programming Assignment rubric available in Sakai.
- Your team presentation will be graded using the Group Presentation rubric available in Sakai.

### In-Class Group Assignments

- Many times, the best teachers are your fellow classmates. The purpose of these in-class group assignments is to apply what you have learned, using help from other students.

### Class Participation

- Our class meets once a week for 3 hours. Because there is so much content that we cover in each class, it is very important to make every effort to attend and participate. As part of your participation grade, at the end of each class I will ask you to complete a quick “Exit Exercise” comprised of 3 questions – what did you like, what did you not like, and do you have any additional questions not asked in class. I will then use this feedback to prepare for our next class.

## Grading Scale

Grade	Range	Description
A	90 – 100	Outstanding and excellent work of the highest standard, mastery of the topic, evidence of clear thinking, good writing, work submitted on time, well organized and polished.
B+	85 – 89	Very good work, substantially better than the minimum standard, very good knowledge of the topic; error free.
B	80 – 84	Good work, better than the minimum standard, good knowledge of the topic.
C+	75 – 79	Minimum standard of work, adequate knowledge of the topic.
C	70 – 74	Work barely meeting the minimum standard, barely adequate knowledge of the topic; errors.
D	65 – 69	Work not up to standard, disorganized, many errors.
F	Below 65	Unacceptable, inadequate work.

## Student Participation Expectations

Participation accounts for 5% of your grade. The following is a summary of your expected participation:

- Attendance**  
 You are expected to attend all classes. If you expect to miss one or two classes, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> to indicate the date and reason for your absence. An email will automatically be sent to me from this system. You are responsible for any material discussed in class the day you were absent.
- “Exit Exercise”**  
 The “Exit Exercise” was discussed in the Class Participation section.
- Religious Observances**  
 It is University policy to excuse without penalty students who are absent because of religious observance, and to allow the make-up of work missed because of such absence. You are advised to provide **timely notification** to me about necessary absences for religious observances and are responsible for making up the work or exams according to an agreed-upon schedule.
- Time Commitment**

To be successful in this course, you should plan to dedicate approximately 8-10 hours per week to this class.

- **Office Hours**

Office hours are available by appointment, and 30 minutes after each class.

## Discussion and Communication Guidelines

The following are my expectations for how we should communicate as a class, both in our class sessions and online via Sakai. Above all, please remember to be respectful and thoughtful.

- **In class:** Please feel free to ask questions! If something seems unclear to you, it is likely that others have the same question. If you have a question of a more personal nature, I would recommend asking after class or making an appointment to speak privately with me.
- **Discussion Forum in Sakai:** You will inevitably run into issues while working on your assignments outside of class. Use the forum in Sakai to ask me any questions, and be sure to follow these guidelines:
  - While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. Informality (including an occasional emoticon) is fine for non-academic topics. Please also refrain from using all CAPITAL LETTERS, as this is often interpreted as shouting.
  - Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online. Treat your instructor and fellow students with respect at all times, and in all communications.

## Support and Policies

### Late Work and Make-up Exams

Unless prior arrangements have been made, late assignments will receive a 25% penalty per day, up to a maximum of 3 days. So if the assignment is due today at 5 PM, then if you submit by 5 PM tomorrow (1 day late), the highest grade you can get is 75%, by 5 PM the following day (2 days late) is 50%, by 5 PM the following day (3 days late) is 25%, and it will not be accepted after that (note that these days include weekends). Late assignments must be emailed to me and cannot be submitted via Sakai.

Unless prior arrangements have been made, quizzes cannot be made up.

## Faculty Feedback and Response Time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can email sakai@rutgers.edu or call 848-445-8721 if you have a technical problem.)

### Grading

Grades will typically be returned within one week of the due date, except in the case of an emergency.

You have **1 week** to dispute any grades, which must be done via email (see below for email guidelines). The email should contain the following:

- The assignment name
- Specific question(s) that you feel deserve a higher grade
- Correct answer
- Your answer
- An explanation of why your answer should receive a higher grade

### Email

I prefer that most communication occur in class, or via the Sakai Discussion Forum, where other students may benefit from questions. However, I realize that there are instances where email may be necessary.

In general, I will reply to emails within **24 hours on weekdays**, given the following:

- You have emailed me from your Rutgers email account
- You have included your first and last name in the body of your email
- You have included the course number (ITI 202) in the subject line of the email

I cannot guarantee that you will receive a response to your email if these guidelines are not met.

If several students email me about the same topic, I may choose to address it in an announcement to the class, rather than responding individually to each student.

### Discussion Board

There will be a Discussion Board available within Sakai for you to ask questions. Typically, you can expect a response within 24 hours on weekdays.

## Academic Integrity

The consequences of scholastic dishonesty are very serious. Please review the [Rutgers' academic integrity policy](#).

Academic integrity means, among other things:

- Develop and write all of your own assignments, unless explicitly permitted to work with others (e.g., team assignments).
- Do not look over at the exams of others or use electronic equipment such as cell phones or MP3 players during exams.
- Do not fabricate information or citations in your work.
- Do not facilitate academic dishonesty for another student by allowing your own work to be submitted by others (including code).
- Do not reuse work that has been submitted to another class or section for grading.

If you are in doubt about any issue related to plagiarism or scholastic dishonesty, please discuss it with your instructor. At the instructor's discretion, work presented in this course is subject to verification of originality, using TurnItIn ([www.turnitin.com](http://www.turnitin.com)).

Other sources of information to which you can refer include:

- [Rutgers' Academic Integrity website](#)
- [Multimedia presentation 1 about academic integrity](#)
- [Multimedia presentation 2 about academic integrity](#)
- [Code of Student Conduct](#)
- [Eight Cardinal Rules of Academic Integrity](#)

## Academic Support Services

- Rutgers has a variety of resources for academic support. For more information, check the [Academic Support website](#).
- Rutgers has Learning Centers on each campus where any student can obtain tutoring and other help. For information, check the [Learning Center website](#).
- Rutgers also has a Writing Center where students can obtain help with writing skills and assignments. Learn more at the [Writing Center website](#).
- Many library resources are available online. Assistance is available through phone, email, and chat. For information, check the [Rutgers Libraries website](#).



## Rutgers Health Services

- Rutgers Health Services is dedicated to health for the whole student body, mind and spirit. It accomplishes this through a staff of qualified clinicians and support staff, and delivers services at a number of locations throughout the New Brunswick-Piscataway area. For more information, check the [Rutgers Health Services website](#).

## Accommodations for Accessibility

### Requesting accommodations

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation. More information can be found in the [Documentation Guidelines](#) section of the [Office for Disability Services](#) website.

If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the [Registration Form](#) on the [Office for Disability Services](#) website.

Go to the [Student section of the Office of Disability Services](#) website for more information.

## Accessibility and Privacy Links

### Accessibility Statements

[Blackboard](#)

[eCollege](#)

[Moodle](#)

[Sakai](#)

### Privacy Policies

[Blackboard](#)

[eCollege](#)

[Moodle](#) 

[Sakai](#) 

## Course Schedule and Deadlines

The schedule below is subject to change. An updated schedule will be posted as needed.

Week	Dates	Module 1: Fundamentals Topics, Readings, Assignments, and Deadlines
1	September 1	<p><b>Introduction, Eclipse Setup, &amp; Java</b></p> <p><b><u>IN-CLASS:</u> Group Assignment # 1 DUE @ 11:30 PM</b></p> <p><b><u>POST-CLASS:</u> (1) Weekly Assignment 1 DUE 9/15 @ 5 PM</b></p> <p>(2) Set up Eclipse &amp; Buy Text Book</p> <p>(3) Reading: Horstmann, Chapter 1, Chapter 2 (except 2.9 &amp; 2.10)</p>
-	September 8	No class. (Rutgers runs on Monday schedule.)
2	September 15	<p><b>Using Objects (Ch 2)</b></p> <p><b><u>IN-CLASS:</u> Group Assignment # 2 DUE @ 11:30 PM</b></p> <p><b><u>POST-CLASS:</u> (1) Weekly Assignment 2 DUE 9/22 @ 5 PM</b></p> <p>(2) Reading: Horstmann, Chapter 3 (except 3.8)</p>
3	September 22	<p><b>Implementing Classes (Ch 3)</b></p> <p><b><u>IN-CLASS:</u> Group Assignment # 3 DUE @ 11:30 PM</b></p> <p><b><u>POST-CLASS:</u> (1) Weekly Assignment 3 DUE 9/29 @ 5 PM</b></p> <p>(2) Reading: Horstmann, Chapter 4</p>
4	September 29	<p><b>Fundamental Data Types</b></p> <p><b><u>IN-CLASS:</u> Group Assignment # 4 DUE @ 11:30 PM</b></p> <p><b><u>POST-CLASS:</u> (1) Weekly Assignment 4 DUE 10/6 @ 5 PM</b></p> <p>(2) Reading: Horstmann, Chapter 5</p>
5	October 6	<p><b>Decisions</b></p> <p><b><u>IN-CLASS:</u> Group Assignment # 5 DUE @ 11:30 PM</b></p> <p><b><u>POST-CLASS:</u> (1) Weekly Assignment 5 DUE 10/13 @ 5 PM</b></p> <p>(2) QUIZ 1 (WEEKS 1-4)</p> <p>(3) Reading: Horstmann, Chapter 6</p>

<b>Week</b>	<b>Dates</b>	<b>Module 2: Loops, Arrays, and I/O Topics, Readings, Assignments, and Deadlines</b>
<b>6</b>	<b>October 13</b>	<b>Loops (WebMeeting)</b> <b><u>POST-CLASS:</u> (1) Weekly Assignment 6 DUE 10/20 @ 5 PM</b> <b>(2) Reading: Horstmann, Chapter 6</b>
<b>7</b>	<b>October 20</b>	<b>More Loops (Online video)</b> <b><u>POST-CLASS:</u> (1) Weekly Assignment 7 DUE 10/27 @ 5 PM</b> <b>(2) Reading: Horstmann, Chapter 7</b>
<b>8</b>	<b>October 27</b>	<b>Arrays and Array Lists</b> <b><u>IN-CLASS:</u> Group Assignment # 6 DUE @ 11:30 PM</b> <b><u>POST-CLASS:</u> (1) Weekly Assignment 8 DUE 11/3 @ 5 PM</b> <b>(2) Reading: Horstmann, Chapter 11</b>
<b>9</b>	<b>November 3</b>	<b>Input/Output and Exception Handling</b> <b><u>IN-CLASS:</u> Group Assignment # 7 DUE @ 11:30 PM</b> <b><u>POST-CLASS:</u> (1) Weekly Assignment 9 DUE 11/10 @ 5 PM</b> <b>(2) Reading: Horstmann, Chapter 8</b>
<b>10</b>	<b>November 10</b>	<b>Designing Classes</b> <b><u>IN-CLASS:</u> (1) Group Assignment # 8 DUE @ 11:30 PM</b> <b>(2) QUIZ 2 (WEEKS 5-8)</b> <b><u>POST-CLASS:</u> (1) Weekly Assignment 10 DUE 11/17 @ 5 PM</b> <b>(2) Final Team Project Assigned</b> <b>(3) Reading: Horstmann, Chapter 9</b>

Week	Dates	<b>Module 3: Object-Oriented Design</b> <b>Topics, Readings, Assignments, and Deadlines</b>
11	November 17	<p style="text-align: center;"><b>Inheritance</b></p> <p><b><u>IN-CLASS:</u> (1) Group Assignment # 9 DUE @ 11:30 PM</b>  <b>(2) Group Project DRAFT of Game Map DUE @ 11:30 PM</b></p> <p><b><u>POST-CLASS:</u> (1) Weekly Assignment 11 DUE 11/24 @ 5 PM</b>  <b>(2) Reading: Horstmann, Chapter 10</b></p>
12	November 24	<p style="text-align: center;"><b>Interfaces</b></p> <p><b><u>IN-CLASS:</u> (1) Group Assignment # 10 DUE @ 11:30 PM</b>  <b>(2) Group Project Program DRAFT with Navigation features working DUE @ 11:30 PM</b></p> <p><b><u>POST-CLASS:</u> (1) Weekly Assignment 12 DUE 12/1 @ 5 PM</b>  <b>(2) Reading: Horstmann, Chapter 12</b></p>
13	December 1	<p style="text-align: center;"><b>Object-Oriented Design</b></p> <p><b><u>IN-CLASS:</u> (1) Group Assignment # 11 DUE @ 11:30 PM</b>  <b>(2) Group Project DRAFT Presentation Plan DUE @ 11:30 PM</b></p> <p><b><u>POST-CLASS:</u> (1) Weekly Assignment 13 DUE 12/8 @ 5 PM</b>  <b>(2) Finalize Group Projects/Presentations</b></p>
14	December 8 (Final Class)	<p style="text-align: center;"><b>Wrap-Up</b></p> <p><b><u>IN-CLASS:</u> (1) Group Projects DUE @ 5 PM in Sakai</b>  <b>(2) Group Project Presentations in class</b>  <b>(3) Course Evaluations</b></p>