DOMINICAN UNIVERSITY of CALIFORNIA

Syllabus 2023 Spring A

Course Information:

Course Number: MSBA 5506/Lecture/1 - HY

Course Title: Cloud Computing

Units: 3

Department Name: Barowsky School of Business

Semester Offered: 2023 Spring A

Course Meeting Days: Saturday 3/18, Monday 3/20, Monday 3/27, Saturday 4/1, Monday 4/3, Monday 4/10, Saturday 4/15, Monday 4/17, Monday 4/24, and Saturday 4/29

Course Meeting Time: M, T 7:00 PM - 9:40 PM; Dominican University, Virtual, Room ONLINE

S 8:00 AM - 12:30 PM; Dominican University, Science Building, Room 231

Course Meeting Place or Zoom Link: Virtual, Room ONLINE; Science Building, Room 231

Online Course Meeting/Access Information (if applicable): Online: Zoom Link Available on Moodle

Prerequisites: Knowledge of Information Technology (IT) Infrastructure (Computing, storage, networking, software, and business use of IT

Instructor Information:

Name and pronouns: Rao Mikkilineni (He/Him)

Office Phone: (408)679 1956

Email Address: rmikkilineni@ggu.edu

Office Location: Zoom link available on Moodle

Office Hours: On appointment

Librarian: louis.knecht@dominican.edu

> **Library Support**
> **Phone:** 415-485-3251
> **Email:** ref@dominican.edu

Section: Course Details

1. Course Description: General Content of the Course

a) **Cloud Computing**: In this course, students will learn how cloud computing works as an IT delivery service to enhance business efficiency and agility. Cloud computing is the on-demand delivery of IT resources over the Internet with pay-as-you-go pricing. Instead of buying, owning, and maintaining physical data centers and servers, you can access technology services, such as computing power, storage, and databases, on an as-needed basis from a cloud provider. Students will learn about cloud computing concepts, cloud applications, and cloud networking. Topics include cloud architectures such as Amazon Web Services, cloud programming, cloud transport using Docker Containers, mobile cloud applications for the Internet of Things (IoT), social network analysis using cloud services, cloud performance, and cloud security.

This course is only available for graduate students enrolled in the Barowsky School of Business or 4+1 business majors with Program Director approval.

b) **Student Learning Outcomes**: As a result of taking this course, students are expected to be able to demonstrate the following:
   i. Use Cloud Computing to manage business Information Technology requirements.
   ii. Design migration solutions for business applications from their private data centers.
   iii. Use cloud resources to build, deploy and operate business applications.
   iv. Evaluate Cloud Computing platforms, and manage their performance and security characteristics to meet their business requirements.
   v. Explain the use of mobile cloud applications for the Internet of things.
   vi. Apply various learnings from the class to a real-world business problem and present a paper at the end of the term.
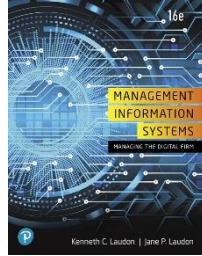
2. Texts and Resources

a) **Cloud Computing: Concepts, Technology & Architecture,** by Zaigham Mahmood; Thomas Erl; Ricardo Puttini, Published by Pearson, 2013, Current Printing: 2019.
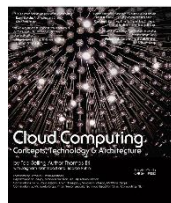
Book available on Home (oreilly.com). Available through the library. ISBN-13: 978-0-13-338752-0; ISBN-10: 0-13-338752-6

b)   **Reference Book:** A deep learning of cloud computing requires a good understanding of information technologies and their use in improving business efficiency, and resiliency at scale.

This Course will use the following book as a reference from which material will be used and the book will be available in the library. The book provides a comprehensive discussion of all aspects of information technologies and their use by businesses large and small. It provides an overview in simple and easily understandable terms. While we will not use this book as a textbook, the students will find it useful as a reference book to understand the IT vocabulary that is essential to master cloud computing. **Management Information Systems: Managing the Digital Firm,** 16th edition by Laudon and Laudon. Pearson Education, ISBN-13: 978-0-13-519179-8, ISBN-10: 0-13-519179-3

c) **Online Resources:** Here are some resources that are very useful to get a broad perspective on cloud computing::
   a) [NIST Cloud Computing Program - NCCP | NIST](#).
   b) [Cloud Computing Online Courses | Coursera](#)

Recording Policy
- **Classes may be recorded and attendance will be considered consent. Class session recordings are for learning purposes in this course only. Neither the instructor nor the students may share or use class session recordings for any purpose outside of the class.**
- *Instructor will delete all versions of the recording upon completion of the course.*

3. Assessments

DESCRIPTION	POINTS
Class Attendance and Participation	10
Quizzes and Homework assignments (Each is worth 5 points)	30
1 Student presentation on a selected topic related to Cloud Computing	10
Mid-Term Exam	10
Final Project – Individual (Paper and PowerPoint Presentation)	30
Final Exam	10
Total	**100**

4. Grading

Points	Letter Grade		Points	Letter Grade
94 - 100	A		73.0 - 76.9	C
90.0 - 93.9	A-		70.0 - 72.9	C-
87.0 - 89.9	B+		67.0 - 69.9	D+
83.0 - 86.9	B		63.0 - 66.9	D
80.0 - 82.9	B-		60.0 - 62.9	D-
77.0 - 79.9	C+		< 60.0	F

5. Expectations for Students

Participants are expected to show evidence of mastery of the assigned reading and to take part in verbal discussions each session. Participation must also be demonstrated via the in-class computer-based assignments that follow several lectures throughout the course.

Attendance at the first session of each course is important; if circumstances demand that a student miss the first session of a course, the student must contact the professor immediately. Attendance information for the first two weeks of course meetings will be shared with the University administration in order to ensure compliance with federal financial aid regulations, which require that the University establish evidence of student participation or absence before disbursing aid funds. Unexcused absences beyond three sessions are not allowed and will result in a penalty of 5% of the total course grade for each additional session. Unexcused absences for two or more consecutive weeks without the express permission of the professor may result in administrative withdrawal.

On the exams, quizzes, essays, and other assignments, please make sure to provide the source of the article. You will get no extra points for being verbose. Clear, concise, and to the point should be your mantra.

All assignments must be turned in on the due date. Late assignments will have a Penalty.

Zoom Expectations
Please log in with your Dominican email address. Use your first and last name as your screen name. Your attention should be focused on the class, not any other distractions. Therefore, students are asked to have their video on. If you feel uncomfortable with your video on, please let the instructor know. If you would like to ask or answer a question, please use the "Raise Hand" icon. Additionally, please keep your microphone muted unless you are speaking. This will help to limit distracting background noises. Remember to unmute when it is your turn to speak. Students may also use the group Chat feature, but note that it is visible to everyone, and your comments will appear in the session archive.

Quizzes and Homework
Quizzes and homework assignments are intended to give students feedback concerning their mastery of essential instructional objectives. It is given to students to encourage students to read the textbooks, and class lectures to study the material in a timely fashion. The questions included on the quizzes and homework are carefully selected to represent only those outcomes that are regarded as basic.

Mid Term Exam: The mid-term exam is in the form of a quiz with short answers and is intended to assist in the reflection of the concepts learned in the class.

Final Exam: The final exam will cover the basic concepts learned in the course, also in the form of a quiz with short answers, and is intended to assist in the reflection of the concepts learned in the class.

Final Project (Individual)
Each student picks a project assigned at the beginning of the course and will prepare a case study on a chosen topic. There are two tracks for the project. Students, based on personal interest will choose one of the two tracks. The project output at the end of the course will be a paper describing the case prepared and a presentation to the class.

Business Application Track: In this track, the student plays a role of a business consultant addressing a serious business issue and presents a solution that addresses the issue using Cloud Computing solutions. The student will apply the learnings from the course supplemented by research to analyze the problem and provide a recommendation that addresses it using Cloud Computing.

Cloud Computing Solution Implementation Track: In this track, the student chooses an implementation of a cloud-based solution and shares the experience with the class.

Student Presentations: Each student chooses a personal topic of interest related to Cloud Computing and presents an executive briefing on the topic to the class.

Students Who Require Accommodations
Include: the Dominican University of California is committed to equal access for all students in accordance with the Americans with Disabilities Act of 1990. Students who feel they may need accommodations based on the impact of a disability should contact the Office of Accessibility and Disability Services at 415-257-1388 or email accessibility@dominican.edu as soon as possible to discuss specific accommodations. Please submit the subsequent paperwork to the instructor right away.

Student Course Evaluations
The Dominican University of California is committed to an ongoing evaluation of its programs and courses through a culture of constructive dialogue and feedback. It is expected that students will complete the course evaluation either in class or outside of class. The instructor

will determine the time for the course evaluation to be completed. A link to the course evaluation will be sent to all the students enrolled in the class by the IT Department. The evaluation may be completed on a laptop, tablet, or mobile device. A laptop can be checked out from the library if needed.

University Policies Section

6. Academic Honesty Honor Code

Students are expected to adhere to the [Academic Honesty Honor Code](#) stated in the catalog. Students should practice academic integrity in all of its forms, including abstaining from plagiarism, cheating, and other forms of academic misconduct. The University reserves the right to determine in any given instance what action constitutes a violation of academic honesty and integrity.

Plagiarism is a very serious matter. Plagiarism, like cheating on an assignment or exam, is a violation of the University Honor Code. [The policy on plagiarism can be found here](#).

7. Diversity, Equity, and Inclusion

Specifically indicate how diversity will be integrated into the course curriculum in terms of content, pedagogy, and learning outcomes. The [Office of Diversity, Equity, and Inclusion](#) has developed Diversity Guidelines for Faculty and resources to assist in the preparation of curricula and syllabi that meet the diversity requirements for academic program reviews and support the University's Diversity Declaration.

University Resources Section

8. Library Support

The Alemany Library is an active partner in your academic success. The library provides one-to-one research help, academic resources, technology, and quiet individual and group study spaces. Students may [book an appointment](#) and refer to the [library website](#).

9. Students Who Require Accommodations:

The Dominican University of California is committed to equal access for all students in accordance with the Americans with Disabilities Act of 1990. Students who feel they may need accommodations based on the impact of a disability should contact the [Office of Accessibility and Disability Services](#) at 415-257-1388 or email accessibility@dominican.edu as soon as possible to discuss specific accommodations. Please submit the subsequent paperwork to the instructor right away.

10. Student Support

[Visit the student portal](#) for information and resources (including Tutoring & Learning Center, CARE Team, Counseling Services, Integrative Coaching, & more). The Student Success Center may also be reached at (415) 485-3296, or sscstu@dominican.edu

11. Course Evaluations

The Dominican University of California is committed to an ongoing evaluation of its programs and courses through a culture of constructive dialogue and feedback. It is expected that students will complete the course evaluation either in class or outside of class. The instructor will determine time for the course evaluation to be completed. A link to the course evaluation will be sent to all the students enrolled in the class by the IT Department. The evaluation may be completed on a laptop, tablet, or mobile device.

12. Title IX

As instructors, one of our responsibilities is to help create a safe learning environment for our students and for the campus as a whole. As part of our commitment to students' wellbeing, we have the responsibility to report any instances of sexual harassment, sexual violence, relationship violence, or stalking to our Title IX Coordinator, so they can inform students about their reporting options and the various support resources available. Student privacy is a priority for us and will be maintained to the extent permissible by law and policy. For more information about your rights and reporting options, including confidential and anonymous reporting, please visit Sexual Misconduct, Title IX, and Discrimination. Email: titleix@dominican.edu.

13. Student Conduct (University Wide)

Visit the Student Handbook and Code of Conduct Section 5 Code of Conduct

14. Course Schedule

Course Schedule

Date	Day	Class Activity	Assignment Due
Mar 18	Sat	● Introductions & what to expect ● Syllabus Review ● Lecture & Discussions 　○ What is Cloud Computing? 　○ Introduction to IT Operations & Management ● Class project discussion ● Assessment quiz discussion ●	● Read Textbook Chapters 1, 2 and 3
Mar 20	Mon	● Lecture & Discussions 　○ Business Drivers for Cloud Computing 　○ Technology Drivers enabling Cloud Computing ● Assignment 1 ●	● Discussion of textbook chapters 1, 2 and 3 in class

Mar 27	Mon	- Lecture & Discussions - Cloud Computing fundamentals, models, various stakeholders, and their roles - Student Presentation topics discussion - Class project discussion - Assignment 2	- Class Project Topic Selection due - Assessment Quiz (Not Graded) due - Assignment 1 Due
Apr 1	Sat	- Lecture & Discussions - Cloud security, performance, and availability - Student Presentations & Discussion - Class project discussion - Assignment 3	- Assignment 2 due - Student Presentation topic confirmed
Apr 3	Mon	- Lecture & Discussions - Anatomy of End-to-End application development, deployment and operation Project - Containers, Cloud-native and cloud-agnostic applications and their operation and management - Student Presentations & Discussion - Project discussion - Mid Term Exam (Take Home)	- Assignment 3 Due - Student presentations Batch 1
Apr 10	Mon	- Lecture & Discussions - Cloud economics and cloud service level agreements - Student Presentations - Project discussion - Assignment 4	- Mid Term Exam Due - Student presentations Batch 2
Apr 15	Sat	- Lecture & Discussions - Cloud federation, edge clouds and the Internet of Things (IoT) - Assignment 5	- Assignment 4 due - Student presentations Batch 3
Apr 17	Mon	- Lecture & Discussions - AI and Machine Learning in the cloud - Assignment 6	Assignment 5 Due
Apr 24	Mon	- Review of the course learnings - Final Project Presentations in the class - Final examination (Take Home)	- Assignment 6 due - Student Presentations
Apr 29	Sat	- Final Project Assignment: Submit final project paper & presentation - Final Project Presentations in class	- Student Presentations - Submit final project paper & presentation - Final examination (Take Home) Due

BSB Graduate Speakers Series
DATE: TBD (5/1 or 5/2)
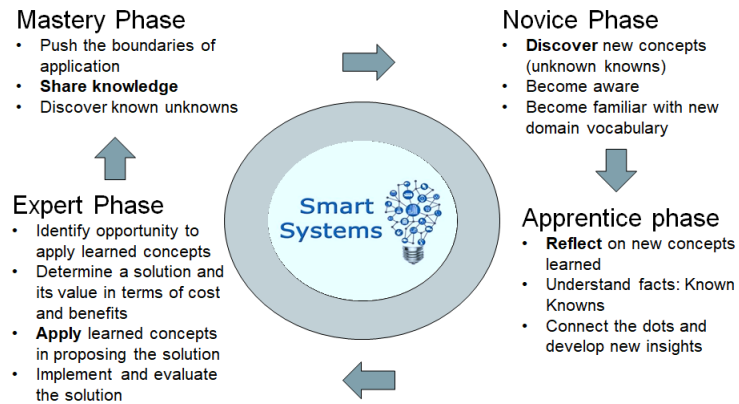Link to the [Conference](#)

Assessment Quiz
An assessment quiz at the beginning of the course (which is not graded) is used provide an understanding of prerequisites and to set goals and objectives.

Process of Learning in this Class
Learning a new subject and developing mastery is a process. One starts the process with discovery of concepts as a novice, reflects on the concepts in an apprentice phase with guidance from others, starts applying the concepts learned to develop expertise. Practice provides the experience required to develop mastery and a master shares the concepts mastered to other novices and in the process discovers new concepts and the journey continues.

This course uses the Discover – Reflect – Apply – Share Knowledge, process.

The Circle of Learning

Mastery Phase
- Push the boundaries of application
- **Share knowledge**
- Discover known unknowns

Novice Phase
- **Discover** new concepts (unknown knowns)
- Become aware
- Become familiar with new domain vocabulary

Expert Phase
- Identify opportunity to apply learned concepts
- Determine a solution and its value in terms of cost and benefits
- **Apply** learned concepts in proposing the solution
- Implement and evaluate the solution

Smart Systems

Apprentice phase
- **Reflect** on new concepts learned
- Understand facts: Known Knowns
- Connect the dots and develop new insights

15. Disclaimer

> **This syllabus is subject to modification. The instructor will inform students of any changes. Please see Moodle Course online for deliverable due dates and assignments.**