

SYLLABUS: COURSE # 04:547:202-01 OBJECT-ORIENTED PROGRAMMING FALL TERM 2016

Course Overview

Instructor


Instructor: Ismael Lara

Email address: Ismael.Lara@rutgers.edu

Phone number: 646-389-5722

Office hours: By appointment

Course Delivery

This face-to-face course meets in Room CI-119 on Mondays and Wednesdays from 4:30 – 5:50 PM. We will be using Sakai as a supplement to the course – lectures, assignments, and other materials will be accessible from the Sakai site. To access the Sakai site for this course, please visit sakai.rutgers.edu . For more information about course access or support, contact the Sakai Help Desk via email at 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

Fall 2016 Semester Start: Tuesday, September 6

Fall 2016 Semester End: Friday, December 23 (including Reading and Final Exam periods)

Since this course has no final exam, our last class will be on **Wednesday, December 14**.

Other deadlines:

DROP this course WITHOUT a “W” grade: September 13.

ADD a class: Wednesday, September 14.

DROP this course WITH a “W” grade: October 31.

WITHDRAW from the semester: November 28.

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.

Course Materials

Required Text(s)

Java: An Introduction to Problem Solving and Programming plus MyProgrammingLab with Pearson eText -- Access Card Package, 7/E by Walter Savitch (see below for ISBNs)

In addition to the physical textbook, you will also need access to the supplemental package, MyProgrammingLab. The text + supplement come in the 3 formats noted below. The only difference between the 3 packages is the format of the textbook: completely digital, looseleaf text, or bound text. You may choose whichever format is most convenient for you. All 3 formats are available at the Rutgers bookstore.

If you are not sure which format to choose, I would recommend the “**MyProgrammingLab + Bound text**” PACKAGE.

Package	ISBN
MyProgrammingLab access card (all digital)	0133860779 9780133860771
MyProgrammingLab + Looseleaf text PACKAGE	0133861996 9780133861990
MyProgrammingLab + Bound text PACKAGE	0133862119 9780133862119

Required Videos and/or Website Materials

Videos and/or website materials will be posted to Sakai.

Optional Materials

Optional supplementary materials may be posted to Sakai from time to time. As the name suggests, these are optional materials you may review if you are interested.

Technology Requirements

Baseline technical skills necessary for online courses

- Navigating Sakai to access supplementary course site
- Answering polling questions during class using the PollEverywhere tool
- Downloading and installing the Eclipse Integrated Development Environment (IDE)
- Logging into the Pearson MyProgrammingLab Supplementary site and completing required course activities

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 you are 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
MyProgrammingLab Assignments	10%
Eclipse Assignments	20%
Quizzes	35%
Final Project	30%
Class Participation	5%

See course schedule, below, for due dates.

Assignment Overview

MyProgrammingLab Assignments

- You will be required to complete assignments in the textbook supplement, MyProgrammingLab.
- These are intended to be problems to test your knowledge of programming concepts. We will complete some of these problems in class. Even if you miss class, you will still be responsible for completing the assigned problems.
- The lowest grade will be dropped.
- Except for the problems we complete in class together, it is expected that you will complete these assignments on your own.

Eclipse Assignments

- Eclipse is a software application used in the industry by professional software engineers.
- In order to get you comfortable with Eclipse, these assignments will require you to use it to develop, compile, and run your programs.
- These assignments will be slightly more challenging than the MyProgrammingLab Assignments.

Quizzes

- There will be short quizzes (about 30 minutes in length) throughout the semester. Check the schedule below for specific dates and topics. I will discuss the format of the quizzes in class.
- The lowest grade will be dropped.

Final Project

- You will work on your Final Project regularly throughout the semester. There will be four parts (check the schedule below for specific deadlines), each of which will be graded on a 65 (✓-)/80 (✓)/95 (✓+) scale, except for the final submission.
 - Proposal – 10%
 - Algorithm – 15%
 - Rough Draft of Program – 25%
 - Final Submission of Program – 50%
- Each submission will allow me an opportunity to provide you with feedback, so the better the quality of your submissions, the better the quality of my feedback.
- A rubric will also be provided prior to the Final Submission, so that you understand what I will be looking for when grading.

Class Participation

- Because there is so much content that we cover in each class, it is very important to make every effort to attend and participate.
- During class, I will use a polling tool called PollEverywhere to gauge your understanding of the course material. Your participation in these polls also counts towards your class participation grade.
- The lowest grade will be dropped.

Grading Scale

(Source: Rutgers standard undergraduate grade 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	60 – 69	Work not up to standard, disorganized, many errors.
F	Below 60	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.
- 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.

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, ***no late assignments will be accepted*** except in cases of emergency. That applies to all assignments and activities in the course:

MyProgrammingLab Assignments, Eclipse Assignments, Quizzes, Final Project submissions, and Class Participation components.

This policy ensures that grading and feedback is completed in a timely manner for all students.

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 and Feedback

Grades will typically be returned within one week of the due date, except in cases 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

E-mail

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.
- Discussing with your classmates general strategies for approaching a problem is fine, but the code you submit should be your own. You will be doing yourself a disservice (as well as doing poorly on the quizzes) if you cheat.
- Do not facilitate academic dishonesty for another student by allowing your own work to be submitted by others.

If you are in doubt about any issue related to plagiarism or scholastic dishonesty, please discuss it with your instructor.

Other sources of information to which you can refer include:

- [Rutgers' Academic Integrity website](#)
- [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](#).

Counseling, ADAP, and Psychiatric Services

- Undergraduate and graduate students experience a great many stresses in their lives - sorting out one's identity, establishing and maintaining important relationships, coping with anxiety and depression, working on changing relationships with parents and other family members, dealing with losses, handling new academic demands, and dealing with reactions to one's differentness. To help with these tasks, [Counseling, ADAP & Psychiatric Services \(CAPS\)](#) provides a variety of psychological counseling services for all students of Rutgers University in New Brunswick/Piscataway, undergraduate and graduate. Services are free, and confidentiality is guaranteed within legal and ethical guidelines.

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

[Sakai](#)

[PollEverywhere](#) - VPAT available upon request

[Eclipse Accessibility features](#)

Privacy Policies

[Sakai](#)

[PollEverywhere](#)

[Eclipse](#)

Course Schedule and Deadlines

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

Red: Quizzes

Green: Final Project components

Blue: MyProgrammingLab Assignments (MPL)

Orange: Eclipse Assignments

Week	Dates	Module 1: Basics Topics, Readings, Assignments, and Deadlines
1-W	09/07/2016	<p>Course Introduction, Syllabus, Eclipse, & Java</p> <p>AFTER CLASS: Purchase textbook</p> <p>Sign up for MyProgrammingLab & PollEverywhere</p> <p>Complete Warmup Exercises 20501, 20502, 60006</p>
2-M	09/12/2016	<p>Introduction to Computers and Java</p> <p>BEFORE CLASS: Savitch, Chapter 1 (1.1, 1.2, 1.3)</p>
2-W	09/14/2016	<p>Introduction to Computers and Java</p> <p>AFTER CLASS: MPL #1 (Ch 1) due 09/21 @ 11:55 PM</p> <p>Eclipse Assignment #1 due 09/21 @ 11:55 PM</p>
3-M	09/19/2016	<p>Basic Computation</p> <p>BEFORE CLASS: Savitch, Chapter 2 (2.1, 2.2, 2.3, 2.4)</p>
3-W	09/21/2016	<p>Basic Computation</p> <p>Final Project Introduction in class</p> <p>AFTER CLASS: MPL #2 (Ch 2) due 09/28 @ 11:55 PM</p>

Week	Dates	Module 2: Flow of Control Topics, Readings, Assignments, and Deadlines
4-M	09/26/2016	Flow of Control: Branching BEFORE CLASS: Savitch, Chapter 3 (3.1, 3.2, 3.3) DURING CLASS: Quiz 1 (Module 1)
4-W	09/28/2016	Flow of Control: Branching AFTER CLASS: MPL #3 (Ch 3) due 10/05 @ 11:55 PM Eclipse Assignment #2 due 10/05 @ 11:55 PM Final Project Proposal due 10/05 @ 11:55 PM
5-M	10/03/2016	Flow of Control: Loops BEFORE CLASS: Savitch, Chapter 4 (4.1, 4.2)
5-W	10/05/2016	Flow of Control: Loops AFTER CLASS: MPL #4 (Ch 4) due 10/12 @ 11:55 PM

Week	Dates	Module 3: Objects, Classes, & Methods Topics, Readings, Assignments, and Deadlines
6-M	10/10/2016	Defining Classes and Methods BEFORE CLASS: Savitch, Chapter 5 (5.1, 5.3) DURING CLASS: Quiz 2 (Module 2)
6-W	10/12/2016	Defining Classes and Methods AFTER CLASS: MPL #5 (Sec. 5.1, 5.3) due 10/19 @ 11:55 PM Eclipse Assignment #3 due 10/19 @ 11:55 PM
7-M	10/17/2016	More about Objects and Methods BEFORE CLASS: Savitch, Chapter 6 (6.1, 6.2, 6.3)
7-W	10/19/2016	More about Objects and Methods AFTER CLASS: MPL #6 (Ch 6) due 10/26 @ 11:55 PM Final Project Algorithm due 10/26 @ 11:55 PM

Week	Dates	Module 4: Fundamental Data Structures Topics, Readings, Assignments, and Deadlines
8-M	10/24/2016	Arrays BEFORE CLASS: Savitch, Chapter 7 (7.1, 7.2, 7.3, 7.4) DURING CLASS: Quiz 3 (Module 3)
8-W	10/26/2016	Arrays AFTER CLASS: MPL #7 (Ch 7) due 11/02 @ 11:55 PM Eclipse Assignment #4 due 11/02 @ 11:55 PM
9-M	10/31/2016	ArrayLists and Linked Lists BEFORE CLASS: Savitch, Chapter 12 (12.1, 12.3)
9-W	11/02/2016	ArrayLists and Linked Lists AFTER CLASS: MPL #8 (Ch 12) due 11/09 @ 11:55 PM

Week	Dates	Module 5: Inheritance Topics, Readings, Assignments, and Deadlines
10-M	11/07/2016	Information Hiding BEFORE CLASS: Savitch, Sections 5.2, 6.5 DURING CLASS: Quiz 4 (Module 4)
10-W	11/09/2016	Information Hiding AFTER CLASS: MPL #9 (Sec. 5.2, 6.5) due 11/16 @ 11:55 PM Eclipse Assignment #5 due 11/16 @ 11:55 PM
11-M	11/14/2016	Inheritance, Overloading, and Overriding BEFORE CLASS: Savitch, Sections 8.1, 8.2, 6.4
11-W	11/16/2016	Inheritance, Overloading, and Overriding AFTER CLASS: MPL #10 (Sec 8.1, 8.2, 6.4) due 11/22 @ 11:55 PM

Week	Dates	Module 6: Polymorphism Topics, Readings, Assignments, and Deadlines
12-M	11/21/2016	<p>Polymorphism</p> <p>BEFORE CLASS: Savitch, Section 8.3</p> <p>DURING CLASS: Quiz 5 (Module 5)</p> <p>Final Project Draft due 11/30 @ 11:55 PM</p>
12-W	11/23/2016	NO CLASS - CHANGE IN DESIGNATION (FRIDAY CLASSES)

Week	Dates	Module 7: Special Topics Topics, Readings, Assignments, and Deadlines
13-M	11/28/2016	<p>Handling Exceptions</p> <p>BEFORE CLASS: Savitch, Chapter 9 (9.1, 9.2, 9.3)</p>
13-W	11/30/2016	<p>Handling Exceptions</p> <p>AFTER CLASS: MPL #11 (Ch 9) due 12/07 @ 11:55 PM</p> <p>Eclipse Assignment #6 due 12/07 @ 11:55 PM</p>
14-M	12/05/2016	<p>File Input/Output</p> <p>BEFORE CLASS: Savitch, Chapter 10 (10.1 through 10.5)</p>
14-W	12/07/2016	<p>File Input/Output</p> <p>AFTER CLASS: MPL #12 (Ch 10) due 12/14 @ 11:55 PM</p> <p>Final Project Submission due 12/14 @ 11:55 PM</p>
15-M	12/12/2016	<p>Recursion</p> <p>BEFORE CLASS: Savitch, Chapter 11 (11.1, 11.2)</p> <p>DURING CLASS: Quiz 6 (Module 7)</p> <p>AFTER CLASS: Final Project Submission due 12/14 @ 11:55 PM</p>
15-W	12/14/2016	<p>Final Project Working Session</p> <p>Final Project Submission due 12/14 @ 11:55 PM</p>