



Spring '24 – ECEN 214 Labs

Introductory Meeting

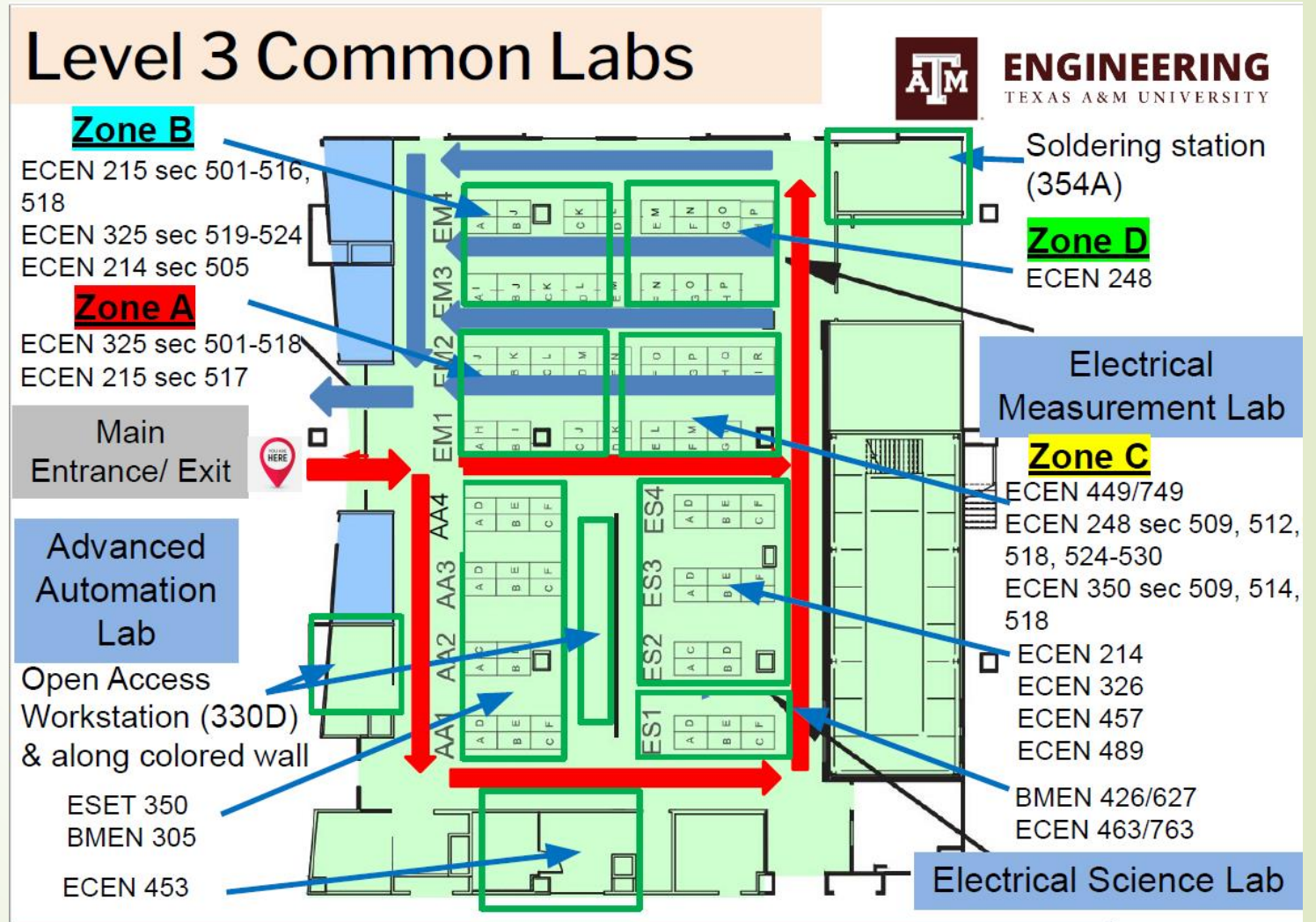
Session Outcomes

- Know basic lab information
- Know how & where to submit lab reports
- Know common labs regulations and safety protocol
- Information for collection of parts kits and AD2 units
- Lab teams and roster creation

Some Basic Lab Information

Our Lab: 3rd Floor - Lab 324

Work stations: ES3 & ES4



Lab Schedule

Lab Schedule

Date	Lab	Assignments Due
Week of Jan. 15	None	None
Week of Jan. 22	None - Meet with Lab TA	None
Week of Jan. 29	Lab 1 – Introduction to ECEN 214 Lab	Prelab 1
Week of Feb. 5	Lab 2 – Non-Ideal Sources and Renewable Energy Sources	Report 1 Prelab 2
Week of Feb. 12	Lab Practicum 1	None
Week of Feb. 19	Lab 3 – Equivalent Networks and Superposition	Report 2 Prelab 3
Week of Feb. 26	Lab 4 – Op Amps / Security System Part 1	Report 3 Prelab 4
Week of Mar. 4	Lab 5 – Op Amps / Security System Part 2	Report 4 Prelab 5
Week of Mar. 11	Spring Break	
Week of Mar. 18	Lab Practicum 2	None
Week of Mar. 25	Lab 6 – Transient Response of 1 st Order Circuits No Friday Labs*	Report 5 Prelab 6
Week of Apr. 1	Lab 7 – AC Steady State Response of 1 st Order Circuits	Report 6 Prelab 7
Week of Apr. 8	Lab 8 – Transient Response of 2 nd Order Circuits	Report 7 Prelab 8
Week of Apr. 15	Lab Practicum 3	None
Week of Apr. 22	Lab 9 – AC Steady State Response of 2 nd Order Circuits	Report 8 Prelab 9
Week of Apr. 29		Report 9

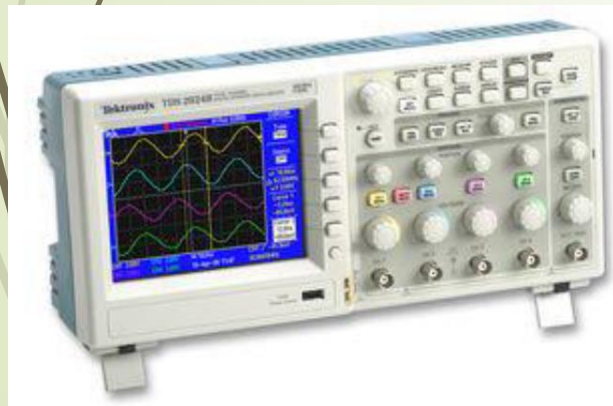
Total Reports:

- 9 Prelabs
- 9 Postlabs

- Lab manuals and appendices are **available on Canvas**
- Email me at least one day ahead if you cannot come. Have a valid excuse.
- If you're getting late, email me
- Include '**ECEN 214 – Section5##**' in the subject of any email correspondence

Lab measurement devices

1) Bench Equipment (in-lab)



2) Portable measurement device Analog Discovery 2 unit



3) Simulations Multisim



Prelab and Postlab Reports

Prelabs

- 1) Prelabs are due at the **start of the lab; it is an individual submission.**
- 2) Every prelab is **marked out of 10; no late submissions**
- 3) Simulation work in prelabs: Multisim.
Install one if you want, or Multisim online: <https://www.multisim.com/>
- 4) Search for: **Multisim online tutorial**, I will not be demonstrating it separately.
- 5) A good prelab should include: screenshots of the simulation; photos/scans of your handwritten calculations; all requested information mentioned in the lab manual

Postlab reports

- 1) Postlabs are due at the **start of the following week's lab**;
- 2) It is an **group submission**; as a team you will be using the lab equipment in rotation. It is your responsibility to split the lab report tasks among yourselves and ensure a complete report is submitted. Make sure at least one of you is submitting the report on time or all members in the team will lose points
- 3) Every postlab is **marked out of 100 points; late submissions will receive -10% penalty** for every 24 hours of delay
- 4) Make sure to record raw data on a record sheet (hardcopy) during the lab time.
- 5) Include the **cover page** mentioning the **lab number and title, names of authors, date performed and date submitted**
- 6) A good postlab report must include: all recorded data taken during lab, good representation of data (charts/graphs etc), conclusion with scientific reasoning,

Submission information

- The format of lab reports: convert your scanned/word documents to **pdf format only**
- Upload the pdf file on Canvas (no paper submissions):

Filename: **Prelab#_YourName_Section#**
Postlab#_YourName_Section#

- If you need help with prelabs/postlabs, **attend office hours**
- Grading Criteria:

Lab Reports	60%
Prelab Assignments	30%
Lab Practicums	10%
Total	100%

- Any issues with **graded post-lab reports** must be related to your TA **within 1week** of receiving them

Parts kits and AD2 Units

Parts kits and AD2

- Each student will receive their own parts kit. No returns required. You need to bring your own batteries. (Two AAs and one 9V)
- Each student will sign off an AD2 unit. This *MUST* be returned at the end of the semester
- I will be handing out parts kits today

Common Labs Regulations

Rules from common labs

- Students can only come for in-lab sessions as scheduled, **no walk-ins** will be allowed.
- Students are only permitted to **enter labs 5 mins before** the labs start.
- Lab session will need to be **completed on time**, so make sure to **you arrive on time**.
- Be sure to come in **proper attire (PPE)** to the lab.
- Do not start an experiment without **TAs/ support staff supervision**.

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Engineering

PROPER LAB PPE

	DO wear clear safety glasses with side shields	  Don't wear sunglasses or only your eye glasses.
	DO pull back long hair	  Don't leave long hair down.
	DO wear shirts with sleeves	  Don't wear sleeveless shirts
	DO wear long pants	  Don't wear skirts or shorts, or pants with holes
	DO wear closed-toe and closed-heel shoes that cover the whole foot	 Don't wear slip-on shoes or sandals
	DO wear your pant leg over the whole opening of your shoe	   

Student Responsibilities



- Report all equipment malfunction
 - Do not attempt to remove the equipment from the benches or swap with other benches.
 - Label the malfunction equipment and include a brief explanation
 - Report any problems encountered during a lab experiment, immediately to your TAs or Common Lab staffs.

Lab teams and roster...



Thank You!