Linear Circuit Analysis I
ENGR 2305 and ENGR 2105

Name: Hacer Varol
Email: hacervarol@sfasu.edu

E-mail is the best way to communicate.
Note: You are expected to add “ENGR/PHYS 2305/2105” in the subject of each e-mail so that I can easily retrieve the emails from students in this course.

Phone: 936-468-2097
Office: STEM 207N
Office Hours: M-W 11:00 am - 1:00 pm
F 10:00 am - 12:00 pm

If you are not able to stop by my office, you can meet me via Zoom, please send me an email in advance to set a meeting time.

Department: Department of Physics, Engineering, and Astronomy

Class meeting time and place:

Lecture – MWF 9:00 am – 9:50 am, STEM 108
Lab – M 2:00 pm – 4:50 pm, STEM 111

Course Description:
Principles of electrical circuits and systems. Basic circuit elements (resistance, inductance, mutual inductance, capacitance, independent and dependent controlled voltage, and current sources). Topology of electrical networks; Kirchhoff's laws; node and mesh analysis; DC circuit analysis; operational amplifiers; transient and sinusoidal steady-state analysis; AC circuit analysis; first- and second-order circuits; and use of computer simulation software to solve circuit problems. Lecture and laboratory grades are computed independently.

Text and Material:
ISBN 9781264272679 (Connect Access Card This is access to Connect (2 semesters), and within Connect, you have access to the ebook.)

Assignments:
There will be assignments almost every week, they are due one week after they have been posted. The assignments will be posted in McGraw-Hill Connect or D2L dropbox.

Quizzes:
Quizzes can be posted on D2L or can be delivered in the class environment. The idea is to reinforce knowledge from lectures and reading assignments.

Exams:
There will be a total of two regular exams during the semester and one comprehensive final exam. The exams will be based on the homework and the materials covered during the lecture.
Laboratory Procedures:
The laboratory procedures will be returned to the Teaching Assistant by the end of the laboratory period.

Laboratory Reports:
Two laboratory reports will be required during the semester. The first will be at the beginning of the semester, and the last at the end of the semester. The report will be written based on the results from the laboratory procedures. The laboratory report template is located in D2L.

Practicum Exams:
Two practicum exams will be given during the semester. These are going to be individual, and you will be assessed based on your laboratory skills. The instructor will provide a grading rubric in advance. Be aware that all practicums will have a duration of 80 minutes.

Course Calendar: (Tentative)

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
<th>Chapter</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 15</td>
<td>Basic Concepts, Basic Laws</td>
<td>1, 2</td>
<td>No Lab</td>
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<tr>
<td>2</td>
<td>Jan 22</td>
<td>Basic Concepts, Basic Laws Methods of Analysis</td>
<td>2,3</td>
<td>No Lab</td>
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<tr>
<td>3</td>
<td>Jan 29</td>
<td>Methods of Analysis</td>
<td>3</td>
<td>Lab 1</td>
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<tr>
<td>4</td>
<td>Feb 5</td>
<td>Methods of Analysis</td>
<td>3</td>
<td>Lab 2</td>
</tr>
<tr>
<td>5</td>
<td>Feb 12</td>
<td>Circuit Theorems</td>
<td>4</td>
<td>Lab 3</td>
</tr>
<tr>
<td>6</td>
<td>Feb 19</td>
<td>Circuit Theorems</td>
<td>4</td>
<td>Lab 4</td>
</tr>
<tr>
<td>7</td>
<td>Feb 26</td>
<td>Operational Amplifiers</td>
<td>5</td>
<td>Lab 5</td>
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<tr>
<td>8</td>
<td>Mar 4</td>
<td>Capacitors and Inductors</td>
<td>6</td>
<td>Practicum</td>
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<tr>
<td>9</td>
<td>Mar 11</td>
<td>Spring Break</td>
<td>7</td>
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<tr>
<td>10</td>
<td>Mar 18</td>
<td>Exam 2 (Chapters 4,5,6)</td>
<td>8</td>
<td>Lab 6</td>
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<tr>
<td>11</td>
<td>Mar 25</td>
<td>Second Order Circuits</td>
<td>9</td>
<td>Lab 7</td>
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<tr>
<td>12</td>
<td>Apr 1</td>
<td>Second Order Circuits</td>
<td>9</td>
<td>Lab 8</td>
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<tr>
<td>13</td>
<td>Apr 8</td>
<td>Sinusoids and Phasors</td>
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<td>Lab 9</td>
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<tr>
<td>14</td>
<td>Apr 15</td>
<td>Sinusoids and Phasors</td>
<td>10</td>
<td>Lab 10</td>
</tr>
<tr>
<td>15</td>
<td>Apr 22</td>
<td>Sinusoidal Steady State Analysis</td>
<td>10</td>
<td>Lab 11</td>
</tr>
<tr>
<td>16</td>
<td>Apr 29</td>
<td>Sinusoidal Steady State Analysis</td>
<td></td>
<td>Practicum</td>
</tr>
<tr>
<td>17</td>
<td>May 6</td>
<td>Final Exam: Wednesday, May 8 (All Chapters)</td>
<td>8</td>
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Grading Policy:

<table>
<thead>
<tr>
<th></th>
<th>Lecture</th>
<th>Laboratory</th>
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<tbody>
<tr>
<td>Homework (McGraw-Hill Connect)</td>
<td>15%</td>
<td>Lab Procedures</td>
</tr>
<tr>
<td>Self-Study/Review (McGraw-Hill Connect - Smart Book)</td>
<td>15%</td>
<td>Lab Reports</td>
</tr>
<tr>
<td>Quizzes/Attendance</td>
<td>10%</td>
<td>Attendance</td>
</tr>
<tr>
<td>Exams</td>
<td>40%</td>
<td>Practicum</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
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</table>
Late Policy
Any assignment should be returned in time. In the case that the assignment is returned late it will be affected by the following policy:

- Late submission after five days won’t be accepted.
- A deduction of 2% will be applied to the assignment for each day that you are late. This will be done automatically by Connect.
- Some assignments may be affected by a different policy.
- SmartBook through McGraw-Hill Connect will be used to help you maximize your studying and be better prepared for class.

Attendance Policy:
Attendance will be based on the Quizzes, and Attendance to Lecture/Laboratory Sessions. I will take attendance during the lecture/laboratory sessions, this is to ensure that you are keeping up with the material, and practicing the concepts covered in the lectures. If you arrive late to any of the sessions is your responsibility to ensure that your attendance was recorded.

General Education Core Curriculum Objectives/Outcomes (EEO)
There are no specific general education core curriculum objectives in this course. This course is not a general education core curriculum course.

Credit Hour Justification
Meets 3 hrs/wk for 15 weeks, and also meets for a 2-hour final examination. This is a problem-oriented class and lab with homework problems. The lecture and lab combine for 5 hours and 20 minutes of contact time each week and the work outside of classes each week for the combined courses averages much more than 10 hours and 40 minutes in working homework problems, preparing and answering quizzes, reading the book to understand the theories used in lecture and in homework problems and exams, reading the lab manual to prepare for the lab experiments done each week, writing up the lab experiments, writing formal laboratory reports, and studying for exams which include major exams and possibly short lecture quizzes.

Academic Integrity (A-9.1)
The Code of Student Conduct and Academic Integrity outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy.

Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to (1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or permitting another person to substitute for one’s self, to take a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities.

Plagiarism is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any
indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements.

Collusion is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam.

Misrepresentation is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially.

**Definition of Academic Dishonesty**
Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at [http://www.sfasu.edu/policies/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp)

**Withheld Grades Semester Grades Policy (5.5)**
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the coursework because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course to compute the grade point average. For additional information, go to [https://www.sfasu.edu/policies/course-grades-5.5.pdf](https://www.sfasu.edu/policies/course-grades-5.5.pdf)

**Student with Disabilities:**
To obtain disability-related accommodations, alternate formats, and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services promptly may delay your accommodations. For additional information, go to [http://www.sfasu.edu/disabilityservices/](http://www.sfasu.edu/disabilityservices/).

Students with special accommodation requests have the responsibility to immediately initiate a meeting with the instructor to discuss how the special accommodations will be provided. Students who are aware of these special needs at the beginning of the semester must inform the instructor in person before the twelfth-class day about any class activity, which will require special accommodations.

**Student Wellness and Well-Being**
SFA values students’ overall well-being, mental health and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.

If you are experiencing concerns, seeking help, SFA provides a variety of resources to support students’ mental health and wellness. Many of these resources are free, and all of them are confidential.

**On-campus Resources:**
The Dean of Students Office (Rusk Building, 3rd floor lobby)
www.sfasu.edu/deanofstudents
936.468.7249
dos@sfasu.edu

SFA Human Services Counseling Clinic Human Services, Room 202
www.sfasu.edu/humanservices/139.asp
936.468.1041

The Health and Wellness Hub “The Hub”
Location: corner of E. College and Raguet St.

To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include:

- Health Services
- Counseling Services
- Student Outreach and Support
- Food Pantry
- Wellness Coaching
- Alcohol and Other Drug Education
  www.sfasu.edu/thehub
  936.468.4008
  thehub@sfasu.edu

**Crisis Resources:**
- Burke 24-hour crisis line: 1.800.392.8343
- National Suicide Crisis Prevention: 9-8-8
- Suicide Prevention Lifeline: 1.800.273.TALK (8255)
- johCrisis Text Line: Text HELLO to 741-741