

# ELE 215 – LINEAR CIRCUITS LABORATORY

Spring 2025

**Catalog Description:** DC measurements, natural and step response of first- and second-order circuits, AC measurements, impulse and frequency response, operational amplifier circuits.

**Schedule:** Recitation Fridays 2:00-2:50 in Edwards Auditorium – in case of snow, a link for a zoom session will be sent via email.  
Lab sessions are Mondays and Fridays in Bliss 320 or 380

**Prerequisites:** ELE 202, credit or concurrent enrollment in ELE 212

**Instructor:** Prof. Peter F. Swaszek, 492 Fascitelli Center, [swaszek@uri.edu](mailto:swaszek@uri.edu)  
Office hours: M & F 10-11 or by appointment

**Materials:** The ELE 202 electronics kit will be useful for the op amp exercises

**Course Website:** <http://www.ele.uri.edu/~swaszek/ele215> I will post relevant class materials here including recitation slides, info on our bench equipment, lab instructions, and lab summary pages. The site has access limits; when requested to login, use ID \_\_\_\_\_ and password \_\_\_\_\_.

## Recitation Schedule:

| Date | Topic                    |
|------|--------------------------|
| 1/24 | Intro; basic equipment   |
| 1/31 | Lab 2 circuit; soldering |
| 2/7  | MatLab                   |
| 2/14 | More MatLab              |
| 2/23 | Op amps                  |
| 2/28 | Bode plots               |

| Date      | Topic           |
|-----------|-----------------|
| 3/7       | cancelled       |
| 3/21      | More Bode plots |
| 3/28      | Parasitics      |
| 4/4       | More op amps    |
| 4/11      | "Black Box"     |
| 4/18 & 25 | cancelled       |

## Lab Schedule:

| Dates      | Topic      |
|------------|------------|
| 1/27, 1/31 | Lab 1      |
| 2/3, 2/7   | Labs 2 & 3 |
| 2/10, 2/14 |            |
| 2/19, 2/21 | Lab 4      |
| 2/24, 2/28 | Lab 5 & 6  |
| 3/3, 3/7   | Lab 7      |

| Dates      | Topic  |
|------------|--------|
| 3/17, 3/21 | Lab 8  |
| 3/24, 3/28 | Lab 9  |
| 3/31, 4/4  | Lab 10 |
| 4/7, 4/11  | Lab 11 |
| 4/14, 4/18 | Lab 12 |
| 4/21, 4/25 |        |

**Due Dates and Grading:**

| Due Date    | Time   | Late Date | What's Due             | Points | How Submitted | Type       |
|-------------|--------|-----------|------------------------|--------|---------------|------------|
| 1/31        | 5 PM   | none      | PreLab 1               | 10     | online        | Individual |
| 2/5         | 5 PM   | 2/12      | Summary 1              | 40     | Brightspace   | Pair       |
| 2/19        | 9 AM   | none      | PreLab 4               | 25     | online        | Individual |
| 2/19        | 5 PM   | 2/26      | Summary 2              | 50     | Brightspace   | Individual |
| 2/26        | 5 PM   | 3/5       | Summary 4              | 50     | Brightspace   | Pair       |
| 3/5         | 5 PM   | 3/19      | Summary 5              | 75     | Brightspace   | Pair       |
| 3/17        | 5 PM   | none      | Summary 6 - v and i    | 20     | online        | Individual |
| 3/17        | 5 PM   | none      | Summary 6 - simulation | 55     | Brightspace   | Individual |
| 3/17 or 21  | in lab | none      | Lab 8 Bode plot        | 10     | in lab        | Pair       |
| 3/19        | 5 PM   | 3/26      | Summary 7              | 75     | Brightspace   | Pair       |
| 3/24        | 9 AM   | none      | PreLab 9               | 20     | online        | Individual |
| 3/24 or 28  | in lab | none      | Lab 9 Bode plot        | 10     | in lab        | Pair       |
| 3/26        | 5 PM   | 4/2       | Summary 8              | 90     | Brightspace   | Pair       |
| 3/31 or 4/4 | in lab | none      | Lab 10 Bode plot       | 10     | in lab        | Pair       |
| 4/2         | 5 PM   | 4/9       | Summary 9              | 70     | Brightspace   | Pair       |
| 4/7         | 9 AM   | none      | PreLab 11              | 20     | online        | Individual |
| 4/7 or 111  | in lab | none      | Lab 11 Bode plot       | 10     | in lab        | Pair       |
| 4/9         | 5 PM   | 4/16      | Summary 10             | 90     | Brightspace   | Pair       |
| 4/16        | 5 PM   | none      | Program for Lab 3      | 75     | Brightspace   | Individual |
| 4/16        | 5 PM   | 4/23      | Summary 11             | 70     | Brightspace   | Pair       |
| 4/21        | 9 AM   | none      | Lab 12 initial check   | 25     | online        | Pair       |
| 4/30        | 5 PM   | none      | Lab 12 report          | 100    | Brightspace   | Pair       |

The total is 1000 points.

Late submissions, if accepted, are penalized 40%.

Final grades typically are:

900-1000 = A, 800-899 = B, 700-799 = C, 630-699 = D, < 630 = F

Any student with a documented disability is welcome to contact me as early in the semester as possible so that we may arrange reasonable accommodations. As part of this process, please be in touch with Disability Services for Students Office at 330 Memorial Union, 401-874-2098.