

CSIS 3701 - Advanced Object-oriented Programming

Fall 2026 Syllabus, Section A01, CRN 43220,

Credit hours: 3

Instructor

Sharjil Islam

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Public Instructor Information

Instructor Qualification:

Sharjil Islam

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Course Description

3701. Advanced Object-oriented Programming. Object-oriented design and programming, including classes, encapsulation, inheritance, polymorphism, exception handling, and generics. Design, development, and testing of large-scale programs using object-oriented programming. Prereq.: CSIS 2605 or CSIS 2610 with a grade of C or better. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Starting Out with Java: Early Objects, 6th edition	Tony Gaddis	978-0134462011

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
10/19	Week 1 videos Chapters 1 and 2 (and also chapters 4 and 5 as a review of basic control structures if necessary)	Module 0: Course Introduction Watch Video - Introduction to Object-Oriented Programming Module 0: Watch Video - Introduction to CSIS 3701 Module 1: Study the Materials Module 1: Assignment 1 Video Introduction to Java The IntelliJ IDE for Java Types and objects in Java Java applications	No Assignments Due this week



10/26	Week 2 videos Chapter 3	Module 2: Study the Materials Object-oriented class syntax and concepts Overloading, Encapsulation, and Static class components JavaDoc Documentation	Assignment 1: Java Application Programming due
11/2	Week 3 videos Chapters 5 and 10	Module 3: Study the Materials Designing class methods and member variables UML and object-oriented decomposition Unit testing	Assignment 2: Implementing object-oriented classes due
11/9	Week 4 videos Chapter 6	Module 4: Study the Materials Aggregation and object-oriented design Java generic containers Implementing container classes	Assignment 3: Object-oriented design and testing due Midterm Exam
11/16	Week 5 videos Chapter 7	Module 5: Study the Materials Inheritance and encapsulation Introduction to Inheritance Polymorphism Designing an inheritance hierarchy	Assignment 4: Generic containers due
11/23	Week 6 videos Chapter 9	Module 6: Study the Materials Introduction to exception handling Designing and throwing exceptions File processing in Java Serialization	Assignment 5: Inheritance and polymorphism due
11/30	Week 7 videos Chapters 9 and 11	Module 7: Study the Materials Introduction to interfaces Interfaces and inheritance Java FX components and layouts Java FX event handling	Assignment 6: Exception handling and file processing due Final Exam

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.