

CISS 438: Object-Oriented Design & Analy

Location:	Evening
Address:	1001 Rogers Street Columbia, MO 65216
Section:	19FALL2/CISS/438/AEV
Semester Credit Hours:	3
Class Day(s) and Time(s):	Wednesday 5:30 PM - 9:30 PM from October 21, 2019 to December 14, 2019

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📘 Course Information

Catalog Description

Introduction to object-oriented (OO) analysis, design, and modeling. Topics include techniques for mapping real-world systems onto an OO representation, use case design, OO methodology for software development, identifying patterns, building conceptual models, and OO implementation issues. The Unified Modeling Language is used as a modeling tool.

Prerequisite: CISS 350 or 358.

Additional Notes

Thanksgiving: Due to the Thanksgiving Holiday, class will not meet on Wednesday, November 27; the planned make-up day will be the Friday, November 22.

📖 Textbooks

As part of TruitionSM, students will receive their course materials automatically as described below.

📖 C. Larman. (2005). *Applying UML and Patterns: An Introduction to Object-Oriented Analysis and Design and Iterative Development* (3rd). Prentice Hall. *Physical Book*

Bookstore Information

Visit <https://www.ccis.edu/bookstore.aspx> for details.

eText Information

If a course uses an eText, (see textbook information above) the book will be available directly in Desire2Learn (D2L) seven

days before the session begins, if registered for courses prior to that date. Upon first login to VitalSource, students should use their CougarMail email address; alternate email addresses cannot be used. More information about how to use the VitalSource platform, including offline access to eTexts, can be found in D2L.

Physical Course Materials Information

Students enrolled in courses that require physical materials will receive these materials automatically at the shipping address on file with Columbia College. Delivery date of physical materials is dependent on registration date and shipping location. Please refer to confirmation emails sent from Columbia College for more details on shipping status.

Returns: Students who drop a class are responsible for returning any physical course materials that were shipped. To initiate a return, visit [Ingram Returns](#) to generate a pre-paid return label. Materials from dropped courses must be returned within 30-days of receipt. **Failure to return physical items from a dropped course will result in a charge to the student account for all unreturned items.**

Note: Students who opt-out of having their books provided as part of [TuitionSM](#) are responsible for purchasing their own course materials.

Technology Requirements

THIS IS A TECHNOLOGY-ENRICHED COURSE WHICH COMBINES IN-SEAT INSTRUCTION WITH ONLINE LEARNING.

Participation in this course will require the basic technology for all classes at Columbia College:

- A computer with reliable internet access
- A web browser
- Acrobat Reader
- Microsoft Office or another word processor such as Open Office

For more information, see [technical requirements](#).

Course Learning Outcomes

• Discuss the properties of good software design. • Compare and contrast object-oriented analysis and design with structured analysis and design. • Evaluate the quality of multiple software designs based on key design principles and concepts. • Select and apply appropriate design patterns in the construction of a software application. • Perform requirements analysis and create a use case model from user requirements. • Create an OO software design for a software product from a software requirement specification using UML. • Conduct a software design review using appropriate guidelines. • Evaluate a software design from the perspective of reuse. • Implement an OO software design using an OO programming language.

Course Objectives

• To develop a strong foundation in object-oriented analysis, design, and implementation of software systems. • To use UML notation in the design of systems. • To choose appropriate design patterns for common design problems.

Grading

Grading Scale

Grade	Points	Percent
A	900 - 1000	90-100%
B	800 - 899	80-89%
C	700 - 799	70-79%
D	600 - 699	60-69%
F	0 - 599	0-59%

Grade Weights

Assignment Category	Points	Percent
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Quiz	240	24%
Case Study	160	16%
Draft Project	150	15%
Final Project	150	15%
Mid-term Examination	150	15%
Final Examination	150	15%
Total	1000	100%

Schedule of Due Dates

Week 1		
Assignment	Points	Due
Quiz 1	40	10/23/2019
Week 2		
Assignment	Points	Due
Case Study 1	40	10/30/2019
Quiz 2	40	10/30/2019
Week 3		
Assignment	Points	Due
Quiz 3	40	11/06/2019
Case Study 2	40	11/06/2019
Week 4		
Assignment	Points	Due
Draft Project	150	11/16/2019
Mid-term Examination	150	11/13/2019
Week 5		
Assignment	Points	Due
Quiz 4	40	11/20/2019
Week 6		
Assignment	Points	Due
Case Study 3	40	11/27/2019
Quiz 5	40	11/27/2019
Week 7		
Assignment	Points	Due
Case Study 4	40	12/04/2019
Quiz 6	40	12/04/2019
Week 8		
Assignment	Points	Due
Final Examination	150	12/11/2019
Final Project	150	12/13/2019
Total Points: 1000		

Assignments

There are 4 case study assignments worth 40 points each. The case studies will be assigned in appropriate weeks and must be submitted to the course dropbox no later than Saturday by 11:59pm. Note: One assignment will be worth 40 points. This will bring the points total to an even 160 points for all case studies combined.

The Draft term project can be started anytime and must be submitted before Saturday of Week 4. The term project will be individual based and selected from a list of acceptable subjects. The Draft term project has 150 points.

The Final term project can be started anytime and must be submitted before Saturday of Week 8. This project will use many of the topics covered during this course. The Draft project has 150 points and the Final Project has 150 points. The total Project points equal 300. The Draft and Final Projects must be submitted to the course dropbox before 11:59 pm C.T. Friday of the appropriate week.

Examinations

There are 6 weekly **in-class** quizzes worth 40 points each. The weekly quizzes will consist of 20, 5 point question and will be presented in class **only**. The combined 6 quizzes of 40 points each will total 240 points throughout the term of the class.

Mid-term exam is given in class week 4. Thirty questions, 150 point multiple choice/true-false exam. It will be based on the chapters covered in the course to test your understanding of the course material and concepts.

Final exam is given in class week 8. Twenty-five questions, 150 point multiple choice/true-false exam. It will be based on the chapters covered in the course to test your understanding of the course material and concepts.

Course Outline

Click on each week to view details about the activities scheduled for that week.

Week 1:

Quiz 1
Ch 1-7

Week 2:

Case Study 1
Assigned in Class.

Quiz 2
Ch. 8-13

Week 3:

Quiz 3
Ch. 14-16

Case Study 2
Assigned in class.

Week 4:

Draft Project

Details will be provide in class.

Mid-term Examination

In Class. Examination with cover both in class and text information covered in weeks 1-4. Chapters 1-21.

Week 5:

Quiz 4

Ch. 23-26

Week 6:

Case Study 3

Assigned in class.

Quiz 5

Ch. 27-32

Week 7:

Case Study 4

Assigned in class.

Quiz 6

Ch. 33-36

Week 8:

Final Examination

In-Class. All Class material and text Chapter 1-40.

Final Project

Details will be provided in class.

+ Additional Resources

Online databases are available at library.ccis.edu. You may access them using your CougarTrack login and password when prompted.

Technical Support

If you have problems accessing the course or posting your assignments, contact your instructor, the Columbia College Technology Solutions Center, or the D2L Helpdesk for assistance. If you have technical problems with the VitalSource eText reader, please contact VitalSource. Contact information is also available within the online course environment.

- Columbia College Technology Solutions Center: CCHelpDesk@ccis.edu, 800-231-2391 ex. 4357
- D2L Helpdesk: helpdesk@d2l.com, 877-325-7778
- VitalSource: support@vitalsource.com, 1-855-200-4146

Online Tutoring

Smarthinking is a free online tutoring service available to all Columbia College students. Smarthinking provides real-time online tutoring and homework help for Math, English, and Writing. Smarthinking also provides access to live tutorials in writing and math, as well as a full range of study resources, including writing manuals, sample problems, and study skills manuals. You can access the service from wherever you have a connection to the Internet. I encourage you to take advantage of this free service provided by the college.

Access Smarthinking through CougarTrack at [Students -> Academics -> Resources](#).

! Columbia College Policies and Procedures

The policies set forth in the [Policy Library](#) are the current official versions of College policies and supersede and replace any other existing or conflicting policies covering the same subject matter. For more information on policies applicable to students, see [Student Policies](#). For more information on policies applicable to the entire Columbia College community, see [College-Wide Policies](#).

Students are expected to read and abide by the College policies. Policies of particular interest to students include, but not limited to the following:

- Graduate Grading Policy
- Undergraduate Grading Policy
- Registration Policy and Procedures
- Withdrawal Policy
- Alcohol and Other Drugs Policy
- Family Educational Rights and Privacy Act (FERPA)

Additional Policies:

Academic Integrity and Plagiarism

Academic integrity is a cumulative process that begins with the first college learning opportunity. Students are responsible for knowing and abiding by the [Academic Integrity Policy and Procedures](#) and may not use ignorance of either as an excuse for academic misconduct. Additionally, all required papers may be submitted for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers may be included in the Turnitin.com reference database for the purpose of detecting plagiarism. This service is subject to the Terms and Conditions of Use posted on the Turnitin.com site.

Disability Resources

If you have a disability that requires an accommodation, please speak with the instructor and consult the [Student Accessibility Resources](#) office. Student Accessibility Resources staff will determine appropriate accommodations and will work with your instructor to make sure these are available to you. To find additional information, see our [ADA and Section 504 Policy for Students](#).

Notice of Non-Discrimination and Equal Opportunity:

The College has a process through which students, faculty, staff and community members who have experienced or witnessed incidents of discrimination, harassment, or retaliation on the basis of protected status, can report their experiences to a College official. For more information, see our [Non-Discrimination and Equal Opportunity Policy and Complaint Resolution Procedure](#).

Title IX and Sexual Misconduct

The College is committed to addressing the issues of discrimination, harassment and sexual misconduct in the educational and workplace landscape and will continue to modify policies, procedures and prevention efforts as needed. For more information, see the College's [Title IX and Sexual Misconduct Policy](#).

Course Policies and Procedures:

Attendance Policy

Columbia College students are expected to attend all classes and laboratory periods for which they are enrolled.

For classes with an online component, attendance for a week includes submitting any assigned online activity. Assigned activities are scheduled prior to the course commencing. Assigned activity due dates are subject to change based on actual course progression and will be adjusted as necessary. Attendance for the week is based upon the date work is submitted. A class week is defined as the period of time between Monday and Sunday (except for week 8, when the work and the course will end at 11:59 PM Central Time on Saturday.) The course and system deadlines are based on the Central Time Zone.

Students are directly responsible to instructors for class attendance and work missed during an absence for any cause. If absences jeopardize progress in a course, the College reserves the right to drop or withdraw students from classes. For additional information, see the Administrative Withdrawal for Non-Attendance heading in the [Withdrawal Policy](#).

CougarMail

All students are provided a CougarMail account when they enroll in classes at Columbia College. You are responsible for monitoring email from that account for important messages from the College and from your instructor.

Students should use email for private messages to the instructor and other students. The class discussions are for public messages so the class members can each see what others have to say about any given topic and respond.

Late Assignment Policy

All classes rely on participation and a commitment to your instructor and your classmates to regularly engage in the reading, discussion and writing assignments. You must keep up with the schedule of reading and writing to successfully complete the class.

No late assignments will be accepted without the prior approval of the instructor.

Acceptance of a late assignment is at the discretion of the instructor.

Make-up examinations may be authorized for students who miss regularly-scheduled examinations due to circumstances beyond their control. Make-up examinations must be administered as soon as possible after the regularly scheduled examination period and must be administered in a controlled environment.

Student Conduct

All Columbia College students, whether enrolled in a land-based or online course, are responsible for behaving in a manner consistent with Columbia College's [Student Conduct Code](#) and [Acceptable Computing Use Policy](#). Students violating these policies or any other College policy will be referred to the office of Student Affairs and/or the office of Academic Affairs for possible disciplinary action. The Student Code of Conduct, the [Student Behavioral Misconduct Policy and Procedures](#), and the Acceptable Computing Use Policy can be found in the Policy Library at ccis.edu/policies. The adjunct faculty member maintains the right to manage a positive learning environment all students must adhere to the conventions of online etiquette when enrolled in a course with an online component.