

Thermal and Electrochemical Energy Laboratory (TEEL)

Abel Chuang



TEEL Laboratory Vision Statement

Vision

Make Positive Impact on Technology and People

by performing cutting-edge research and producing engineers
with **desirable skills** and **positive attitude**.

TEEL Laboratory Mission Statement

Mission

We **recruit and train** students and scholars to generate **impactful** patents, publications, and products by performing **unique and innovative** researches in **thermal and electrochemical** technologies.

TEEL Laboratory Values

- Pursue excellence through **hard work**
- Take **initiatives**
- Be **on time**
- Be **respectful** and **thankful**
- Be **responsible** and **accountable**
- **Team** above **individual**
- Always **do your best**
- Always speak the **truth**
- It's ok to say "**I don't know**"
- **Admit** mistakes instead of find **excuses**
- Find **solutions** instead of **complaining**

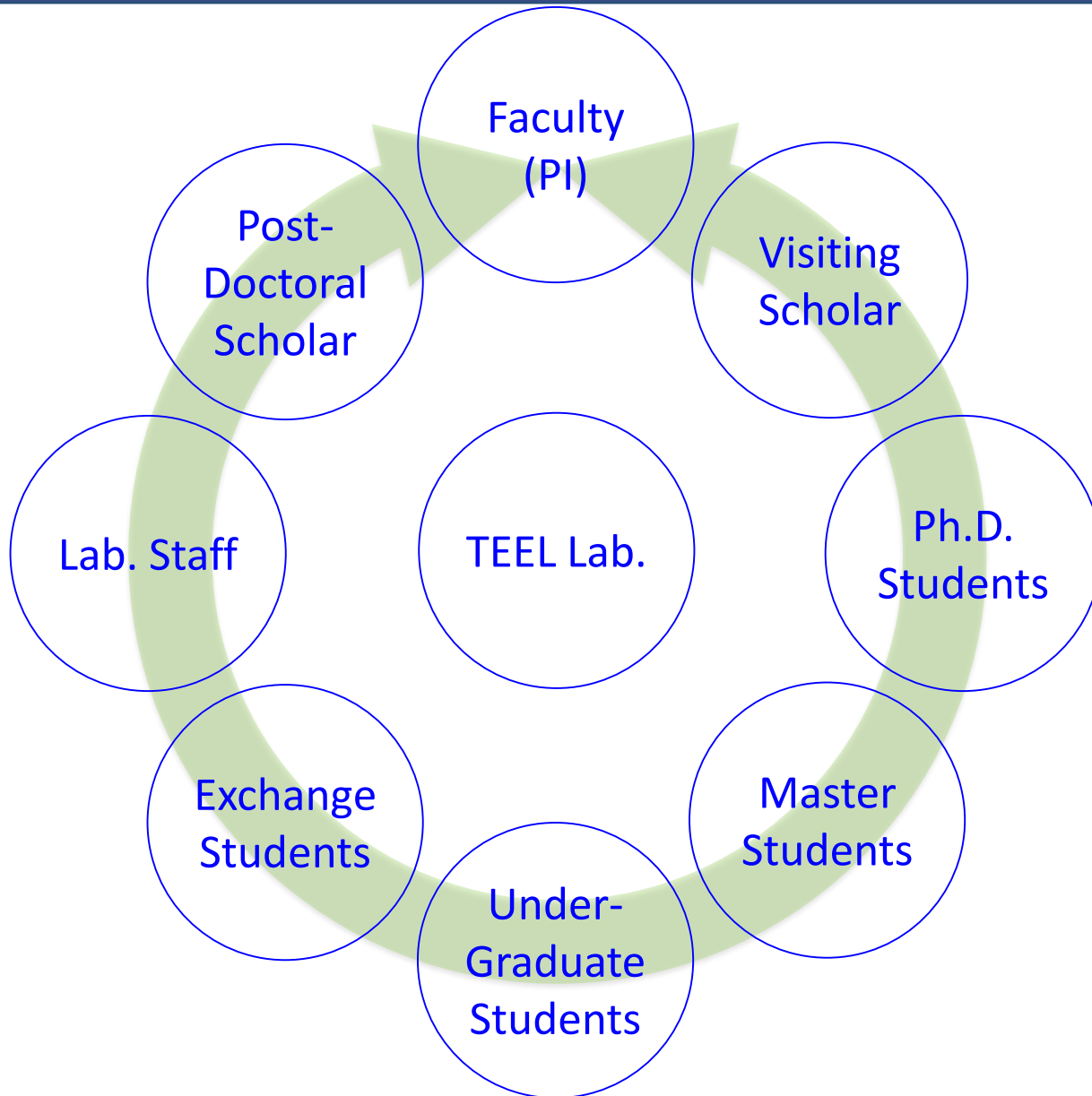


If you don't agree with these values, please schedule a meeting with the professor for detail discussion.

TEEL Laboratory Rules

- Be safe (No open-toe shoes, loose clothes, shorts, etc.).
- Learn to use the eyewash fountain and safety shower.
- Evacuate if alarm sounds.
- Follow manuals and SOPs for equipment operation.
- Use safety goggles and lab aprons as instructed.
- Use care when handling chemicals.
- Report all accidents regardless of how minor to PI.
- Return all tools and materials and clean up after your work.
- Keep a focus on your projects and experiments.
- Take notes of your experiment.
- Respect other laboratory members.

TEEL Laboratory Roles



Bi-Weekly Group Meeting

- Every other Saturday at 8:30 – 10 am in SE2 224
- Agenda:
 - **Group reading:** review scientific articles that are related to our research and most importantly discuss their strengths and weaknesses.
 - **Research Progress:** students take turns presenting the research they've done since their last presentations.
 - **Laboratory Interaction:** students to communicate with each laboratory member.
- Coordinator: Felipe Mojica
 - Solicit and email out agenda before [Thursday 5 pm](#).
 - Send out reminder on [Friday before 5 pm](#).
 - Assign individual to take meeting minutes.
 - Template: [Box\SEII_230H_Laboratory\Meetings\Meeting Minutes_Template.docx](#)
 - Review meeting minutes and email it to PI for approval before [Monday 5 pm](#).
 - Archive the meeting minutes in Box folder after approval:
 - [Box\SEII_230H_Laboratory\Meetings\2015](#)

Laboratory Member Performance Review

- One-on-one meeting.
- Twice a year (June and December).
- Required for every laboratory members.
- Review and evaluate laboratory member's **progress**.
- Clarify professor's **expectations**.
- Discuss future **plans**.
- Set performance **goals** together.
- Give **feedback** to professor.
- All discussions will be kept confidential between you and the professor.
- Template:
 - [Box\SEII_230H_Laboratory\Forms_Template\Performance review form.docx](#)

My General Expectations

- All laboratory members to work and study hard.
- Don't be late turning in your assigned tasks to professor.
- Be prepared for meeting and take notes.
- Always use presentation template and rehearse your presentation.
 - \SEII_230H_Laboratory\Forms_Template\Teel_presentation template.pptx
- Format your report and include citations.
- Never alter research results, never copy from others, always cite appropriately.
- Always store research data and results on box folder.
- Advance notification for vacation and long leave.
- Authorship of papers:
 - First author: the one responsible for the project and has done most of the writing.
 - Only include the ones that have made contribution to the actual work.
 - Professor is the corresponding author.

Undergraduate Student Experience

- My Expectations:
 - GPA > 3.5 (after joining the laboratory).
 - Attend every bi-weekly meeting.
 - Prepare assigned tasks and deliver them professionally.
 - Reach out to senior laboratory members to assist in any way you can.
- Possible outcomes:
 - Switch laboratory: does not fit in with laboratory vision, mission, and values.
 - Graduation: successfully finish all course work in time.
 - Successfully apply for graduate school or secure a job.



Master Student Experience

	Plan I - Thesis	Plan II – Non-Thesis
GPA	> 3.0	> 3.0
Course work	> 20 units of course work > 8 units of research	> 28 units of course work
Graduate seminar	> One semester	> One semester
Final Gate	Thesis defense	Oral comprehensive exam

- My Expectations:
 - GPA > 3.5; Two years of study; 1 journal publication (Thesis option)
- Possible outcomes:
 - Switch advisor: does not fit in with laboratory vision, mission, and values.
 - Switch from Plan I to Plan II: does not meet research expectations.
 - Graduation: successfully pass all requirements in time.



Doctoral Student Experience



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- My Expectations:
 - GPA > 3.7
 - Four years of study
 - 3 journal publications

	Ph.D.
GPA	> 3.0
Course work (Ph.D.)	> 12 units of course work
Graduate seminar	> Two semesters
Teaching Assistant	> 1 semester
Preliminary exam	Pass < two years
Proposal and Qualify exam	Pass
Conference or Seminar	> 1 presentation
Final Thesis Defense	Pass

- Possible outcomes:
 - Switch advisor: does not fit in with laboratory vision, mission, and values.
 - Switch from Ph.D. to M.S.:
 - Does not pass preliminary exam or qualify exam.
 - Does not meet research expectations.
 - Graduation: successfully pass all requirements in time.

Postdoctoral Scholar Experience

- Research
 - Spend significant hours in the laboratory.
 - Perform independent and innovative research everyday.
- Writing
 - Generate journal publication: more than 2 publications per year.
 - Write funding proposal: more than 2 proposals per year.
- Teaching
 - Teaching can be arranged if there's a strong interest.
 - The opportunity is based on the need of the school.
- Mentoring
 - Coordinate laboratory research activities.
 - Supervise laboratory members including staff, graduate students and undergraduate students.

Time Management

- First priority: finish tasks assigned by professor on time.
- 3 credit course: devote a **maximum** of 9 hours **weekly** including lecture, study, solving homework problems, etc.
- 50% Teaching Assistantship: devote a **maximum** of 20 hours **weekly**.
- 25% Teaching Assistantship: devote a **maximum** of 10 hours **weekly**.
- Preparation for preliminary exam and qualifying exam:
 - Self-study at night or during the weekend.
- To be a successful graduate student, one needs to be goal oriented and be ready for extended working hours.
- It is reasonable for a graduate student or research staff to work on an average of **60~80** hours per week.
- If you cannot manage your time or work effectively, please record your daily timesheet and schedule a meeting with the professor ASAP.

My Promises to Laboratory Members

- I will be available.
- I will provide timely and truthful feedback.
- I will challenge you to improve.
- I will encourage you to learn from your mistakes.
- I will listen to your feedback.
- I will treat you with respect.
- I will do my best to help you succeed.

Any Questions?