

ELC 4383 RF/MICROWAVE CIRCUITS I
ELC 5338 HIGH FREQUENCY ELECTONIC DESIGN
FALL 2019

Lectures: Lectures TR 9:30-10:45 (many weeks the lecture will be TR 9:30 – 10:20 to facilitate the laboratory period as the third credit hour), Rogers 204. Laboratory sections as scheduled, Rogers 314.

Instructor: Dr. Charles Baylis

Office: Rogers 300C

Office Hours: (subject to change) TR 1:00 – 3:00 or by appointment

E-mail: Charles_Baylis@baylor.edu

Teaching Assistants: To Be Announced

Course Website: <http://web.ecs.baylor.edu/faculty/baylis>. Students are responsible to check this site frequently as it will be the primary out-of-class communication method. Handouts and assignments will be posted on this site. Students should also have a Baylor e-mail account and are responsible for checking this account at least once per day for class-related updates.

Textbook: D.M. Pozar, *Microwave Engineering*, Fourth Edition, John Wiley & Sons, 2012, ISBN 978-0-470-63155-3

Prerequisites: ELC 3337 – Applied Electromagnetic Fields

Objectives: Introduction to passive RF, microwave, and wireless circuit design; transmission line theory; network analysis; impedance matching techniques; design of resonators, couplers, and filters; diodes; mixers; and the use of RF/Microwave computer-aided design techniques in analysis and design. Introduction to laboratory equipment, principles of microwave measurement, and hands-on experience with passive circuit design will be facilitated through regular laboratory assignments.

Grading: The following is tentative and subject to change: Two in-class examinations will be given. The format of these tests and specific dates will be announced in advance of the tests. Homework will be assigned for each lecture but will not be collected. A quiz will be given each Friday covering the material from the previous week. The lowest quiz score will be dropped. Laboratory assignments will consist of software assignments and/or circuit design, construction, and measurements. The following breakdown of grade percentages is tentative and is subject to change at any time.

Tentative Grading Breakdown (subject to change):

Midterm Exam	25%
Final Exam	25%
Projects/Labs	30%
Quizzes	20%

A typical grading scale will be used. The undergraduate and graduate sections will be evaluated separately:

90-100	A
88-90	B+
80-88	B
78-80	C+
70-78	C
60-70	D
Below 60	F

No minus grades will be assigned.

Undergraduate and Graduate Section Differences: Certain laboratory assignments will have sections that are required for students taking the course for graduate credit, but are optional (potential extra credit) for undergraduate students. Graduate students will also complete additional journal review assignments. In addition, there may be required additional parts of assignments and examinations and/or additional assignments for students taking the course for graduate credit.

Attendance: Students are expected to attend all lectures and laboratory sessions. Any student who has attended less than 75 percent of the class meetings will receive a grade of “F” in the course. Both excused and unexcused absences are used in this calculation.

Missed Assignments: If no arrangement is made in advance with the instructor, students missing a test, quiz, or assignment may be given, at the option of the instructor, a zero for that assignment. Students anticipating the need to take a test or quiz at a time other than that scheduled or to turn in an assignment late must make arrangements with the instructor in advance. In an emergency where advance notification is impossible, appropriate documentation supporting the excuse should be provided.

Appeal of Assignment Grades: Any student wishing to appeal a grade on an individual assignment must appeal that grade to the instructor, in writing, within one week following the return of the graded assignment to the student. Any appeals for grade changes outside of this one-week window will be disregarded.

Registration: Assignments of students not on the official class roll will be discarded without grading.

Academic Dishonesty: Rules for academic honesty in this course are as follows:

- Tests and Quizzes: No collaboration whatsoever is allowed on any of the tests or quizzes.
- Laboratory Assignments: The laboratory experiments may be completed in groups as authorized by the course instructor and teaching assistants. Discussion of results and general conversation regarding conclusions to be taken from the results are allowed and encouraged; however, laboratory reports are to be written individually and originally.
- Projects: All software projects are to be completed individually unless specifically noted by the instructor or a teaching assistant. Discussion of ideas and implementation methods is acceptable and encouraged; however, all development of simulation schematics, circuit designs, programming and/or problem solving related to the projects should ultimately be completed individually.

Any student found in violation of this policy may be given an “F” for the course at the option of the instructor and at minimum will be given a zero for the assignment. It is the responsibility of each student to understand and follow this policy.

Computer Requirements: All students should have access to a computer running Advanced Design System (including Momentum) from Keysight Technologies. This software is available in the open-access computer labs in the Rogers building as well as the WMCS Teaching Laboratory in Rogers 314.

Sexual and Gender-Based Harassment and Interpersonal Violence Policy: Baylor University does not discriminate on the basis of sex or gender in any of its education or employment programs and activities, and it does not tolerate discrimination or harassment on the basis of sex or gender. This policy prohibits sexual and gender-based harassment, sexual assault, sexual exploitation, stalking, intimate partner violence, and retaliation (collectively referred to as prohibited conduct). For more information on how to report, or to learn more about our policy and process, please visit www.baylor.edu/titleix. You may also contact the Title IX office directly by phone, (254) 710-8454, or email, TitleIX_Coordinator@baylor.edu.