



Course Title: Computer Architecture and Design
Course #: EE 430

Credit Hours: 3
Semester: Spring - 2021
Cap:15

Faculty: Dr. Kamel Alboaoouh
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Office Phone: N/A

Office Hours (face-to-face or online): face-to-face

Preferred Communication (email and/or text; will respond within 24 hours): email

Modality (face-to-face, hybrid, or online): face-to-face

Class Location and Meeting Times (if face-to-face): TBA

Meeting Hours and Online Hours (if hybrid): TBA

Required Materials:

Textbooks: class notes

Tools:

Lab Fee (if applicable):

Mission, Vision, and Philosophy

Mission: Navajo Technical University honors Diné culture and language, while educating for the future.

Vision: Navajo Technical University provides an excellent educational experience in a supportive, culturally diverse environment, enabling all community members to grow intellectually, culturally, and economically.

Philosophy: Through the teachings of Nitsáhákees (thinking), Nahátá (planning), Íina (implementing), and Siihasin (reflection), students acquire quality education in diverse fields, while preserving cultural values and gaining economic opportunities.

Course Description

The evolution of operating systems will be explained to students. A general framework of operating systems is included while details of specific products will be eliminated. Special lectures will be dedicated to Windows.

Course Outcomes	Course Assessments
1a Chooses a mathematical model of a system or process appropriate for required accuracy	The students are going to model computer processing time (homework) accuracy, in the light of what has been taught in the class.
1b Applies engineering, scientific and mathematical principles to achieve analytical or numerical solution to model equations	Students shall apply the sequential logic of a computer in a real life example.

1c Solution procedure, problem set up and methods are defined with diagram as appropriate	Students shall identify the number of interrupts needed in order to design a clock.
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Connections to Program Assessment (Course-Embedded Measures)

1a Chooses a mathematical model of a system or process appropriate for required accuracy
1b Applies engineering, scientific and mathematical principles to achieve analytical or numerical solution to model equations
1c Solution procedure, problem set up and methods are defined with diagram as appropriate

Course Activities

Week	Date	Class Topics/Reading Due	Assignments Due	Assessments
1		Introduction		
		Last day to add/drop		
2		What is operating system	30/Jan.	TBA
3		Evolution of computing	6/Feb.	TBA
4		Meeting and discussion	13/Feb	TBA
5		Types of operating systems	20/Feb	TBA
		Graduation Petition due		
			Midterm	
		Midterm grades due		
6		Memory management	27/Feb	TBA
7		Processor management	6/Mar.	TBA
		Last day to withdraw with "W"		
8		Process synchronization	13/Mar.	TBA
9		Concurrent processes	27/Mar.	TBA
10		Device management	3/Apr.	TBA
11		File management	10/Apr.	TBA
12		Network organization concepts	17/Apr.	TBA
13		Management of network functions	24/Apr.	TBA
14		Security and ethics	1/May	TBA
15		Review		
16		Project Presentation		
17			Finals	
		Grades due to the Registrar		
		Graduation		

Grading Plan

Homework: 10%

Class Participation: 2%
Project(s): n/a
Quizzes: 8%
Mid-term:30%
Final Exam: 50%
Portfolio: n/a

A = 100-90%
B = 89-80%
C = 79-70%
D = 69-60%
F = 59% or less

Grading Policy

Students must do their own work. Cheating and plagiarism are strictly forbidden. Cheating includes (but is not limited to) plagiarism, submission of work that is not one's own, submission or use of falsified data, unauthorized access to exams or assignments, use of unauthorized material during an exam, or supplying or communicating unauthorized information for assignments or exams.

Participation

Students are expected to attend and participate in all class activities. Points will be given to students who actively participate in class activities including guest speakers, field trips, laboratories, and all other classroom events.

Cell phone and headphone use

Please turn cell phones off **before** coming to class. Cell phone courtesy is essential to quality classroom learning. Headphones must be removed before coming to class.

Attendance Policy

Students are expected to attend all class sessions. A percentage of the student's grade will be based on class attendance and participation. Absence from class, regardless of the reason, does not relieve the student of responsibility to complete all course work by required deadlines. Furthermore, it is the student's responsibility to obtain notes, handouts, and any other information covered when absent from class and to arrange to make up any in-class assignments or tests if permitted by the instructor. Incomplete or missing assignments will necessarily affect the student's grades. Instructors will report excessive and/or unexplained absences to the Counseling Department for investigation and potential intervention. **Instructors may drop students from the class after three (3) absences unless prior arrangements are made with the instructor to make up work and the instructor deems any excuse acceptable.**

Study Time Outside of Class for Face-to-Face Courses

For every credit hour in class, a student is expected to spend two hours outside of class studying course materials.

Study Time for Hybrid or Blended Courses

For a hybrid or blended course of one credit hour, a student is expected to spend three hours per week studying course materials.

Study Time for Online Courses

For an online course of one credit hour, a student is expected to spend four hours per week studying course materials.

Academic Integrity

Integrity (honesty) is expected of every student in all academic work. The guiding principle of academic integrity is that a student's submitted work must be the student's own. Students who engage in academic dishonesty diminish their education and bring discredit to the University community. Avoid situations likely to compromise academic integrity such as: cheating, facilitating academic dishonesty, and plagiarism; modifying academic work to obtain additional credit in the same class unless approved in advance by the instructor, failure to observe rules of academic integrity established by the instructor. **The use of another person's ideas or work claimed as your own without acknowledging the original source is known as plagiarism and is prohibited.**

Diné Philosophy of Education

The Diné Philosophy of Education (DPE) is incorporated into every class for students to become aware of and to understand the significance of the four Diné philosophical elements, including its affiliation with the four directions, four sacred mountains, the four set of thought processes and so forth: Nitsáhákees, Nahát'á, Íina and Siih Hasin which are essential and relevant to self-identity, respect and wisdom to achieve career goals successfully.

At NTU's Zuni Campus, the A:shiwí Philosophy of Education offers essential elements for helping students develop Indigenous and Western understandings. Yam de bena: dap haydoshna: akkya hon detsemak a:wannikwa da: hon de:tsemak a:ts'umme. *Our language and ceremonies allow our people to maintain strength and knowledge.* A:shiwí core values of hon i:yyułashik'yanna:wa (respect), hon delank'oha:willa:wa (kindness and empathy), hon i:yyayumola:wa (honesty and trustworthiness), and hon kohoł lewuna:wediyahnan, wan hon kela i:tsemanna (think critically) are central to attaining strength and knowledge. They help learners develop positive self-identity, respect, kindness, and critical thinking skills to achieve life goals successfully.

Students with Disabilities

Navajo Technical University is committed to serving all students in a non-discriminatory and accommodating manner. Any student who feels that she or he may need special accommodations should contact the Accommodations Office (<http://www.navajotech.edu/student-services#accommodations-services>) in accordance with the university's Disability Accommodations Policy (see http://www.navajotech.edu/images/about/policiesDocs/Disability_Exhibit-A_6-26-2018.pdf).

Email Address

Students are required to use NTU's email address for all communications with faculty and staff.

Final Exam Date: 5th/Jan./2021