The University of Texas at Tyler
Department of Electrical Engineering

EENG 3314: Design Methods

Syllabus

Spring, 2019

Course Description:	Introduction to analysis and design of electrical engineering systems. Modeling, simulation and verification of sub-systems and systems with modern engineering tools. Comparison and evaluation of alternative system designs with electrical engineering examples.
Course credit:	(3 hours lecture, 0 hours laboratory per week)
Class Meeting Days and Location:	RBN 2012 2:00PM-3:20PM Monday, Wednesday
Instructor(s):	**Course coordinator**
	Dr. Mukul V. Shirvaikar, Electrical Engineering Office: RBN 2014 Phone: 903-565-5620 E-mail: mshirvaikar@uttyler.edu Website: http://www.uttyler.edu/ee Office hours: W 2:00-4:00pm, R 9:00-11:00am or by appointment Preferred method of contact: e-mail
Required Materials	Stormy Attaway, **Matlab, Third Edition: A Practical Introduction to Programming and Problem Solving, 3/E,** Butterworth-Heinemann, 2013. ISBN-13: 978-0124058767 ISBN-10: 0124058760 John Essick, **Hands-On Introduction to LabVIEW for Scientists and Engineers, 3/E,** Oxford University Press, 2016 ISBN-13: 978-0190211899 ISBN-10: 019021189X
Recommended Materials:	Craig Lent, **Learning to Program with MATLAB: Building GUI Tools, 1/E,** Wiley, 2013. ISBN-13: 978-0470936443 ISBN-10: 0470936444
Course Student Learning Objectives (SLOs)	1. Explain basic analysis and design principles for electrical engineering sub-systems and systems. 2. Compare and evaluate alternative system designs with electrical engineering examples. 3. Demonstrate modeling, simulation and verification of sub-systems and systems. 4. Utilize modern software to design and simulate systems. 5. Write laboratory reports with experimental results demonstrating visual and written communication skills.

	WEEK	DATE	TOPICS COVERED
Course Schedule/Content	1	14-Jan-2014	Introduction
	2	21-Jan-2014	Matlab/Simulink Fundamentals
	3	28-Jan-2014	Matlab/Simulink Fundamentals
	4	4-Feb-2014	Matlab/Simulink Examples
	5	11-Feb-2014	Matlab/Simulink Projects
	6	18-Feb-2014	Labview Fundamentals
	7	25-Feb-2014	Labview Fundamentals
	8	4-Mar-2014	Midterm Review

			MIDTERM EXAM **Tuesday, March 4**
	9	11-Mar-2014	**SPRING BREAK** **NO CLASS**
	10	18-Mar-2014	Labview Projects
	11	25-Mar-2014	Labview Examples
	12	1-Apr-2014	Additional Design Tools
	13	8-Apr-2014	Additional Design Tools
	14	15-Apr-2014	Design Principles
	15	29-Apr-2014	Selected Topics Final Exam Review
	16	6-May-2014	**FINAL EXAM** **Wednesday, May 7,** **2:00PM-3:00PM**

Class Withdrawal	The withdrawal policy outlined by the Registrar will be strictly followed. The policy may be found at the following website: http://www.uttyler.edu/registrar/registration/withdrawals.php The last day to withdraw from courses is March 23, 2015.
Grading Policy and Criteria to Determine Final Grade	Homework and project reports will be due in class or lab one week after assignment. Project reports should be written as per the guidelines provided in class. A 25% penalty will be assessed per week for late project reports and homework.
	Grades will be assigned based on the total score as per the distribution below and the following scale out of a 100 total: A: >90, B: >80, C: >70, D: >60, F: <60 Any deviation from the above policy such as scaling or curving to calculate the individual item or final scores will be at the sole discretion of the instructor and performed by the instructor uniformly for all students in the class section.
Examination and/or Major Assessment Policies and Procedures	Quizzes 30% Mid-Term Examination 25% Laboratory Projects 20% Final Examination 25% Wednesday, May 7, 2:00PM-3:00PM
Attendance and Make-up Policy	The progressive nature of the class means that perfect attendance is recommended if a good grade is desired. Makeup quizzes, exams or projects will only be provided for valid absences and at the sole discretion of the instructor.
Students' Rights and Responsibilities	To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: http://www.uttyler.edu/wellness/rightsresponsibilities.php. Students are responsible for reviewing the syllabus and abiding by all that is within. Students are encouraged to seek clarification within the first week of the course.
Grade Replacement/Forgiveness and Census Date Policies	Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. Grade Replacement Contracts are available in the Enrollment Services Center or at http://www.uttyler.edu/registrar. Each semester's Census Date can be

	found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.
	Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.
	The Census Date is the deadline for many forms and enrollment actions that students need to be aware of. These include: • Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit. • Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date) • Schedule adjustments (section changes, adding a new class, dropping without a "W" grade) • Being reinstated or re-enrolled in classes after being dropped for non-payment • Completing the process for tuition exemptions or waivers through Financial Aid
State-Mandated Course Drop Policy	Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date). Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.
Disability Services	In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University offers accommodations to students with learning, physical and/or psychiatric disabilities. If you have a disability, including non-visible disabilities such as chronic diseases, learning disabilities, head injury, PTSD or ADHD, or you have a history of modifications or accommodations in a previous educational environment you are encouraged to contact the Student Accessibility and Resources office and schedule an interview with the Accessibility Case Manager/ADA Coordinator, Cynthia Lowery Staples. If you are unsure if the above criteria applies to you, but have questions or concerns please contact the SAR office. For more information or to set up an appointment please visit the SAR office located in the University Center, Room 3150 or call 903.566.7079. You may also send an email to cstaples@uttyler.edu.
Holidays and Religious Observations	Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.
Student	If you intend to be absent for a university-sponsored event or activity,

Absence for University-Sponsored Events and Activities	you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.
Social Security and FERPA Statement for Courses That Utilize Plagiarism Detection Software	It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically. *The University of Texas at Tyler has an account with an automated plagiarism detection service which allows instructors and students to submit student assignments to be checked for plagiarism. Faculty reserve the right to require that student assignments be electronically submitted 1) directly to the instructor; 2) to SafeAssign; or 3) to SafeAssign through the Blackboard course management program of UT Tyler. Assignments are compared automatically with a database of journal articles, web articles, and previously submitted papers. The instructor receives a report showing exactly how a student's paper was plagiarized. For more information about the University's policies regarding plagiarism, go to Subchapter 8-800-Student Standards of Conduct in the Manual of Policies and Procedures for Student Affairs. It can be found at:* http://www.uttyler.edu/mopp/documents/8Student%20Conduct%20and%20Discipline.pdf. *PLEASE REMOVE YOUR NAME FROM THE BODY OF YOUR PAPER AND REPLACE IT WITH YOUR UT Tyler ID#. ALSO REMOVE YOUR NAME FROM THE FILE NAME AND REPLACE IT WITH YOUR UT Tyler (e.g., "U12345678 Essay 1.docx") BEFORE SUBMITTING IT TO SafeAssign. Pursuant to the provisions of the Family Educational Rights and Privacy Act (FERPA), students are requested to maintain confidentiality as a way to keep their personal contact information (i.e. name, address, telephone) from being disclosed to vendors or other outside agencies. By your submission, you are also agreeing to release your original work for review for academic purposes to SafeAssign. Thank you!*
Emergency Exits and Evacuation	Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.
Prerequisites	EENG 3305 Pre-requisite, EENG 4308 – Automatic Controls and EENG 4311 – Signals and Systems Co-requisites