



COURSE OUTLINE: CSD125 - EMERGING TECHNOLOGY

Prepared: Computer Programming department

Approved: Martha Irwin, Dean, Business and Information Technology

Course Code: Title	CSD125: EMERGING TECHNOLOGY
Program Number: Name	2095: COMPUTER PROGRAMMING
Department:	COMPUTER STUDIES
Academic Year:	2024-2025
Course Description:	It is important for professionals to remain cognizant of the trajectory of changes in the rapidly evolving field of information technology. Through research and prototyping, students in this class explore topics of interest currently emerging in tech. A final presentation gives students opportunity to practice communication skills and share findings with their colleagues.
Total Credits:	3
Hours/Week:	3
Total Hours:	42
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Vocational Learning Outcomes (VLO's) addressed in this course:	2095 - COMPUTER PROGRAMMING
Please refer to program web page for a complete listing of program outcomes where applicable.	VLO 1 Identify, analyze, develop, implement, verify and document the requirements for a computing environment.
	VLO 2 Contribute to the diagnostics, troubleshooting, documenting and monitoring of technical problems using appropriate methodologies and tools.
	VLO 4 Implement robust computing system solutions through validation testing that aligns with industry best practices.
	VLO 6 Select and apply strategies for personal and professional development to enhance work performance.
	VLO 8 Adhere to ethical, legal, and regulatory requirements and/or principles in the development and management of computing solutions and systems.
Essential Employability Skills (EES) addressed in this course:	EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.
	EES 6 Locate, select, organize, and document information using appropriate technology and information systems.
	EES 7 Analyze, evaluate, and apply relevant information from a variety of sources.
	EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.
	EES 10 Manage the use of time and other resources to complete projects.
	EES 11 Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	Passing Grade: 50%, D



A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.

Other Course Evaluation & Assessment Requirements:

Students are expected to be present to write all tests in class, unless otherwise specified. If a student is unable to write a test due to illness or a legitimate emergency, that student must contact the professor prior to class and provide reasoning. Should the student fail to contact the professor, the student shall receive a grade of zero on the test.

If a student is not present 10 minutes after the test begins, the student will be considered absent and will not be given the privilege of writing the test.

Students exhibiting academic dishonesty during a test will receive an automatic zero. Please refer to the College Academic Dishonesty Policy for further information.

In order to qualify to write a missed test, the student shall have:

- a.) attended at least 75% of the classes to-date.
- b.) provide the professor an acceptable explanation for his/her absence.
- c.) be granted permission by the professor.

NOTE: The missed test that has met the above criteria will be an end-of-semester test.

Labs / assignments are due on the due date indicated by the professor. Notice by the professor will be written on the labs / assignments and verbally announced in advance, during class.

Labs and assignments that are deemed late will have a 10% reduction per academic day to a maximum of 5 academic days at 50% (excluding weekends and holidays). Example: 1 day late - 10% reduction, 2 days late, 20%, up to 50%. After 5 academic days, no late assignments and labs will be accepted. If you are going to miss a lab / assignment deadline due to circumstances beyond your control and seek an extension of time beyond the due date, you must contact your professor in advance of the deadline with a legitimate reason that is acceptable.

It is the responsibility of the student who has missed a class to contact the professor immediately to obtain the lab / assignment. Students are responsible for doing their own work. Labs / assignments that are handed in and are deemed identical or near identical in content may constitute academic dishonesty and result in a zero grade.

Students are expected to be present to write in-classroom quizzes. There are no make-up options for missed in-class quizzes.

Students have the right to learn in an environment that is distraction-free, therefore, everyone is expected to arrive on-time in class. Should lectures become distracted due to students walking in late, the professor may deny entry until the 1st break period, which can be up to 50 minutes after class starts or until that component of the lecture is complete.

Grade

Definition Grade Point Equivalent

A+ 90 - 100% 4.00

A 80 - 89%

B 70 - 79% 3.00

C 60 - 69% 2.00

D 50 - 59% 1.00

F (Fail) 49% and below 0.00

CR (Credit) Credit for diploma requirements has been awarded.



S Satisfactory achievement in field /clinical placement or non-graded subject area.
 U Unsatisfactory achievement in field/clinical placement or non-graded subject area.
 X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
 NR Grade not reported to Registrar`s office.
 W Student has withdrawn from the course without academic penalty.

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
Research and present information for a technical audience	1.1 Use research tools to identify recent advancements in specific areas of interest 1.2 Summarize news and journal articles about emerging technologies 1.3 Build prototypes of emerging technologies based on available documentation 1.4 Explain an emerging technology using presentation software and visualizations
Course Outcome 2	Learning Objectives for Course Outcome 2
Discuss the history of technology and its societal and ethical impacts	2.1 Identify historical trends in the development of digital technologies 2.2 Evaluate the ethical and societal implications of advances in technology 2.3 Make recommendations for the ethical use of specific emerging technologies
Course Outcome 3	Learning Objectives for Course Outcome 3
Survey recent advances machine learning, artificial intelligence, and data analysis	3.1 Describe established terms and technologies in ML, AI, and data analysis 3.2 Describe new ML, AI, and data analysis technologies 3.3 Discuss applications for developing ML, AI, and data analysis technologies 3.4 Discuss the ethical and cybersecurity challenges of recent advances in ML, AI, and data analysis
Course Outcome 4	Learning Objectives for Course Outcome 4
Identify trends in distributed computing, the `internet of things` (IoT), and blockchain technology	4.1 Discuss popular cloud service models (IaaS, PaaS, SaaS, etc) 4.2 Compare the nature and merits of edge and cloud computing 4.3 Discuss IoT technologies and trends 4.4 Define key blockchain technology 4.5 Identify appropriate applications of blockchain technology 4.6 Identify cloud security best practices
Course Outcome 5	Learning Objectives for Course Outcome 5
Describe developments in other forms of computing	5.1 Identify developing applications for augmented and virtual reality technologies 5.2 Describe the essential nature and applications of quantum computing 5.3 Describe recent advances in robotics 5.4 Describe recent advances in nanotechnology



Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Activities and Formative Assessments	10%
Final research project	30%
Labs	40%
Tests	20%

Date:

December 20, 2024

Addendum:

Please refer to the course outline addendum on the Learning Management System for further information.

