Course Syllabus

Course ID	**0902301**
Course Title	Engineering Analysis
Prerequisite	**0303321**
Time & Date	
Coordinator	-
Instructor	Head of Communication and electronics Department
Office hours	**Tue 8:30 – 11:30am & SunTueThu 9:00-10:00 am**
Course Description	Differential equations and mathematical modeling. First order differential equations. Linear second and high order differential equations. Modeling of electrical and mechanical systems. Laplace transform. Series solution of differential equations. Initial value problem .Simple nonlinear differential equations. Partial differential equations and boundary value problem
Course Objectives	At completing this course the student should be able to : - Solve first order equations. - Solve second order linear equations. - Apply series solutions. - And higher order linear equations. - Use the Laplace Transform. - Systems of linear equations.
Course Outcomes	CO1. The communication process. CO2. communication in small groups , large groups CO3. communication in public . CO4. Writing reports CO5. Interview preparing . CO6. Data analysis .
Course Topics	Topics 1.communication sender and receiver 4 2. communication interaction 8 Lecture 3. Verbal communication 10 Lectures 4. Non verbal communication 8 Lectures 5. Small group communication 4 Lectures 6. Large group communication 4 Lectures 7-Technical report 8- Data analysis 9 -. Personal interviews 12 Lectures
Course Text Book	Books: - "Elementary Differential Equations" Boyce, William E., Diprima, Richard C, 5th Ed., Wiley, New York, 1992.

	- "Advanced Engineering Mathematics" By: Erwin Kreyszig 9th Ed., John Wiley, 2000. - "Elementary Differential Equations with Linear Algebra", 3rd Ed, Rabenstein, Albert L, Academic Press, New York, 1982. - "Differential Equations" Kruse Meyer, Mark, Macmillan Publishing Co., New York, 1994.
Course References	
Course delivery	Lectures Tutorial Lab Homework Project Computer Internet Industrial Visit
Course Assessment	Assignments & short reports…….. 10% 2 exams @ 20% each ……. 40% Final exam …….. 50%
Updated	

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO12
CO1											
CO2											
CO3											
CO4											
CO5											
CO6											
CO7											
CO8											
CO9											

	a	b	C	D	e	f	g	h	i	j	K
CO1											
CO2											
CO3											
CO4											
CO5											
CO6											
CO7											
CO8											
CO9											

ABET a-k Engineering and Technology program outcome

(a) An ability to apply knowledge of mathematics, science, and engineering
(b) An ability to design and conduct experiments, to analyze and interpret data
(c) An ability to design a system, component, or process to meet desired needs
(d) An ability to function on multi-disciplinary teams
(e) An ability to identify, formulate, and solve engineering problems
(f) An understanding of professional and ethical responsibility
(g) An ability to communicate effectively
(h) The broad education necessary to understand the impact of engineering solutions in a global and societal context
(i) A recognition of the need for, and an ability to engage in life-long learning
(j) A knowledge of contemporary issues
(k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Plagiarism

Deliberate plagiarism is a serious act of academic misconduct. Students may be suspended from the University if they are found to have plagiarized their course work. Whether inadvertent or deliberate, plagiarism includes the following:

(a) word-for-word copying of sentences or whole paragraphs or presenting of substantial extracts from either paper-based or electronic sources the work or data of others that are published or unpublished (such as books, internal reports, and lecture notes or tapes) without clearly indicating their origin;
(b) using very close paraphrasing of sentences or whole paragraphs without due acknowledgement in the form of reference to the original work;
(c) submitting another student's work in whole or in part;
(d) using of another person's ideas, work or research data without acknowledgement;
(e) copying computer files, algorithms or computer code without clearly indicating their origin;
(f) submitting work that has been written by someone else on the student's behalf; and
(g) submitting work that has been derived, in whole or in part, from another student's work by a process of mechanical transformation (e.g., changing variable names in computer programs).