

# **Graduate Course Syllabus**

**IT 501: Object Oriented Application Development** 

Center: Online

#### **Course Prerequisites**

None

#### **Course Description**

This course provides a comprehensive introduction to the principles and practices of object-oriented software development and provides a foundation for developing quality software. Students develop skills in applying object-oriented concepts to solve software problems and implement solutions. The course also teaches the concepts and design of algorithms for problem solving and includes the topics of data structures as they are related to the algorithms that use them. The course provides the technical foundation necessary to handle the material covered in the subsequent IT courses.

#### **Course Outcomes**

- Explain key concepts, terminology and design approaches in an object-oriented development environment
- Apply object-oriented principles to practice
- Select environment-specific classes best suited to developing an application
- Design necessary classes consistent with the requirements of an application
- Implement the principles of inheritance and polymorphism in designing object-oriented applications
- Evaluate design alternatives in a multi-tier architecture

#### **Required Materials**

Using your learning resources is critical to your success in this course. Please purchase directly through SNHU's online bookstore, <u>MBS Direct</u>, rather than any other vendor. Purchasing directly from the bookstore ensures that you will obtain the correct materials and that the Help Desk, your advisor, and the instructor can provide you with support if you have problems.

Murach's Java Programming
Murach, Joel
Mike Murach & Associates
Fourth Edition
2011
978-1-890774-65-3

# Software:

Java Development Kit (JDK) and Netbeans Download Bundle

# **Instructor Availability and Response Time**

Your class interaction with your instructor and your classmates will take place in Blackboard on a regular, ongoing basis. Your instructor will be active in Blackboard at least five days a week, and you will normally communicate with your instructor in the open Blackboard discussion forum so that your questions and the instructor's answers benefit the entire class. You should send emails directly to your instructor only when you need to discuss something of a personal or sensitive nature, and in those cases your instructor will generally provide a response within 24 hours.

#### **Grade Distribution**

| Assignment Category           | Number of    | Point Value          | Total Points |
|-------------------------------|--------------|----------------------|--------------|
| Assignment Category           | Graded Items | per Item             | Total Polits |
| Assignments                   | 9            | 50                   | 450          |
| Final Project Milestone One   | 1            | 50                   | 50           |
| Final Project Milestone Two   | 1            | 50                   | 50           |
| Final Project Milestone Three | 1            | 50                   | 50           |
| Final Project Milestone Four  | 1            | 50                   | 50           |
| Final Project Milestone Five  | 1            | 50                   | 50           |
| Final Project Milestone Six   | 1            | 300                  | 300          |
|                               |              | Total Course Points: | 1,000        |

This course may also contain practice activities. The purpose of these non-graded activities is to assist you in mastering the learning outcomes in the graded activity items listed above.

#### **University Grading System: Graduate**

|       |                      | Total Points: | 1000              |       |
|-------|----------------------|---------------|-------------------|-------|
| Grade | Numerical Equivalent | Points        | Points Equivalent |       |
|       |                      |               | Lower             | Upper |
| A     | 93-100               | 4.00          | 930               | 1000  |
| A-    | 90-92                | 3.67          | 900               | 929   |
| B+    | 87-89                | 3.33          | 870               | 899   |
| В     | 83-86                | 3.00          | 830               | 869   |
| B-    | 80-82                | 2.67          | 800               | 829   |
| C+    | 77-79                | 2.33          | 770               | 799   |
| С     | 73-76                | 2.00          | 730               | 769   |
| F     | 0-72                 | 0.00          | 0                 | 729   |
| I     | Incomplete           |               |                   |       |
| IF    | Incomplete/Failure   |               |                   |       |
| W     | Withdrawn            |               |                   |       |

<sup>\*</sup>Incomplete and Incomplete/Failure: Any student requesting an "I" grade must complete a Student Petition and Contract for a Grade of Incomplete and submit it to the proper offices prior to the final day of the term/semester. The petition will specify a deadline by which the coursework must be completed. The incomplete automatically becomes an "IF" if work has not been completed and a grade has not been submitted by the specific deadline.

# **Grading Guides**

Specific activity directions, grading guides, posting requirements, and additional deadlines can be found in the Course Information area in the Assignment Guidelines and Rubrics folder.

#### **Weekly Assignment Schedule**

The Learning Modules area in Blackboard contains one module folder for each week of the course. All reading and assignment information can be found in the folders. All assignments are due by 11:59 p.m. EST on the last day of the module week.

In addition to the textbook readings that are listed, there may be additional required resources within each module in Blackboard.

| Module | Topics and Assignments                                       |
|--------|--------------------------------------------------------------|
| 1      | Icebreaker Activity (Required)                               |
|        | Course Introduction                                          |
|        | Reading: Murach's Java Programming, Preface and Chapters 1-2 |
|        | 1-1 Discussion: Assignment One                               |
|        | 1-2 Practice Exercises                                       |
|        | 1-3 Assignment One                                           |
| 2      | Working with Data                                            |
|        | Reading: Murach's Java Programming, Chapter 3                |
|        | 2-1 Discussion: Assignment Two                               |
|        | 2-2 Practice Exercises                                       |
|        | 2-3 Assignment Two                                           |
|        | 2-4 Final Project: Introduction                              |
| 3      | Control Logic                                                |
|        | Reading: Murach's Java Programming, Chapter 4                |
|        | 3-1 Discussion: Assignment Three                             |
|        | 3-2 Practice Exercises                                       |
|        | 3-3 Assignment Three                                         |
| 4      | Data Validation                                              |
|        | Reading: Murach's Java Programming, Chapter 5                |
|        | 4-1 Discussion: Assignment Four                              |
|        | 4-2 Practice Exercises                                       |
|        | 4-3 Final Project Milestone One: Approach Blueprint          |
|        | 4-4 Assignment Four                                          |
| 5      | Using Classes                                                |
|        | Reading: Murach's Java Programming, Chapter 7                |
|        | 5-1 Discussion: Assignment Five                              |
|        | 5-2 Practice Exercises                                       |
|        | 5-3 Assignment Five                                          |
| 6      | Inheritance                                                  |
|        | Reading: Murach's Java Programming, Chapter 8                |
|        | 6-1 Discussion: Assignment Six                               |
|        | 6-2 Practice Exercises                                       |
|        | 6-3 Assignment Six                                           |
|        | 6-4 Final Project Milestone Two: Main Screen                 |
| 7      | Working with Interfaces                                      |
|        | Reading: Murach's Java Programming, Chapter 9                |
|        | 7-1 Discussion: Assignment Seven                             |
|        | 7-2 Practice Exercises                                       |
|        | 7-3 Assignment Seven                                         |
|        | 7-4 Final Project Milestone Three: Add New Employee Screen   |

| 8  | Simple Collections                                          |  |  |
|----|-------------------------------------------------------------|--|--|
|    | Reading: Murach's Java Programming, Chapters 11 and 12      |  |  |
|    | 8-1 Discussion: Assignment Eight                            |  |  |
|    | 8-2 Practice Exercises                                      |  |  |
|    | 8-3 Final Project Milestone Four: Punch In/Punch Out Screen |  |  |
|    | 8-4 Assignment Eight                                        |  |  |
| 9  | Developing Graphic User Interfaces (GUIs)                   |  |  |
|    | Reading: Murach's Java Programming, Chapter 15              |  |  |
|    | 9-1 Discussion: Assignment Nine                             |  |  |
|    | 9-2 Practice Exercises                                      |  |  |
|    | 9-3 Assignment Nine                                         |  |  |
|    | 9-4 Final Project Milestone Five: Report Screen             |  |  |
| 10 | Working with Collections                                    |  |  |
|    | 10-1 Discussion: Final Project                              |  |  |
|    | 10-2 Practice Exercises                                     |  |  |
|    | 10-3 Final Project Milestone Six: Submit Final Project      |  |  |

#### **Attendance Policy**

Failure to participate during the first week of the course (12:00 a.m. Monday through 11:59 p.m. Sunday) will result in automatic withdrawal. Participation is defined as posting within a discussion board, wiki, or blog, and/or submitting an assignment. Students who do not participate during the first week forfeit their rights to be reinstated into the course.

Extended absences, defined as failure to post into the Blackboard classroom for more than five days, must be coordinated with the instructor. Students who fail to coordinate any such absence with the instructor, or who fail to withdraw from the course in accordance with the COCE official drop and withdrawal policy, will be graded appropriately.

All assignments must be submitted through the appropriate Blackboard tool by 11:59 PM Eastern Standard Time on the specified due date. Refer to the Assignment Guidelines and Rubrics folder for specific details on completing the assignments in this course.

# **SNHU College of Online and Continuing Education Withdrawal Policy**

https://my.snhu.edu/ layouts/FormServer.aspx?XsnLocation=https://my.snhu.edu/FormServerTemplates/COCE. Withdrawal.revised.form.xsn&SaveLocation=https%3A%2F%2Fmy%2Esnhu%2Eedu%2FOffices%2FCOCE%2FAdvising%2FCourse%20Withdrawal%20Library&OpenIn=browser

# **SNHU College of Online and Continuing Education Guide to Student Success**

https://my.snhu.edu/Resources/StudentHandbooks/Pages/default.aspx

# **Blackboard Course Tools/Areas Overview**

Your course will be delivered through Blackboard. Below are the most often used Blackboard tools and areas.

| Tool/Area          | Description                                                                                                                              | You Should                                                                                                         |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Announcements      | This area is used to post day-to-day course details such as the status of or directions for assignments.                                 | Check the announcements on a regular basis, at least several times each week.                                      |
| Course Information | The course syllabus, assignment guidelines and rubrics, technical support, Student Handbook, and advising information can be found here. | Check this area at the start of the class. It is recommended that the syllabus be downloaded for future reference. |
| Learning Modules   | This area contains course content, including lectures, readings, resources, and assignments.                                             | Check this area at the start of each module and throughout the module week to review course materials.             |
| Discussion Board   | This is one of the areas for discussion and collaboration in the class.                                                                  | Participate and contribute on a regular basis if your course includes discussions.                                 |
| Research/Writing   | SNHU library and research information can be found here.                                                                                 | Check this area for links and information on different library-related resources.                                  |
| My Instructor      | Instructor information is located in this area.                                                                                          | Check this area to find out about your instructor's background and contact information.                            |
| My Grades          | Assignment grades are located in this area.                                                                                              | Check this area to find out your grades for your course assignments.                                               |

### **Southern New Hampshire University Policies**

More information about SNHU policies can be found at <a href="https://my.snhu.edu/Academics/Pages/SyllabiStatements.aspx">https://my.snhu.edu/Academics/Pages/SyllabiStatements.aspx</a>.

Continuing Education Center Instructor Availability: All undergraduate Continuing Education instructors at all center locations (Manchester, Nashua, Salem, Portsmouth, and Brunswick, Maine) will be available to students for a minimum of four additional hours of face-to-face meeting time per term. This time is in addition to the required 20 hours of face-to-face time in hybrid classes and the required 40 hours of face-to-face time in lecture classes. How the additional meeting time is utilized is at the discretion of the instructor and may vary by course.

Academic Honesty Policy: Southern New Hampshire University requires all students to adhere to high standards of integrity in their academic work. Activities such as plagiarism and cheating are not condoned by the university. Students involved in such activities are subject to serious disciplinary action. Plagiarism is defined as the use, whether by paraphrase or direct quotation, of the published or unpublished work of another without full and clear acknowledgment. Cheating includes the giving or receiving of unauthorized assistance on quizzes, examinations, or written assignments from any source not approved by the instructor. Understand that in taking

this course, your assignments may be submitted to Turnitin.com or other plagiarism-detection services and reviewed for textual similarity suggestive of plagiarism. All submitted papers are subsequently included as source material in the Turnitin.com database for the purpose of detecting plagiarism in other submitted work. Please review the Turnitin.com Usage Policy should you have any questions. For more about academic dishonesty, please refer to the undergraduate or graduate catalogs.

**ADA/504 Compliance Statement:** Southern New Hampshire University is committed to and concerned with meeting the needs of students challenged by physical, sensory, psychiatric and/or learning disabilities with regard to the Americans with Disabilities Act (ADA), as amended, and Section 504 of the 1973 Rehabilitation Act. At the beginning of each term, or as soon as you become aware of a disability, we encourage you to contact the Office of Disability Services to discuss accommodations for which you may be qualified.

For questions concerning support services, documentation guidelines, or general disability issues:

Office of Disability Services, Exeter Hall, Suite 59

Hyla Jaffe, Director

603.626.9100 ext. 2386

h.jaffe@snhu.edu

For questions concerning disability-related compliance matters, grievance, or legal issues:

Ms. Jet Goldberg, ADA/504 Compliance Officer

**Director of Wellness Center** 

603-645-9679

j.goldberg@snhu.edu

**Technical Support:** Support for Blackboard or other technology issues via phone, chat, and online form submission is available from the SNHU Technology Help Desk at <a href="http://www.snhu.edu/techsupport">http://www.snhu.edu/techsupport</a> including 1.855.877.9919. Technical support is available 24/7.

**Academic Assistance:** Online students enrolled in undergraduate courses in the areas of math, writing, accounting, and statistics will have access to Smarthinking online tutoring:

https://my.snhu.edu/offices/COCE/Tutoring/Pages/default.aspx.

Library Resources Statement: In addition to the intellectual resources available onsite and online, <a href="https://my.snhu.edu/Academics/Library/Pages/default.aspx">https://my.snhu.edu/Academics/Library/Pages/default.aspx</a>, Shapiro Library makes available group and one-on-one instruction in information literacy, enabling students to define and articulate what knowledge-based resources are relevant to their research interests. Library staff are available to assist students in effectively and efficiently accessing information from credible sources, to compare new knowledge with prior beliefs, and to consider the related ethical, legal, and socioeconomic issues that are inherent in scholarly investigation.

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http://libguides.snhu.edu/content.php?pid=5411. Questions regarding copyright may be addressed to the Dean of the University Library.