

2020 Materials Science Tracks Student Handbook

UO Knight Campus Graduate Internship Program

The Knight Campus Graduate Internship Program is part of the **Phil and Penny Knight Campus for Accelerating Scientific Impact**, an initiative designed to fast-track scientific discoveries into innovations, products, or cures to improve the quality of life for people in Oregon and throughout the world: <https://accelerate.uoregon.edu/>.

In 2017, the Knight Campus Graduate Internship Program merged two established master's programs: the Master's Industrial Internship Program and the Bioinformatics & Genomics Master's Program. This handbook is specific to the materials science tracks within the Knight Campus Graduate Internship Program which include:

- Polymer Science
- Semiconductor & Photovoltaic Device Processing
- Optical Materials & Devices
- Molecular Sensors and Probes

For brevity herein, we will refer to the materials science tracks as the *Internship Program*.

The intent of this handbook is to ensure students within the Internship Program have a clear understanding of program policies and expectations.

Program Overview

With a rich 22-year history, the mission of the Internship Program is to train students in the real-world knowledge and skills necessary to be successful in the industrial environment. We believe an advanced degree should not only provide rigorous academic training but also help students land a job and prepare for a successful career. The Internship Program begins summer term with accelerated coursework in one of 4 materials science focal areas (see above).

In the core courses, students learn the technical and professional skills necessary to solve problems in the industrial environment, with an emphasis on a particular industrial sector. In addition to core courses, students are required to take elective credits in their major.

Students also have access to optional coursework in professional development. Professional development topics include interviewing, networking and job hunting – skills that enable students to successfully land the jobs they want and chart a path to a rewarding career in science.

Internships in industry allow students to apply these new professional skills in real time and take them to the next level. Internships are paid and last 9 months. Though internships are not guaranteed, historically close to 98% of students complete internships.

Coursework Credits

There are **54** total credits required to complete the degree – 24 coursework credits (the equivalent of six 4-credit classes) and 30 internship credits (10 credits per quarter for 3 quarters).

Due to the impact of the 2020 COVID-19 pandemic, the program has altered the core course sequence and terms in which coursework is offered, but the overall credit requirements remain the same. Table 1 has a breakdown of overall credit requirements and Appendix 1 contains the revised core course sequence offering.

Students are required to demonstrate satisfactory academic progress in all core courses (*see GPA requirements*).

Table 1. Coursework requirements.

	Credit Breakdown
Core Course Credits (Graded)	16
Elective Credits (Graded)	8
Internship Credits (Pass/No Pass)	30
Total	54

Elective Courses

In addition to core courses, students have 8 elective course credits within the major to be completed. Students may choose to take these credits at the UO - or at another institution with a graduate program in the student's major.

When taking electives at another university, courses must be approved through the **Course Approval Request form** prior to the start of class. Courses taken at semester schools transfer in at 1.5x (*e.g. 3 semester credits transfer in to the UO as 4.5 credits*).

Course Approval Process

If a student chooses to take a course at another institution, the **Course Approval Request form** (*available on the program website*) should be completed and emailed to the track lead. It is advisable to submit course approval requests 4 weeks in advance of the course start date. In the event a course is not approved, a student may incur a financial penalty if the course is dropped beyond the school's refund period. Please be mindful that the requested 4-week lead time is to prevent the aforementioned situation.

Approved courses meet the following criteria:

- Course is a graded, graduate-level course in major (or closely related) field of study.
- Course meets in person (not online).
- Course material has not been covered in previous coursework.
- Course counts toward a graduate degree in the major at the institution where the course is offered.

TIP: To take courses at another institution, students typically register as a *non-degree-seeking student*. Courses will be charged at the regular graduate rate for that institution.

Transferring Credits

See “Graduation Requirements” section below for instructions on transferring in credits from other institutions.

Professional Development

The program offers several opt-in activities to promote the professional development and corporate visibility of its students. These activities are available to students enrolled in *Professional Communication in Science* (CH610). The elective is P/NP and does not fulfill degree requirements. The opt-in activities may have additional requirements defined in the syllabus such as satisfactory course attendance, active participation and good standing with the Internship Program. Examples of opt-in activities include guest seminars, one-on-one professional development mentoring, inclusion meetings, mock interviews, networking events and virtual and in-person introductions to corporate partners.

Partner-facing events (i.e. in-person and virtual introductions) have 3 additional requirements:

- Good academic standing (≥ 3.00 GPA)
- No grades of “Incomplete”
- No infractions of the UO Student Conduct Code
<https://studentlife.uoregon.edu/conduct>
- Permission for program staff to serve as references via UO’s Student Reference Request Form: <https://registrar.uoregon.edu/files/pdf/StudentReferenceRequestForm.pdf>

If a student fails to meet any of these requirements but would like to be considered for future professional development activities, a plan detailing necessary remediation actions and timeline to meet professional conduct standards may be created with the program director, Stacey York, and when necessary, additional staff or faculty. Upon successful completion of the remediation plan, a student may be eligible to participate in extracurricular professional development activities.

Internships

Students participating in the *Professional Communication in Science* elective and who are in good standing may submit resumes for consideration by partner companies and have the opportunity to network and interview with partners who are seeking interns. The program facilitates both virtual and in-person networking opportunities with corporate partners. Students are also encouraged to seek internships outside the program’s partner network. Track leads can provide guidance as to whether an outside opportunity will qualify for internship credit.

Internship start dates vary, as these are determined by the company. Winter term internships typically begin in January but occasionally begin in December. *Table 2* provides common enrollment scenarios.

While interning, students typically enroll for **10 internship credits per term**. If an internship starts midway through a term or the student is employed less than 35 hours per week, the student should consult with an Internship Program staff member on the proper number of internship credits to register for. Internship credits cannot be taken in advance of core coursework in the Internship Program.

Table 2. Potential coursework and internship scenarios.

Term	Scenario 1	Scenario 2
Summer	8 core credits 4 elective credits 1 prof. dev. credit	8 core credits
Fall	8 core credits 4 elective credits	8 core credits 4 elective credits
Winter	10 credits Internship	4 elective credits
Spring	10 credits Internship	10 credits Internship
Summer	10 credits Internship	10 credits Internship
Fall		10 credits Internship

Internship Papers

In order to document successful progression of technical knowledge, either a research paper summarizing internship projects or a technical literature review relevant to the internship is submitted each term a student is registered for internship credit. Term paper requirements are provided by the instructor of record (typically the track lead) for internship credits. Internship credits are taken Pass/No Pass. Failure to meet term paper requirements may lead to a “No Pass” for the term. Papers that describe work conducted during an internship may have to be approved by the company’s legal department prior to submission. Students should be proactive in understanding the timeline for managerial approval and proactively working with the instructor if an issue arises.

Registration

To register for core courses and internship credits via Duckweb, students will need course registration numbers (CRNs). CRNs for summer and fall courses and internship credits will be provided by the program via email each term. Some courses may not be listed in the general course list for the university and cannot be found by searching the class list online. Instead, students should input the CRN and the information associated with the course will populate.

Students should be registered by the end of the first week of classes each term to remain in good standing.

Tuition & Fees

Tuition for Core Courses, Internship Credits & Professional Development

For students enrolling in the summer of 2020, tuition for core courses and internship credits will be offered at a rate of \$565/credit through summer term 2021. Credits offered through the Internship Program are the same rate for resident and non-resident students.

Tuition for Elective Coursework

Students may choose to take their 8 elective credits at the UO or at another institution with a graduate program in their major. Elective courses taken at the UO which fulfill degree requirements are offered at the rate of \$565/credit (through the summer of 2021).

Tuition for elective coursework taken at another institution will be charged at the regular graduate tuition rate of that institution.

Tuition must be paid in full before a student can register for the following term. *Students must be registered before the term deadline set by the university to be in good standing with the program.* For a full list of registration and drop/add dates, refer to the academic calendars: <https://registrar.uoregon.edu/calendars/academic/five-year>.

Note: Students who have financial aid awards will not receive their awards until their registration is processed.

Fees

Students pay standard student fees when enrolled for *on*-campus courses. Students pay *reduced* fees for terms in which they are exclusively enrolled in *off*-campus courses (e.g. internship credits, courses at other schools). Internship credits for internships hosted at the University of Oregon are required to pay on-campus fee rates.

Matriculation Fee: All new students are charged a one-time matriculation fee the term they enter the UO (currently \$430 - this is subject to change).

A description of the fees and the standard cost for each term can be found at:

<https://registrar.uoregon.edu/costs/tuition-fees>. Be sure to select *Knight Campus Internship Program* from the dropdown menu to see the correct tuition/fees.

Note: When students are enrolled in off-campus credit, you will be billed the full fee amount and then credited the difference. You should see both charges in Duckweb.

Financial Aid

For information about financial aid, please contact the aid office at <http://financialaid.uoregon.edu> or 1-800-760-6953 / 541-346-3221.

Safety

Safety should be thought of in relation to the self, colleagues, lab mates and equipment. A large part of the training in this program is how to be an effective scientist while preventing avoidable problems. Making technical mistakes is part of the learning process; however, students will be taught basic and advanced best practices over the course of the program to minimize mistakes.

The program includes extensive laboratory components. Each track has industry-specific tools and occupational hazards students should be aware of, in addition to safety practices. If a student feels uncomfortable or inadequately trained to handle an occupational hazard or lab task, the student should immediately consult with an instructor and/or teaching assistant so that proper training can be administered.

Books

Books are loaned to students during summer term. Track leads will coordinate the expected return date. Please report loss or damage to the track lead.

ID Cards

Students can request an ID card from UO Card Office in the student union. A selfie may be submitted ahead of time if preferred. Students starting the program in the summer of 2020 will not need cards until fall term.

<http://uocard.uoregon.edu/>

GPA Requirements

Students must have a cumulative GPA of 3.00 or above. Transfer credits do not affect overall GPA at the UO. (Please refer to the *Elective Courses* section for further details).

Grades below a C- do not count for graduate credit, but *are* used to calculate overall GPA. If a student's GPA drops below a 3.00 at any time during graduate study or if a student accumulates more than 5 credits of N or F grades (regardless of GPA), it is considered unsatisfactory and the student may be disqualified, terminating the student's degree program.

Removal of Incompletes

Graduate School policy requires that graduate students have a maximum of 1 year to convert a graduate course grade of Incomplete ("I"). After one year, the student must petition the Graduate School for removal. A course instructor may elect to create a shorter timeline to convert an "I" to a grade.

Consult the grad school website for a full overview of graduate grade requirements, including incompletes: <https://gradschool.uoregon.edu/policies-procedures/grades>

Student Conduct

The UO Student Conduct Code applies to all students in the program. Students will be asked to confirm they have read and understood the Student Conduct Code before the first week of classes. The full conduct code may be found at: <https://studentlife.uoregon.edu/conduct>

Accessibility

The UO is working to create inclusive and accessible learning environments. Please notify a program staff member if there are aspects of the program design that result in accessibility-related barriers to participation. For more information, please contact the Accessible Education Center in 360 Oregon Hall, (541) 346-1155 or uoaec@uoregon.edu.

Recording Restrictions

In an effort to protect privacy and freedom of expression, students may not record classes, meetings or events without advance written consent of the instructor, staff or classmate leading the class, meeting or event. If permissible, recordings may only be used by the student for study purposes and may not be distributed. If a student has received permission, other students in the session will be notified in advance. Failure to comply with this policy is considered a violation of the student conduct code and may result in disciplinary action.

Program Probationary Warnings and Dismissal

Students who fail to meet department, program or university requirements or fail to make satisfactory progress toward the MS degree are subject to probationary warnings and/or dismissal.

In consultation with the Faculty Advisory Committee (FAC), program staff will establish whether a probationary warning or immediate dismissal is warranted. The FAC is a group of UO faculty who ensure program alignment with broader departmental and university goals and initiatives.

If a warning is issued, the student will be placed on probation and the FAC will establish actions required for the student to be re-instated to good standing. Failure to meet the necessary requirements outlined by the FAC within the established timeframe will result in dismissal from the program. Serious infractions may lead to immediate dismissal without going through a probationary period.

Advising

General course requirements and advising are provided by track leads. (*Other core staff may also serve as resources if necessary*)

- *Polymer Science*, **Casey Check**
- *Optical Materials & Devices*, **Nima Dinyari**
- *Molecular Sensors*, **Jessica Lohrman**
- *Semiconductor & Photovoltaic Device Processing*, **Fuding Lin**

Given the interdisciplinary nature of the material science tracks, if a student has interest in broadening their skill set to other disciplines, they are encouraged to reach out to that track lead.

Graduation Requirements

To graduate, students must *APPLY to the Graduate School in the first two weeks of the term in which all required credits are completed*. The application and deadlines can be found on the graduate school website: <http://gradschool.uoregon.edu/>.

To ensure eligibility to graduate, please review the following graduate school requirements:

1. Continuous Enrollment Requirement.

Graduate students are required to be continuously enrolled for a minimum of 3 graduate credits until all requirements have been completed (excluding summer term).

Any term (except summer) in which a student is not enrolled for **UO credit**, a leave of absence request is required by the grad school: <https://gradschool.uoregon.edu/policies-procedures/leave>. *For example, if a student enrolls at another university while not enrolled for internship credit.*

2. Waiver of Enrollment in Term of Completion.

The UO requires registration in the term a degree is awarded. There is an exception for students in the Internship Program who are completing elective courses at another institution in the term they will graduate.

If a student is not enrolled at the UO in the term of completion for any *other* reason than stated above, students should submit a *General Petition* with the grad school requesting a “waiver of enrollment in the term of completion,” and explain why they are not enrolled at the UO. There is a \$15 fee for the general petition (subject to change).

<http://gradschool.uoregon.edu/current-students/academic-forms>

3. Transfer of Graduate Credit

If a student completes elective courses outside the UO, the student must request to have those credits transferred in before they can graduate.

To transfer credits, students must do the following ***once the grade from the final class is posted***:

- Complete the ***Transfer of Graduate Credit form***:
<http://gradschool.uoregon.edu/current-students/academic-forms>
- Sign it and send it electronically to Lynde Ritzow: lynde@uoregon.edu
- Send an ***official transcript*** to Lynde once the final grade is posted (*Please do not submit these directly to the graduate school as it may delay transfer*).

Electronic transcripts are preferred, but students may send them by post if an electronic copy is not available:

Lynde Ritzow
Knight Campus Graduate Internship Program
6231 University of Oregon
Eugene, OR 97403

Because students usually transfer courses in the term they wish to graduate, failure to do this immediately after the end of the term may delay graduation.

Students who were undergraduates at the UO must also transfer in courses they “reserved for graduate credit” while they were undergraduates. They do not need to submit a transcript for these credits.

Please Note:

- All courses transferred must be completed with a grade of B or higher (grades of B- or lower cannot be transferred).
- Transferred courses do not impact GPA at Oregon.
- Credits from a semester institution transfer in at 1.5x (*exp: 3 semester credits transfer in as 4.5 UO credits*).

4. Beware of the 7-year time-to-completion limit.

The graduate school requires graduate students to complete their degree within seven years, beginning with the term of admission. This date is adjusted back in time if a student transfers graduate credits that were earned before the date of admission.

5. Degree Requirements

Degree requirements are based on the program, departmental and university requirements for the year the student enrolled in the Internship Program.

Notify Lynde Ritzow that you have applied to graduate.

Graduation Ceremonies:

To participate in *graduation ceremonies*, notify:

Chemistry: Leah O'Brien, 541-346-4839, leaho@uoregon.edu

Physics: Tiffany Stewart, 541-346-4751, tiffany@uoregon.edu

Students are advised to consult the graduate school website for a complete description of university requirements for the master's degree: gradschool.uoregon.edu

Appendix 1. Core course curriculum for the 2020 cohort of the Knight Campus Graduate Internship Program materials science tracks. Note that electives are not included.

Track	# Credits	Course #	Course Description	Term Offered
Semiconductor & Photovoltaic Device Processing	4	CH677M/PHYS677M	Semiconductor Device Physics	Summer 2020
	4	CH678M/PHYS678M	Semiconductor Processing & Characterization	Summer 2020
	4	CH610/PHYS610	Intro to Semiconductor Processing & Device Charact. Lab	Tentatively Fall 2020
	4	CH679M/PHYS679M	Device Processing & Characterization Lab	Tentatively Fall 2020
Molecular Sensors & Probes	4	CH610	Chemical Biology	Summer 2020
	4	CH610	Chemical Analysis and Signal Transduction	Summer 2020
	4	CH610	Synthetic Methods in Chemical Biology	Tentatively Fall 2020
	4	CH610	Molecular Sensors Immersion Lab	Tentatively Fall 2020
Polymer Science	3	CH610	Organic Polymer Chemistry	Summer 2020
	3	CH610	Physical Polymer Chemistry	Summer 2020
	2	CH610	Intro to Rheology & Processing of Polymers	Summer 2020
	4	CH610	Lab Introduction to Polymer Synthesis and characterization Techniques	Tentatively Fall 2020
	4	CH670	Industrial Polymer Projects Lab	Tentatively Fall 2020
Optical Materials & Devices	4	Phys 610	Optical Materials & Devices & Physical Optics Lecture	Summer 2020
	4	Phys 628	LASERs and Nonlinear Optics with OpticStudio	Summer 2020
	4	PHYS 610	Optical Materials & Devices & Physical Optics Lab	Tentatively Fall 2020
	4	PHYS610	Advanced Projects Lab	Tentatively Fall 2020