**Information for Prospective Students /**

**Frequently Asked Questions**

Last Updated: June 23, 2020

Direct link to this document: <https://tinyurl.com/SEALFAQs>

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# **Before Joining SEAL / Initial Steps**

□ These steps must be completed before an in-person interview or a first-contact via Slack.

□ **Step 1)** Read this FAQs Sheet (all pages).

□ **Step 2)** Visit every tab of the SEAL Website to get a sense of the projects and general theme of the lab: <http://uwseal.com/> .

□ **Step 3)** Decide if you are interested in devoting time to SEAL.

□ **Step 4)** Follow the instructions located at <http://uwseal.com/index.php/apply/> to apply.

□ **Step 5)** If you are invited to move forward, proceed with an in-person interview or a first-contact via Slack.

□ **Step 6)** Once you have been formally invited to join SEAL, request access to the “First Week Orientation Sheet”; your team leader should provide you with this information. From there, you will receive step-by-step instructions.

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# **Welcome to SEAL!**

The Sensors, Energy, and Automation Laboratory (SEAL) of the Department of Electrical Engineering is directed by Professor Alexander Mamishev. SEAL conducts research in a variety of areas, including medical device design, consumer products, energy efficiency, security applications, non-destructive testing, and transportation. Students at SEAL are expected to participate in lab projects, team meet-ups, pursue scholarship opportunities, business plan competitions, grant writing, and other activities designed to foster student growth, productive research, and technology commercialization.

# **Expectations**

Students are expected to commit 10 to 15 hours per week for at least 3 quarters. You should be interested in self-edification, putting time toward completing the training program, as well as growing your resume via scholarships and publications. We desire students who are genuinely interested in getting the most out of their undergraduate education.

Frequently Asked Questions

## **Q: What is SEAL?**

**A:** The Sensors, Energy, and Automation Laboratory (SEAL) of the Department of Electrical & Computer Engineering is directed by Professor Alexander Mamishev. SEAL conducts research in a variety of areas, including medical device design, consumer products, energy efficiency, security applications, non-destructive testing, and transportation. SEAL is a distributed matrix organization and uses principles of Scrum and JIT.

## **Q: What is the expected time commitment?**

**A:** For an undergrad, graduate PMP student, or graduate student in the trial mode: 10 to 15 hours per week on the average. For a regular daytime program RA graduate student: 20 to 30 hours per week. Lesser involvement is not worth the student’s time with training, interacting, or project completion. Working hours are generally flexible, although students are expected to meet all deadlines. If you are unable to meet deadlines, you should let your team leader know immediately and with enough advance notice. The number of credits is somewhat disconnected for the number of hours. If you are involved less than 10 hours a week, you will simply not achieve anything valuable.

## **Q: Can I have a paid position?**

**A**: Many student commitments do not start out as paid positions. However, based on performance, available funding, and lab longevity, strong students who are with us for several quarters often transition into paid positions, depending on available funding.

At SEAL, we prioritize the “**We Eat What We Kill**” principle: Although we cannot guarantee funding at the entrance point, there are many opportunities for students to earn funding through our projects. The more active and harder students work, the more likely they will end up in paid positions.

Initially, most SEAL commitments offers students:

\* Course credit (optional),

\* Research experience,

\* Training,

\* Flexible schedules,

\* Mentorship,

\* Telecommute options,

\* Opportunities for publications,

\* Strong research projects to leverage for scholarships, and

\* Pathways to commercializing our technologies via small businesses.

Students are expected to assist in grant applications and to apply for scholarships, awards, and business contests to expand their professional portfolio. We will actively guide this process and assist as needed. We hope that students take these opportunities to get the most out of their undergraduate career. We have many techniques, tools, and resources available to help our students improve their portfolio, secure funding, and become successful.

## **Q: How can I access the SEAL Training Program?**

You will get access after you are accepted to the lab.

## **Q: How many research credits should I take?**

**A:** **For ECE, ME, and CSE students**, the university allows 2 to 5 research credits, such as 299, 399, 499. Register for what is best for you; you can follow the process in the training program and fill out the appropriate forms. We guide you through this process.

**For other departments (e.g., Business Students/English Majors)**, you may need to contact your undergraduate adviser, who will explain the process for getting credits for internships in your department. If you need a signature of a faculty member in your corresponding department, we have contacts in most departments to provide such signatures. Once you know how many credits you need, work with your group leader to complete the paperwork.

Please note that the minimum expected time commitment is 10 hours per week. Registering for less credits does not equate to less time commitment.

## **Q: When are lab meetings?**

**A:** We prefer teleconferences, as our students, faculty, staff, and other collaborators have busy schedules and time commitments. However, we hold twice-a-week tech sessions where the whole lab is urged to progress on their individual tasks at the same time. Team leaders attend these sessions, where they are available to answer questions or provide guidance. These sessions occur on Tuesdays and Thursdays, but we are very flexible. People contribute to the lab on weekdays, weekends, mornings, evenings, etc.

## **Q: Can we meet so that I can get your signature (e.g., for key access or credit registration)?**

**A:** A signature for electronic key access or course credit registration does not warrant a face-to-face meeting. Follow the instructions in the SEAL Training Program (Reference Number 1.5.0) for more information on how to get your forms signed. **Note**: If you have a miscellaneous document that requires Prof. Mamishev’s signature, contact your group leader via Slack, and they will coordinate this process with you. Alternatively, you may be able to leave the document in the Inbox on Prof. Mamishev’s door (in Room 215K) or in Prof. Mamishev’s mailbox (in the EE central office). However, Prof. Mamishev is frequently out of town for business meetings, so receiving an in-person signature may sometimes take days (or even weeks).

## **Q: Where is the lab roster?**

**A:** The entire lab roster is kept in two locations: 1)<https://sealuw.slack.com/team>, which provides a brief description of the SEAL member with a method of contact; and 2) the SEAL Timesheet, with an Organization Structure tab.

## **Q: Where is the lab located?**

**A:** The lab facilities are distributed among ECE building, ME building, Nano building, and Bowman building. The main office room is also an office room 215L. We are also using a variety of other resources and labs on campus, as needed by the projects.

## **Q: Why is there so much writing?**

**A:** This is a research lab, our final product is proposals, papers, and reports. Of course, to produce those, we need to make devices work and code to run while every step needs to be documented for the lab and outside world. If the work is not published, it is as if it was never done. If the proposal is not submitted, there will be no funding for the project.

## **Q: How do I get scholarships based on my research efforts?**

**A**: Watch the webinar *Small Game Hunting* located in the SEAL Training Program (Reference Number 2.5.1).

## **Q: How do I get involved in the business plan competitions?**

**A**: We encourage our students to participate in business plan competitions based on their work in the lab. Such an effort should be coordinated with the lab director and team leader.

## **Q: How can I get published?**

**A**: The overall process is quite easy—select a target journal or conference and write a paper for it. The devil is in the details. Refer to corresponding levels in the SEAL Training Program.

## **Q: How can I assist with the grant writing process?**

**A**: We constantly prepare and submit grant proposals. You can contact a direction leader about your desire to participate, and we will set you up.

## **Q: Do I get to choose my own projects/focus, or will assignments be given to me?**

**A**: It is a mixed bag. We go through the matching process, trying to match projects to your interests. Sometimes, there is an urgent project where anyone available needs to pitch in. Other times, there are no projects available that match your interests. Once you are integrated into the lab, you will have a chance to chart your course.

## **Q: What if I am out of tasks and I want to be productive? What should I do?**

**A**: Let your leaders know. Also, pay attention to announcements on the #general and #seal-active channels. We encourage being proactive.

## **Q: I changed my mind and want to leave the lab. What do I do?**

**A**: Anytime. If you leave early in the quarter, drop the research credits; if you leave late, make sure you have had a decent contribution to date to keep the credits. In any case, before you leave, be sure that all of the work you have done for SEAL is thoroughly reported in a final report so that other students can continue where you left off.

## **Q: Can I have a face-to-face meeting or one-on-one Zoom session with Prof. Mamishev?**

**A:** It is possible, but the situation must be right. All general questions are answered in the orientation sheet and SEAL Training Program; topics that are discussed in these materials should not be repeated in a personal meeting. Similarly, project-related questions should be processed via Slack, during teleconferences, and/or sent to team leaders. However, there may be legitimate questions that require a personal meeting with Prof. Mamishev; you can bring these questions up and approve the meeting agenda prior to the in-person meeting.

## **Q: How do I participate in teleconferences?**

**A:** You will get an invitation to a GoToMeeting/Zoom. The teleconferences are in a computer screen sharing mode. You do not need a video camera. Make sure you are in a quiet environment and use a high-quality headset – not a speakerphone or a built-in computer microphone. Keep yourself muted when not talking. When necessary, the teleconference will be recorded, you can then go over the recording as many times as you need to catch complex details.

## **Q: How do I communicate with group members?**

**A:** With Prof. Mamishev: Ongoing business – via Slack while choosing the appropriate level (e.g., private messages, group channels, general channel). Complex issues requiring dialog – via phone. Face-to-face meetings are usually a last resort. File exchange – via Dropbox.

With other team members: Use your judgment, everyone is different. For internal communication, Slack is the first venue. For external communication, email is the first venue.

## **Q: What if I cannot participate in the next week’s teleconference because I am on travel?**

**A:** Ninety percent of the time you are still connected by your cell phone. You can read updates on Slack, call in, and get screen share with most cell phones. Most telecons are 30 minutes. You do not have to, but remember, we eat what we kill. On the other hand, we record our zoom sessions for those who cannot attend.

## **Q: How to request recommendation letters:**

**A: To request recommendation letters, you must have been at SEAL for a minimum of two quarters, and have completed all steps up to Reference Number 5.0.0 of the SEAL Training Program.** Once you have been a contributing member of SEAL with a decent citizenship score, you may request recommendation letters for things like scholarships, job search, graduate school applications. To request a recommendation letter, complete all steps of Reference Number 2.8.0 of the SEAL Training Program. Be as honest and thorough with this process as possible and provide as much information as you can (especially provide a comprehensive bullet point list explaining your strengths and achievements specific to the lab). The more information you provide, the easier it is for Prof. Mamishev to provide you with a strong, personalized letter.

## **Q: Under what conditions are you advised not to join research?**

**A:** The most frequent failure scenarios in research is improper time management between research, courses, and/or outside work. If reducing course load/working hours is not an option, focus on classes, as less damage is done to the research project and you will receive higher grades. Lack of focus or communication can result in failure in research, so be sure to discuss with mentors and experienced students while allocating enough time for the project. Finally, lack of discipline will result in immediate removal of students.

## **Q: I live far away from campus; can I work remotely?**

**A:** In many cases, yes. It is possible that—after some initial meetings to establish the project—you would be able to telecommute. Some projects are amenable to this mode, while others are not. For example, certain types of projects require you to be in the lab frequently. Thus, in most cases, it depends on the nature of the work, the type of project, and when project leaders are available. Most groups have their meetings in the evening (or on the weekends) to avoid schedule conflicts, with the expectation that most project tasks can be worked on at any time. Note that this flexibility is not an excuse to avoid working or to evade your hour commitments. If you are able to work from home without distraction, and the nature of the work does not prohibit it, then it is okay to do so.