

GRADUATE HANDBOOK 2015-2016

August 2015

Master of Arts (MA) Master of Science (MS)

School of Sustainability Arizona State University

Mailing Address: PO Box 875502, Tempe, AZ 85287-5502 Physical Location: 800 South Cady Mall, Tempe, AZ 85281

> Phone: 480-727-6963 Fax: 480-727-9902

School Website: http://schoolofsustainability.asu.edu

Future Student Inquiries: SOSGradSunDevil@asu.edu

Current Student Inquiries: SOSGradAdvising@asu.edu

Internships: SOSChangeMaker@asu.edu

Career Services: <u>SOSCareerServices@asu.edu</u>

Graduation: SOSGraduation@asu.edu

Alumni Association: SOSAlumni@asu.edu

Table of Contents

| Handbook Objective | |
|---|-----|
| Student Responsibility | |
| SOS Faculty & Students | |
| MA and MS Curriculum Summary | |
| Time Limit Enrollment and Leave Policies | |
| | |
| Registration Enrollment Policy | |
| Continuous Enrollment Policy | |
| Leave of Absence Policy Tuition and Fees | |
| Financial Support | |
| Assistantships | |
| Scholarships and Fellowships | |
| Student Loans | |
| SAP Form | |
| Sexual Harassment | |
| Campus Safety | |
| Facilities | |
| Access | . 5 |
| Reserving Rooms | |
| Locker Policy | |
| Academic Integrity | |
| SOS Satisfactory Academic Progress Policy | . 7 |
| Performance and Annual Review | |
| Annual Review | |
| Probation Policy | . 9 |
| SOS Advising | |
| Role of the Graduate Coordinator | |
| Role of the Faculty Mentor or Advisor (Committee Chair) | |
| Committee Participation Eligibility | |
| Establishing a Committee Chair | |
| Establishing a Supervisory Committee | |
| Pre-admission Credits | |
| Check Sheet and Plan of Study | |
| Check Sheet | |
| Plan of Study (iPOS) | |
| iPOS Workshop | |
| Research Proposal | |
| Thesis or Scientific Paper Proposal | |
| Application for Graduation | |
| Graduation Exit Session | |
| Thesis Paper and Defense | |
| Scientific Paper and Defense | |
| Defense Announcement | |
| After the Defense | |
| Thesis Students | |
| | 16 |

| Final Grades | 7 3 3 9 |
|----------------------------------|---------|
| Addendum B: MA and MS Milestones | • |

Handbook Objective

The objective of this handbook is to provide School of Sustainability (SOS) graduate students information on policies and procedures that must be adhered to for successfully completing a graduate degree at Arizona State University and within SOS. This handbook is not all-inclusive of every university policy, nor is it a complete replica of other handbooks or manuals; however, references are made to other handbooks and links provided for students to review full details on policies outside of the department.

Student Responsibility

It is the responsibility of each student to understand and observe all procedures and requirements specified by Graduate Education and the School of Sustainability. It is a requirement for all SOS students to read and understand the SOS Graduate Handbook, Graduate Education's Policies and Procedures Handbook and the ASU Academic Catalog. Faculty and staff provide academic advice and assistance; however, the ultimate responsibility for meeting degree and other requirements remains with the student.

All ASU students are also required to have an active ASU email account and to check it frequently. Students may forward their ASU email to another preferred account. Instructions on how to do this are found online.

SOS Faculty & Students

A list of <u>SOS faculty</u> and ASU <u>Sustainability Scientists and Scholars</u> can be found online. SOS faculty are eligible to participate as a student's committee chair. The scientists and scholars are able to participate as a co-chair or member on a student's committee. Eligibility questions can be sent to <u>SOSGradAdvising@asu.edu</u>.

A list of current <u>School of Sustainability students</u> can be found online. SOS students can write to <u>SOSGradAdvising@asu.edu</u> to request instructions on how to add a new or update an existing biography.

MA and MS Curriculum Summary

Although both master's degree programs emphasize cross-disciplinary knowledge and skills, the MA degree is most appropriate for students inclined towards social sciences, planning and related fields; the MS degree for those inclined towards natural sciences, economics or engineering. The core courses are identical; a student's past experience, intended focus of study and elective preferences help determine whether the MA or MS is more appropriate.

The program of study will comprise a minimum of 40 semester hours. In summary:

| MA and MS Curriculum | Credits |
|---|---------|
| Core Courses | 19 |
| Methods Electives | 6 |
| Normative Dimensions of Sustainability Elective | 3 |

| General Electives | 6 |
|---|----|
| Thesis or Capstone Publishable Scientific Paper | 6 |
| Total Semester Hours Required | 40 |

Please see *Addendum A* for curriculum details and course descriptions.

Time Limit

Students should complete the master's degree program within two years. In some instances, students may need some additional time to complete the thesis or required revisions. If this happens, students should not exceed a total of three years for completing the master's degree. Exceptions must be approved by the supervisory committee and the graduate director.

Enrollment and Leave Policies

Registration Enrollment Policy

Students are required to register or drop classes by the deadlines listed on the Academic Calendar. The School of Sustainability does not allow late drops past the university's deadline. If a student wishes to drop a class past the deadline, then the student will need to withdraw from the class. A withdrawal will result in a "W" grade on the student's transcript. A "W" grade may negatively impact students receiving student loans. A "W" grade lowers the student's pace rate, which is a measurement of classes taken versus classes successfully completed. The only way to avoid a "W" grade is to drop the class during the university's add-drop period or to enroll in a different course (a swap) to replace the course that is no longer desired.

To swap a class or to enroll in a class past the add-drop deadline, a student must complete the <u>enrollment change request form</u> and obtain required signatures. The form has complete details. Students can also pick up a late enrollment form from the SOS front desk in the Student Services Center, the first floor in Wrigley Hall. After the form is submitted to the front desk, the student will be notified when it is ready for pick-up. The student must then take the form to the Registrar in the Student Services Building. The Registrar will enroll the student in the course.

Continuous Enrollment Policy

Once admitted to a graduate degree program, students must be registered for a minimum of one credit hour (not audit) at the graduate-level during all phases of their graduate education. This includes periods when they are engaged in research; working on or defending their thesis or applied project; or in any other way using university facilities or faculty time including the term in which they graduate.

Registration for every fall and spring semester is required. Summer registration is required for students who are doing an internship for credit, proposing a master's thesis or scientific paper proposal to their committee, defending a thesis or scientific paper, or graduating from the degree program.

To maintain continuous enrollment, credit hours must be:

- A graduate-level course; or
- At least one-credit of SOS 595: Continuing Registration

If the student has completed all required credits for the degree and wishes to take only one-credit to meet the continuous enrollment policy, then the student should take SOS 595: Continuing Registration.

Grades of "W" (withdrawal) or "X" (audit) are not considered valid registration for continuous enrollment purposes. "W" grades are received when students officially withdraw from a course after the course drop deadline. "X" grades are received for audit courses. Additionally, students completing work for a course in which they received a grade of "I" (incomplete) must maintain continuous enrollment as defined previously. Graduate students have one year to complete work for an incomplete grade; if the work is not complete and the grade changed within one year, the "I" grade becomes permanent. See the Satisfactory Academic Progress Policy section for more details on incomplete grades.

Leave of Absence Policy

Students planning to discontinue enrollment for a semester or more must request approval for a leave of absence. Students may <u>petition Graduate Education</u> for a leave of absence for a maximum of two semesters during their entire program. A petition for a leave of absence, endorsed by the student's faculty advisor, the members of the student's supervisory committee (if applicable) and the graduate director, must be approved by Graduate Education. This request must be filed and approved before the anticipated absence.

A student on leave is not required to pay fees, but in turn is not permitted to place any demands on university faculty or use any university resources. Students who do not enroll for a fall or spring semester without an approved leave of absence by Graduate Education are considered withdrawn from the university under the assumption that they have decided to discontinue their program. Students removed for this reason may reapply for admission to resume their degree program; the application will be considered along with all other new applications to the degree program. Please see the Pre-Admission section for details on limitations for applying previously earned credits (if reapplying to the program).

Tuition and Fees

Students can find information on <u>tuition and fees</u> online. Currently, the School of Sustainability does not have a program fee for the MA and MS in Sustainability and uses general graduate tuition and fee rates for courses with the SOS prefix.

Financial Support

Funding is never guaranteed. Students seeking financial support should investigate all opportunities and conduct independent research on funding opportunities beyond the School.

Assistantships

Students in good standing are eligible to apply for teaching assistantships (TA) as part of the annual review process conducted every year in March. The TA application is a section in the annual review survey. TA positions are highly competitive between continuing students and newly admitted students. New students awarded funding

offers in the first-round are notified by the end of March and make their decisions by April 15. Continuing students should expect to receive first-round offers or waitlist notifications around April 15 or just after. Between April 15 and April 30, the department works on second and third-round TA offer letters.

During the summer months, some TAs may be awarded a research assistantship (RA). If this occurs, the TA position will be reallocated to someone on the waitlist. The Graduate Committee determines which waitlist candidate receives the offer. The offer may go to a new student or a continuing student.

Students seeking a RA position should reach out to faculty, usually their committee chair or someone on the supervisory committee. Occasionally, some RA positions are sent to the SOSGrad email listserv. Eligible students should apply to those opportunities by reading the email carefully and following up with the specific contact person listed in the advertisement.

Scholarships and Fellowships

Students may also visit the <u>Graduate Education's</u> website, the <u>SOS</u> website, and the SOS Graduate Community Blackboard site to find other links for student funding resources.

Student Loans

Students are encouraged to apply for <u>federal financial aid</u> if they need funding assistance. The required form is called the FAFSA and is free to submit.

Any questions related to student loans should be addressed to the ASU Financial Aid office. Please note that graduate-level student loans are all unsubsidized, which means you pay interest on the loans while you are in school.

SAP Form

Also, to remain eligible for student loans, student must meet specific GPA requirements and make academic satisfactory progress (pace rate) toward degree completion. A course withdrawal "W" on your transcript, even if it is a medical or compassionate withdrawal, will negatively impact the pace rate.

Any student who receives a financial aid hold (seen in MyASU) for GPA or pace rate violations will be instructed to contact their program's advisor to fill out a <u>Satisfactory Academic Progress (SAP) plan</u>. The graduate coordinator will work with a student who must complete a SAP plan form. The form must be completed prior to the next term. Submitting the form after the semester begins may result in delays in receiving funds or receiving a lesser amount. The Financial Aid Office must approve the SAP form; therefore, the graduate coordinator cannot guarantee the SAP plan will grant the student another loan disbursement.

SAP plans are reviewed on an annual basis after the spring semester. A student who is still in violation may have to fill out another SAP form with the graduate coordinator.

Sexual Harassment

The University prohibits sexual harassment by employees and students and will not tolerate sexual harassment that interferes with an individual's work or educational performance or creates an intimidating, hostile or offensive working, learning or residential environment. Additional information about sexual harassment can be found online.

Campus Safety

To report an emergency on campus, students can simply dial 911 or use one of the emergency call boxes found on campus. Non-emergency ASU Police or campus-safety matters should be directed to 480-965-3456. ASU has an opt-in, text-message alert system by which students can choose to receive a text message from ASU in times of an emergency. Students can sign up for the service online. For additional safety resources and contacts, such as Counseling Services, Police and Safety Escort Services, visit the Safety Resources website.

Facilities

The School of Sustainability is located in <u>Wrigley Hall (WGHL)</u>. Of particular interest to graduate students is the second-floor grad lounge, which is available to provide individual and collaborative work space to students in the SOS graduate program. There is wireless access throughout the building and a data lab with computers and printers on the second floor that is available to SOS graduate students.

Access

Graduate students who have been admitted may request 24-hour access to the second floor by completing an ISAAC form at orientation.

Reserving Rooms

School of Sustainability students can reserve WGHL conference rooms if:

- They are reserving the room for a thesis or other type of culminating experience defense.
- They are reserving the room on behalf of a faculty or staff member that will be present with them during the meeting.

School of Sustainability students can reserve WGHL <u>enclaves</u> under the following circumstances:

- They can only reserve the enclaves between 8am-5pm (and cannot be in the building past 5pm unless there is a faculty or staff member with them).
- Their reservation may be cancelled if a faculty or staff member needs the space for a meeting.
- Their group isn't larger than the capacity that the enclaves hold (i.e., they cannot move chairs into the enclave to accommodate more students)
- They are not using the space as individual study space.
- They should check-in at the front desk on the 3rd or 4th floor before their reservation.

In both instances, students are responsible for making sure the room is cleaned up at the end of the meeting.

Reservations can be requested by emailing <u>SOSGradAdvising@asu.edu</u>. Students should provide the requested day and time, purpose of the meeting, number of seats needed, media needed, and a phone number to add to the reservation.

Other options for students looking for space include:

- WGHL breezeways and 1st floor tables on the patio
- Computing Commons and Coor Hall Team Rooms/Group Study Areas
- Libraries:
 - o Noble Library Study Rooms
 - Hayden Library Study Rooms
 - o Music Library Study Rooms
- Memorial Union (MU) has lots of open/informal space
- Students that are trying to reserve space for a registered student organization can reserve classrooms through classroom scheduling here (once they have a designated contact listed with classroom scheduling)
 - o See p. 3 of Classroom Scheduling's Event Request Guide
 - o Their contact information is (480) 965-6578 or rooms@asu.edu

Locker Policy

Lockers are available in the grad lounge on a first come, first served basis. Students will need to bring their own locks and if they are using a locker on a regular basis. Due to our increase in student population, grad students are encouraged to share lockers or not occupy a locker if they rarely use it. Additionally, students should not occupy more than one locker.

Academic Integrity

ASU Graduate students are expected to be ethical in their multiple roles as students, researchers, teachers or supervisors of undergraduate students and representatives of the School, Institute and University. When in doubt about appropriate conduct, students should consult a faculty mentor to seek clarification. Breaches of academic integrity include, but are not limited to, the following:

- Engaging in any form of academic deceit, e.g., referring to materials, sources or devices (camera phones, text messages, crib sheets, solution manuals, materials from previous classes or commercial research services) not authorized by the instructor for use during an evaluation or assignment;
- Providing inappropriate aid to another student in connection with any evaluation or assignment;
- Engaging in plagiarism by using the ideas, words or data of another person or persons without full and appropriate attribution;
- Engaging in plagiarism by claiming credit for the ideas, words or data of another person or persons, or submitting work done by another as one's own;
- Failing to follow ethical procedures for research involving human subjects, such as violating participants' confidentiality, or failing to maintain confidential or sensitive research data in a secure location;
- Knowingly using data that do not meet appropriate standards for reliability and validity;

- Failing to meet responsibilities to undergraduate students, such as failing to provide assistance during designated office hours;
- Engaging in a romantic relationship with an undergraduate student whom the student supervises or evaluates in a classroom or research setting;
- Falsifying or misrepresenting hours or activities in relationship to an internship, externship, research assistantship, field experience, workshop or service learning experience;
- Repeatedly failing to meet commitments and responsibilities, such as chronically missing deadlines, or failing to provide work promised to colleagues; and
- Behaving in a way that reflects poorly on the School, Institute and University while conducting research or participating in community activities as a representative of the School.

The School of Sustainability has a zero-tolerance policy for any form of academic malfeasance. Penalties for unethical behavior range from being placed on academic probation to dismissal from the program. Additional information about academic integrity policies of the University is available on the <u>Student Rights and Responsibilities website</u>.

SOS Satisfactory Academic Progress Policy

Academic excellence is expected of students doing graduate work. Failure to adhere to the policies below may result in academic probation or a recommendation to Graduate Education for withdrawal from the degree program.

The following policies pertain to the MA and MS in Sustainability:

• <u>Minimum GPA</u>: To be eligible for the degree and to remain in good academic standing, MA and MS SOS graduate students must achieve and maintain a 3.25 minimum grade-point average (GPA).

Students must maintain a 3.25 cumulative GPA in the following areas: 1) all courses numbered 500 or higher that appear on the transcript, and 2) all courses that appear on the plan of study.

The SOS GPA policy also includes post-baccalaureate courses (undergrad classes not listed on the plan of study) taken at ASU, in which students are required to maintain at least a cumulative 3.00 GPA.

• Incomplete Grades: Incompletes are given at the discretion of the instructor of a course and should not be expected. Students granted an incomplete must complete a contract with the instructor, outlining the work required and the timeline for completion. The completed contract must be sent to the graduate coordinator who will obtain the graduate director's signature and keep an electronic record of the contract in the student's file. The timeline cannot exceed one calendar year, but the instructor may choose an earlier completion date.

Once coursework has been fulfilled, a grade will be assigned. The grade must be entered within the calendar year, so the student should allow a few weeks for the instructor to grade each assignment. If the student does not complete coursework within the period <u>stipulated by the instructor</u> (on the contract), then the student may receive an unsatisfactory or failing grade for the course.

In the case that the professor gives the student the full calendar year within which to complete the course, and the course is not complete within that time, then the incomplete will become permanent and the student will have to re-take the course if it is a required course. The School of Sustainability permits only two incompletes on a student's transcript at any time. More than two incompletes is cause for academic probation. More than two permanent incompletes is grounds for dismissal from the program.

• <u>Individual Course Grades</u>: A grade of "C" is not allowed on any courses within a student's plan of study. If a student receives a "C", then he or she must re-take the course or seek approval from the Graduate Committee to remove the course from the plan of study.

The following policies pertain to the MA and MS programs only:

• <u>Time Limit for Submitting a Proposal</u>: MA and MS students should submit their thesis/ scientific paper proposal before the start of their third semester, but no later than one full semester before the thesis defense. To remain on the two-year plan, the student needs to successfully defend the proposal by the middle of the third semester. Students cannot register for Thesis or Scientific Paper until an approved proposal is on file with the graduate coordinator.

See the *Research Proposal* section in this handbook for additional program policies related to the MA and MS proposal.

• <u>Time Limit for Completing the Master's Degree</u>: The university allows up to six years for students to complete a master's degree. However, students are encouraged to finish in two years and should take no more than three years to complete the SOS MA or MS program. Extensions must be approved by the supervisory committee and the SOS graduate director.

Performance and Annual Review

To ensure that students complete their degrees in a timely manner, get the most out of their experience at SOS and meet requirements of the degree and School, the Graduate Committee and student's faculty advisors will review student progress annually. Students who are not making satisfactory progress may be dismissed from the program, according to university regulations.

Annual Review

The graduate coordinator will send the students a link to the annual review survey in February. The completed survey, plan of study and updated CV/resume are to be submitted by the student by March 1. Annual review files will be reviewed in March of each year. The Graduate Committee and the student's faculty advisor will review the following documents when assessing students' progress:

- Check Sheet (provided by the graduate coordinator)
- Transcript (provided by the graduate coordinator)
- Comments (provided by SOS faculty)
- Updated CV or resume (provided by the student by March 1)
- Completed Annual Review Survey (provided by the student by March 1)

The student's faculty advisor will provide to each student, in writing, the results of the annual review. The advisor's comments will be emailed to the student by the graduate coordinator by the end of the spring semester.

Probation Policy

A student may be placed on academic probation if:

- 1. The student's cumulative GPA in all courses numbered 500 and above and in all work specifically included in the plan of study falls below the 3.25 GPA requirement as outlined in the Satisfactory Academic Progress Policy section;
- 2. The student's cumulative GPA for all post-baccalaureate courses taken at ASU falls below 3.00;
- 3. The student receives a "C" or lower in a course on their plan of study;
- 4. The student has more than two incompletes since starting the program; or
- 5. The student fails to complete the program within specified time guidelines and does not meet milestones specified in the graduate handbook.

Students will be notified by email when first placed on probation and will be required to complete a Probation Agreement with their faculty advisor or the Graduate Committee. Students on probation must meet monthly with their faculty advisor or the Graduate Committee member handling their probation agreement to ensure satisfactory progression. A student placed on probation will remain on probation until performance improves and requirements have been met. Students have one semester to advance to good standing before termination is considered. The Graduate Committee will notify the student in writing when he or she advances to good standing.

A student may be recommended for withdrawal from the graduate program if:

- The student is on academic probation because his or her GPA has fallen below the 3.25 GPA as outlined in the Satisfactory Academic Progress Policy section or below 3.00 for all post-baccalaureate courses taken at ASU, and the student fails to bring the GPA to required levels by the deadline specified in the Probation Agreement;
- 2. The student receives a "C" or lower grade while on academic probation for any reason;
- 3. The student has more than two permanent incompletes since starting the program;
- 4. The student fails to meet milestones specified in the graduate handbook; or
- 5. The student fails to meet conditions stipulated in their Probation Agreement.

Students will be notified by email if they are being recommended for withdrawal from the program.

A student may appeal any action concerning academic probation and withdrawal by petitioning the Graduate Committee within 10 business days, using the petition form found on the Graduate Community Blackboard site. Approval of petitions is not guaranteed.

SOS Advising

Role of the Graduate Coordinator

The graduate coordinator is available to students to help explain department and university policies and procedures. Any question about paperwork, university policies or services should be addressed first to the graduate coordinator, who will answer the question or make a referral to the appropriate university office or personnel. All questions regarding coursework or research applied toward the degree should be addressed to the student's faculty mentor/advisor or supervisory committee.

Role of the Faculty Mentor or Advisor (Committee Chair)

Students are assigned an initial faculty *mentor* when they enter the program. The mentor's role is to assist the student with choosing appropriate classes at the beginning of their program and help identify ideal faculty for the student to talk with for the purpose of establishing the supervisory committee. The mentor may become the student's faculty advisor but this is not always the case. The potential advisor must agree to participate in this role.

A student's first responsibility is to meet with several faculty members with the intent of identifying one who will serve as the student's *advisor* (*aka committee chair*) throughout the program. This advisor will act as chair or co-chair of the student's supervisory committee. Students are encouraged to consult with their faculty mentor or advisor prior to registering for classes each semester to ensure classes will contribute to degree completion.

Committee Participation Eligibility

A full supervisory committee must be interdisciplinary and have a minimum of three people (one committee chair and two members or two co-chairs and one member). The chair or co-chair of the supervisory committee must be a <u>SOS faculty member</u> or <u>approved by Graduate Education</u> to chair an SOS committee and must meet certain criteria. Usually, only tenured or tenure-track faculty are granted thesis-chair approval. Please check with the graduate coordinator about chair eligibility if there are any questions. Committee members are typically ASU faculty members (not limited to SOS faculty) or a <u>Sustainability Scientist</u> or Scholar.

Faculty Emeriti who meet Graduate Education criteria may serve as members or cochairs on graduate supervisory committees. They may serve as chairs with the recommendation of the academic unit and approval of Graduate Education on a case by case basis. Qualified individuals outside the university, upon the recommendation of the graduate director and approval of Graduate Education, may serve as members of thesis and dissertation committees. All such requests must be submitted to Graduate Education for approval using one of the appropriate Committee Approval forms. Questions about committee formation and university procedures can be addressed to the graduate coordinator.

Establishing a Committee Chair

All students are expected to identify a faculty advisor (committee chair) no later than the middle of the second semester in the program. The plan of study (iPOS) is due by March 1. The student must list the committee chair on the online iPOS in order to

submit it. Therefore, the student is encouraged to establish the chair by the end of the first semester or near the beginning of the second semester to meet the March 1 deadline.

To establish a committee chair, the student must ask the potential committee chair if he or she is willing to take on the student as their advisee in the role of chair (not member). If the student wants to work with two faculty members, who will both serve as advisors, then the roles will be co-chairs. In a co-chair situation, both faculty need to be aware that they are co-chairs and be informed of who is serving as the other co-chair. Approval from both is required.

The student will list the confirmed chair or co-chairs on the plan of study. The graduate coordinator will follow up with the student and the faculty if additional paperwork is requested by Graduate Education.

Students who are unable to establish a committee chair should consult with their assigned mentor or the graduate director.

Once a committee chair has been established, students work with their chair to map out their entire degree progression (plan of study). Students will also consult their chair for forming a supervisory committee made up of members who can provide an interdisciplinary perspective on the student's research.

Establishing a Supervisory Committee

Since the committee must be interdisciplinary, the student should talk with several faculty members to determine possible committee members and then discuss the options with the committee chair. The student will need to ask the potential committee members if they are willing and able to participate in the role of member on the student's committee. When two willing committee members have been found, the student adds their names to their iPOS and submits it for review.

The remaining committee members should be selected by the end of the second semester. Students should confirm directly with the chair and committee members that each person is willing and able to participate on the student's committee. Once confirmed, the student lists each person on the plan of study (iPOS) to officially establish the committee with the university. The graduate coordinator will follow up with the student and the faculty if additional paperwork is requested by Graduate Education.

Pre-admission Credits

Pre-admission credits are classes applied toward degree completion but were taken prior to admission to the graduate program. These classes can be transfer courses from another institution or classes taken at ASU as an undergraduate, as a non-degree seeking student or as an admitted graduate student of another program.

Pre-admission credits cannot have been used toward another degree that was awarded. Students can use up to 12 credit hours of pre-admission credits. The School and Graduate Education must approve the specific courses used for pre-admission credits in order for the student to use them on the plan of study.

Pre-admission credits must meet the following requirements:

- taken at an accredited college or university
- graduate-level
- student must have obtained at least a "B" grade or the equivalent in the course(s)
- approved by supervisory committee as part of the plan of study
- completed within three years of being admitted to this graduate program

The taking of courses for graduate credit as an undergraduate or non-degree student does not ensure admission to the program or acceptance of the acquired graduate credits as part of the plan of study.

Students who are dismissed from the program for any reason are able to reapply. If the student is readmitted, then the pre-admission policy applies for all credits earned prior to the dismissal. If classes do not meet all the requirements for pre-admission credits, then they cannot be used, meaning some classes may have to be retaken.

Graduate Education has extensive rules regarding pre-admission credits. For complete details, consult the ASU Graduate Policies and Procedures handbook.

Check Sheet and Plan of Study

Check Sheet

Until the plan of study is filed, students can track coursework requirements using the *MA/MS SOS Check Sheet* found on the SOS Graduate Community Blackboard site. The graduate coordinator will also keep track of each student's degree requirements and will keep a copy of the check sheet in the student's file. The check sheet will be used in the student's annual review. Students are encouraged to meet with the graduate coordinator to review their check sheets.

Plan of Study (iPOS)

An interactive plan of study (iPOS) must be filed online via MyASU with Graduate Education. The iPOS is a formal plan to meet degree requirements. It includes all courses to be taken and the designation of a thesis. The iPOS is an agreement that the work specified on the iPOS will be sufficient for the desired degree. Master's students should submit the iPOS online by March 1 of the second semester and <u>before</u> they complete 50% of their coursework (i.e., fifteen credit hours). Changes can be made as necessary after the iPOS has been initially approved.

Instructions on Filing the Interactive Plan of Study (iPOS)

Students must select courses that meet the requirements noted in the Graduate Handbook. They should consult the graduate coordinator if they have any questions. Submitting an iPOS that does not meet program requirements will delay the review process. Students who are seeking approval to have a course not listed as an approved course count towards one of their requirements should start by submitting a School of Sustainability *Petition Form*, which can be found on the SOS Graduate Community Blackboard site.

Students are encouraged to use their degree check sheet to plan out all their coursework, discuss the plan with their committee chair and receive the chair's

approval and then submit the classes via the iPOS system in MyASU. Upon submission, the graduate coordinator will begin the review process.

The student's iPOS will remain in review until the graduate coordinator, the student's committee chair and the graduate director ensure the courses selected meet the program requirements. The graduate coordinator then approves the iPOS online, and it is routed to Graduate Education for the final review. Once Graduate Education approves the iPOS, the status changes from in review to approved. If an iPOS is rejected for any reason, at any level of review, the graduate coordinator will provide details to the student for correcting the issue.

Course and committee changes can be made to an approved iPOS. Changes go through the same review process described above. Some changes to the iPOS may require a paper petition or an online petition within the iPOS system. Consult the graduate coordinator for questions about petitions.

An iPOS, approved by Graduate Education, must be on file before a student's thesis proposal is considered.

IMPORTANT NOTE: All student program forms, regardless of where they are processed, must first be submitted to the graduate coordinator. The graduate coordinator will make an electronic copy for the student's file and ensure that forms are routed to the correct unit for processing.

iPOS Workshop

The graduate coordinator will hold at least one iPOS workshop each semester to help students successfully submit the iPOS or changes to the iPOS. The graduate coordinator will also discuss how and when to submit a SOS petition and Graduate Education committee approval forms, which are items that should be done prior to submitting the iPOS or iPOS changes to avoid delays in the review process.

Students are encouraged to attend the iPOS workshop before submitting their iPOS for the first time and before graduation, since the iPOS must be accurate to avoid having a graduation application withdrawn by the Registrar's Office due to an iPOS with errors.

Students who are not able to attend an iPOS workshop can set up an individual advising appointment with the graduate advisor by contacting the SOS advising front desk.

Research Proposal

Thesis or Scientific Paper Proposal

Students must have a full supervisory committee formed and listed on the iPOS before holding the research proposal meeting. Students should submit a thesis proposal to the supervisory committee for review and approval <u>before they embark on research</u>, and at least one semester before they expect to defend.

The proposal must be approved before the student can register for Thesis (SOS 599) or Scientific Paper (SOS 596) credits. Normally the proposal is approved prior to the third semester in the program.

The SOS *Master's Thesis/ Scientific Paper Proposal Form,* available on the SOS Graduate Community Blackboard site, must be completed and signed by the student and the supervisory committee when the proposal has been approved. The completed form, together with a digital copy of the proposal, must be submitted to SOSGradAdvising@asu.edu

Application for Graduation

Students should apply for graduation during the semester of planned graduation and no later than the date specified in the most current version of Graduate Education's Graduation Deadlines and Procedures.

The Graduate Application for Graduation is through MyASU. Additional instructions on applying for <u>graduation</u> are online.

Graduation Exit Session

The graduate coordinator and events coordinator hold an information session each semester for graduate students who plan to graduate soon. These sessions are designed to help students understand all requirements for graduating on time. Students who miss university deadlines may have a delayed graduation term, resulting in having to take an additional course to maintain enrollment.

During the graduation exit session, the graduate coordinator reviews Graduate Education and SOS policies, procedures and deadlines for each type of degree offered by SOS. The events coordinator reviews procedures for the graduation ceremonies offered by Graduate Education (commencement) and SOS (convocation).

Students are encouraged to attend the graduation exit session during the semester they intend to graduate. Students may also attend a session prior to their last semester to understand the requirements earlier. It is permissible to attend the graduation exit session multiple times.

Thesis Paper and Defense

Every thesis is required to meet a certain standard as a recognizable product of ASU. The student's committee, department and Graduate Education expect to see evidence of careful attention to style and format in the document that the student presents as part of their culminating experience. Please follow the <u>formatting guidelines</u> set by Graduate Education. For more information on thesis style, students should consult the *Format Manual* and their committee chair.

The student's supervisory committee will conduct an oral examination in defense of the thesis. Master's thesis defenses are open to all members of the university community. Oral defenses are held on an ASU campus during regular business hours to facilitate student, faculty and public accessibility. Students are encouraged to defend the thesis during the fall or spring semester since many faculty members are not on campus over the summer and Graduate Education has strict rules about committee members being present at the defense. Tips on preparing for the defense can be found online.

The student will continuously work with the entire committee toward a defense date. The entire committee must review the complete draft before a defense date can be determined to ensure the student is ready for the defense step. Reviews of the draft will take a least two weeks but the student should submit the draft at least a month prior to the desired defense date. Failure to provide enough review time to the entire committee may result in the postponement of the defense date or graduation term.

Once the committee agrees on the day and time of the defense, the student needs to reserve a room for the defense. Students may contact the graduate coordinator for room reservation instructions. At least ten working days prior to the oral defense, the student must send a copy of the thesis for evaluation to Graduate Education thesis editor (gradformat@asu.edu) and schedule the defense through MyASU. Please consult Graduate Education's website for the Graduation Deadlines and Procedures and the 10 Working-Day Calendar.

Thesis Pass/Fail Form

Upon Graduate Education's approval of the defense date, the entire committee and the graduate coordinator will receive the student's pass/fail form from Graduate Education by email. The committee chair or co-chair will bring the pass/fail form to the defense. This form is not given to the student until after completing all thesis and defense requirements. However, the graduate coordinator must have a copy of the pass/fail form after the defense despite the results, since the results must be reported to Graduate Education within 10 days.

Scientific Paper and Defense

Every scientific paper is required to meet a certain standard as a recognizable product of ASU. The student's committee, department and the publisher of choice (e.g., a peer-reviewed journal) expect to see evidence of careful attention to style and format in the document that the student presents as part of their culminating experience. Please follow the formatting guidelines set by the publisher chosen in conjunction with the supervisory committee.

The student's supervisory committee will conduct an oral examination in defense of the scientific paper. Master's scientific paper defenses are open to all members of the university community. Oral defenses are held on an ASU campus during regular business hours to facilitate student, faculty and public accessibility. Students are encouraged to defend the thesis during the fall or spring semester since many faculty members are not on campus over the summer.

The student will continuously work with the entire committee toward a defense date. The entire committee must review the complete draft before a defense date can be determined to ensure the student is ready for the defense step. Reviews of the draft will take a least two weeks but the student should submit the draft at least a month prior to the desired defense date. Failure to provide enough review time to the entire committee may result in the postponement of the defense date or graduation term.

Once the committee agrees on the day and time of the defense, the student needs to reserve a room for the defense, at least two weeks prior to the defense date. Students email SOSGradAdvising@asu.edu for room reservation and defense announcement instructions.

Defense Announcement

After the defense date is approved by Graduate Education, the thesis student will receive a defense announcement template from the graduate coordinator; scientific paper students will receive the template at the time they reserve the room for the defense. The student will provide the thesis title page, abstract page, list of committee members and the date, time and location of the defense. The announcement must be emailed to the graduate coordinator in MS Word format so that edits can be made if needed. The graduate coordinator will then post the announcement on the SOS Events website and send an e-mail notice to students and faculty prior to the defense. The defense announcement is due two weeks before the defense date.

After the Defense

Thesis Students

After a student completes the oral defense of the thesis, he or she will want to take care of <u>final arrangements to ensure completion of the degree</u>. The graduate coordinator needs a copy of the pass/fail form after the defense. If the student passes with no revisions needed, then the committee will give the signed original pass/fail form to the student. The student then needs to drop off a photocopy of the form or email a PDF of it to the graduate coordinator before taking the original to Graduate Education.

If a student passes with major or minor revisions, then the committee chair will retain the form (or give it to the graduate coordinator) until all revisions have been submitted and approved. At that time, the chair will sign the original form to signify all requirements have been met. The student must deliver the form in person to Graduate Education by the deadline (see Graduate Education's list of <u>deadlines</u>) but needs to send a copy to the graduate coordinator first.

After the defense, the student should ask their chair to email a copy or drop off a photocopy of the pass/fail form to the graduate coordinator immediately. The graduate coordinator will report the results to Graduate Education. The report of results is due within 10 working days of the defense so that Graduate Education knows if the form is due (pass with no revisions), revisions are required (for a pass with major or minor revisions) or if the student did not pass the defense. In some cases, the results may be due in less than 10 days after the defense. Refer to the graduation deadlines posted on Graduate Education's website.

Scientific Paper Students

After a student completes the oral defense of the scientific paper, he or she must make edits to the paper, if deemed necessary by the supervisory committee, and then submit the revised paper to the committee for final approval. Upon final approval, the student must submit an electronic copy of the scientific paper to the graduate coordinator at SOSGradAdvising@asu.edu. Acceptance of the paper by a publication (e.g., a peer-reviewed journal) is not required to meet graduation requirements. Edits requested by a publisher are not the same as edits required by the student's committee. Edits required by the committee must be done to complete graduation requirements.

The graduate coordinator also needs the original or a copy of the pass/fail form after the defense. If edits are required, then the student's committee chair can submit the signed pass-fail form by email after the student has completed required edits.

Both the pass-fail form and the student's final version of the scientific paper must be submitted to the graduate coordinator **prior to the end of the semester**, to ensure final grades are entered before the university deadline. Missing the deadline could result in a delay in graduation, which would require the student to register for an additional graduate-level credit. The student would be responsible for the tuition and fee payment of that extra semester.

Final Grades

The final passing grade for Research (SOS 592), Thesis (SOS 599), Scientific Paper (SOS 596), Practicum (SOS 580), Reading and Conference (SOS 590) is Y (satisfactory). A "Z" grade is given for continuing registration (SOS 595). Reading and Conference (SOS 590) may be taken for a letter grade if approved by the instructor. A "Z" grade will be given assigned to Thesis, Scientific Paper and Research until the student successfully completes all graduation requirements. At the end of the student's last semester, those "Z" grades will be changed to "Y", with the exception of Continuing Registration, which always has a "Z" grade.

Concurrent Master's Degrees

A master's degree in sustainability may be taken concurrently with another master's degree through a specific, cooperative arrangement with another ASU department. Students must be admitted separately to each degree program. The plan of study for the MA or MS in sustainability requires forty credit hours. A maximum of 20 percent of the minimum total credit hours for the completion of both degrees may be common hours shared between the Plans of Study provided that the corresponding courses appear on the student's plan of study in both degree programs. Students are encouraged to talk to graduate advisors in both programs before applying to a second master's degree program to ensure the two degrees can be done concurrently.

The School of Sustainability presently has an agreement with <u>several master's</u> <u>programs</u>, but they are in conjunction with the Master of Sustainable Solutions (MSUS program). MA/MS students can pursue a concurrent degree, but it may require a significant amount of time and effort.

Concurrent students are encouraged to meet with a graduate advisor from both programs every semester to ensure the student is making timely academic progress through both degrees.

Master's International Peace Corps Program

Students can pursue an MA, MS or MSUS in Sustainability and participate in the <u>Master's International Peace Corps Program</u>, which integrates graduate study with an international development field experience. However, the Master's International program may be easier to incorporate into graduate studies for Master of Sustainable Solutions (MSUS) students.

Writing Help for Graduate Students

Kathryn Kyle, the School's writing instructor and tutor, helps graduate students improve their writing skills. Individual tutoring is available M-F by appointment, and various writing courses are offered each semester. For appointments, please email Kathryn at kkyle@asu.edu or call her at 965-5704. Online writing resources are available in the graduate-student section of the SOS website.

Research, Project, and Professional Development Grants

Students can apply for research, project, and professional development financial support through three sources: the School of Sustainability, Graduate Education and the Graduate and Professional Student Association (GPSA). Additional sources may materialize through a student's independent search or from a faculty member's suggestion.

The School of Sustainability supports requests from School of Sustainability MA and MS students for grants to support certain costs associated with carrying out their culminating experience. More information can be found on the SOS Graduate Student Community Blackboard site.

Graduate Education travel awards are used for the reimbursement of airfare cost for graduate students participating in professional conferences and workshops. For complete details, visit the <u>Graduate Education Travel Awards website</u>.

The Graduate and Professional Student Association (GPSA) grants exists to support and promote the success of ASU graduate and professional student research and professional development. Applications are reviewed on a monthly basis. For complete details, visit the GPSA web site.

Addendum A: MA and MS Curriculum and Course Description Details

Course and Graduation Requirements

The plan of study comprises a minimum of 40 credit hours.

| MA and MS Curriculum | Credits |
|---|---------|
| Core Courses | 19 |
| Methods Electives | 6 |
| Normative Dimensions of Sustainability Elective | 3 |
| General Electives | 6 |
| Thesis or Capstone Publishable Scientific Paper | 6 |
| Total Semester Hours Required | 40 |

Policy on Specific Courses

The core courses and Thesis or Scientific Paper are required of all MA and MS students. These are non-negotiable.

Classes used to fulfill the normative, methods, and general elective classes are more flexible than the core. Examples of elective classes noted below are pre-approved by the SOS administration. Students should still consult with their committee chair or supervisory committee about which classes are most appropriate for their specific educational and professional goals.

Students are eligible to use up to six 400-level credits on the plan of study. Students should consult with their committee chair or supervisory committee prior to enrollment to ensure the 400-level coursework is appropriate for supporting the student's goals.

| Sem | Requirements By Semester | | | | Cr |
|-----|--------------------------|--------------------------|----------------------|-------------|----|
| 1 | SOS 510 (3) | SOS 520 (3) | SOS 525 (3) | SOS 589 (1) | 10 |
| 2 | Normative Elective (3) | Methodology Elective (3) | General Elective (3) | SOS 589 (1) | 10 |
| 3 | SOS 579 (3) | Methods Elective (3) | General Elective (3) | SOS 589 (1) | 10 |
| 4 | SOS 581 (3) | SOS 599 OR 596 (3) | SOS 599 OR 596 (3) | SOS 589 (1) | 10 |

Core Courses (19 credits)

Core courses bring students together in an integrated learning environment to form a cohort of diverse backgrounds. They are designed to provide students with methods and theory appropriate to the study of sustainability. The students will explore the link between concepts of sustainability and systems approaches to knowledge, and will develop the integrative methods needed to work across the disciplines on sustainability problems.

University-wide course covering perspectives and relevant theories on sustainability. Using case studies, faculty and students from engineering, architecture, humanities, business social sciences, and natural sciences exchange ideas on the major challenges involved in creating a sustainable future at local, national, and global levels.

SOS 520: Research Design and Methods for Sustainability (3) (Required in the first semester)

Provides skills and knowledge that help students design their own research and place it in the context of other disciplines or bodies of work. Not a "methods" class because no specific method is taught in depth. Instead, it is an initial introduction to the research design process and is intended as a platform through which students develop the skills to appreciate and contextualize the approaches taken (and methods used) by others, and during which they can identify the types of specific training they require as they define their own research.

SOS 525: Social-Ecological-Technical Systems (SETS): Domains and Interfaces (3)

Guides students in developing an integrated approach and framework for thinking about complex systems in a sustainability context. Presents overviews of content, theories and methods from each of the SETS domains (Social, Ecological and Technical Systems); primarily focuses on how to bring these domains together. Explores the SETS interfaces (intersections) from an integrated perspective and equips students to make those linkages in their research and in subsequent elective courses. Each semester students use a sustainability problem or theme to explore the concepts presented in the course.

SOS 579: Proposal Writing (3)

Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.

SOS 581: Synthesis for Sustainability Research (3)

This course engages students in inter- and transdisciplinary problem solving after they have gained depth of training in content areas, integrative approaches and methods.

SOS 589: SOS Community of Graduate Student Scholars (1) *Taken over 4 semesters for 4 credit hours total*

This course fosters cohort-building, provides faculty a consistent forum to interact with students, fosters graduate student mentoring, and builds support for an alumni network. This course is student led with faculty oversight. The content will differ each semester, based on participating students.

Methods Electives (6 credits)

Students should take at least 6 credit hours of methods course pertinent to their research. There are a large number of methods courses taught across ASU that can satisfy these credits. Students will select the appropriate course in consultation with their supervisory committee. Below are courses that are pre-approved for these credits, but additional courses may also be approved.

ASB 500: Ethnographic Field Methods (3)

Course on research methods in School of Human Evolution and Social Change.

GIS 505: GIS for Planners (3)

Provides concepts of Geographic Information Systems technology and how the technology is used in planning.

NLM 565: Grant Writing for Nonprofit Organizations (3)

Provides practical, experiential instruction identifying grant makers, writing proposals, developing budgets, and evaluating grant proposals for the nonprofit sector. Students develop proposals based on actual, identified needs of their partner nonprofit organization.

PUP 573: Survey Research and Multivariate Statistics (3)

Methods of survey research design and primary data analysis for urban planning applications.

SOS 511: Transformational Sustainability Research (3)

Transformational sustainability research aims at developing evidence-based solutions to real-world sustainability challenges. The course introduces a methodological framework that integrates methods from description/analysis to visioning and strategy building (from knowledge to action); addresses the specific functions, underlying assumptions, strengths, and weaknesses of sustainability research methods; familiarizes students with distinct ways of how to combine sustainability research methods for problem solving (e.g., intervention research, transition research); integrates two short training programs, one on teamwork skills, the other one on participatory research with stakeholders.

SOS 540: Statistical Modeling for Sustainability (3)

Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to begin conducting empirical analyses in their domains of interest; bring students to a high level of competency in using a cutting-edge statistical software package (Stata) for data management and data analysis tasks; expose students to applications of statistical methods in the economics/policy/social science sustainability literatures in order to develop an understanding for how statistical tools are operationalized in the research world; and develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations and command of statistical tools that constitute quality empirical research.

SOS 591: Applied Robustness Analysis in Socio-Ecological Systems (3)

In this course students will learn how to use qualitative case-study comparison and analysis to understand the robustness of social ecological systems (SESs) and socio-technical systems (STSs). In particular, students will engage with the Robustness Framework developed by Anderies, Janssen, and Ostrom and related tools from institutional analysis, political science, economics, and ethnography in order to study SESs/STSs.

SOS 591: Creating your own TED Talk (3)

If you want your work to make a difference in the world, you need to be able to communicate to diverse audiences in a way that is interesting and accessible. This course guides you through the process of creating and presenting a TED Talk

on the topic of your choice. You will develop: 1) a clear, persuasive, and ethical talk, and 2) your ability to speak engagingly to an audience. Class time and assignments will be devoted about equally to the talk's content and structure, and its presentation.

SOS 591: Dynamic Modeling for Sustainability Science (3)

Develop in students a "mathematical way of thinking" or "mathematical intuition" as a perspective on social, ecological, and social-ecological systems as they relate to sustainability science. This perspective is intended to help students read and interpret research literature in which formal mathematical models are used and to develop their own models. Provide students the basic skill set to analyze simple models. This involves developing an understanding of analytical as well as qualitative and numerical solution techniques. Discrete models and ordinary differential equations will be covered thoroughly. Expose students to a range of computing tools to help analyze and visualize formal mathematical models of ecological systems. Expose students to a number of open source software solutions for scientific research and publishing. Provide an arena for students to practice applying the skills they are developing to sustainability science issues driven by their own interests.

SOS 591: Interdisciplinary Writing (3)

If you want your work to make a difference in the world, you need to be able to communicate your ideas to diverse audiences in a way that is interesting and accessible. This course teaches you to write clearly, persuasively, and ethically to people in your discipline, in other disciplines, and outside academia. It approaches writing as a way to think critically and refine ideas, as well as to communicate them to others.

SOS 591: Qualitative Methods for Sustainability Problems (3)

This course introduces students to the theory and application of qualitative methods to sustainability research and practice. By the end of the course students will have defined and framed a sustainability problem and applied a range of qualitative methods to it, be able to articulate the strengths and weaknesses of these methods, and have a framework for assessing the appropriate use and evaluation of qualitative methods.

SOS 591: Storytelling in Words and Equations (3)

Students develop both modeling skills and the ability to explain what their models do and mean in writing and speaking. They will first develop and explore a research problem verbally, and then learn to use the language of math to tell the story. We want to reach students who could benefit from using modeling in their research but fear they lack the necessary math skills, and to help students who already use modeling to write about it more effectively.

SOS 598: Campus Sustainability Planning (3)

Description will be posted at the time course is offered.

SOS 598: Climate Action Planning (3)

Climate change is continuously affecting more communities, human enterprises and natural ecosystems, and jurisdictions, corporations and organizations are increasingly planning actions to minimize their impacts on climate. Although the problem is global in nature, the most important solutions are local. This course prepares the student to organize, develop and manage the process of prioritizing actions that communities and organizations can take to minimize, mitigate, and

neutralize the adverse impacts that are produced by emitting greenhouse gases from fossil fuel use and other activities.

SOS 598: Green House Gas Emissions Inventory (3)

The course will teach design and development of a GHG inventory for organizations, corporations and jurisdictions. Students will learn: 1) the policy framework within which GHG management has arisen over the past fifteen years; 2) standardized methods for developing and calculating GHG emissions for complex organizations and institutions; 3) the process of synthesizing results of a GHG inventory, including the process of defining its importance and relevance to the organization; and 4) how to prepare and present a professional quality GHG inventory report.

SOS 598: Life Cycle Assessments for Civil Systems (3)

Covers fundamental and advanced concepts of the life cycle assessment (LCA) framework exploring products, services, activities, and infrastructure systems. Key concepts for system boundary selection, functional unit selection, inventorying, impact assessment, and interpretation stages are examined with a focus on energy and environmental assessment.

SOS 598: Mathematical Concepts & Tools in Sustainability (3)

This course will equip you with some of the mathematical concepts and tools necessary for understanding and tackling sustainability problems. These concepts and tools will be introduced in a problem-based context. It will start with a toy model of sustainability, a simple model that explores how human and natural systems interact, including the effects of time lags on stability.

Normative Dimensions of Sustainability Elective (3 credits)

The intent of this elective would be to take a course that addresses the normative component of sustainability. Students will select the appropriate course in consultation with their supervisory committee.

PHI 522: Ethics of Sustainability (3)

Explores the normative framework of sustainability.

SOS 591/ Environmental Ethics and Policy Goals (3) 598:

An advanced, discussion-intensive course in applied environmental ethics and policy studies. Seminar participants will examine the ethical foundations of evolving environmental policy and management goals, including emerging issues relating to environmental valuation and the societal and scientific dimensions of formulating ecological and conservation policy on a rapidly changing planet. Applications will include policies and actions for eco-social sustainability, biodiversity conservation, and global climate change, among other topics.

SOS 598: Sustainability Ethics for Science and Engineering (3)

This course uses a novel, game-based pedagogy to immerse students in the salient ethical problems of sustainability, including: environmental externalities, the Tragedy of the Commons, weak vs. strong sustainability, and intragenerational equity. Students will formulate and test moral hypotheses via online collaboration with multiple Universities simultaneously administering the

same game modules on their campuses. Applications in climate change, environmental policy, and ecological economics are introduced.

General Electives (6 credits)

The selection of these electives will be left to the discretion of the student and the student's committee. However, these courses should serve to give the student specific depth in the SETS domains, interfaces, and sustainability competencies needed to conduct their research. Electives can be taken outside of the School of Sustainability.

Thesis or Scientific Paper (6 credits)

Students will be required to devote six (6) hours to writing either a thesis (SOS 599) or a publishable scientific paper (SOS 596). All master's degree candidates must also be enrolled for at least one semester hour of credit within the academic unit (i.e., the School of Sustainability) during the semester or summer session in which the thesis or paper is defended.

Thesis or Scientific Paper Course (6 credits)

Students are required to devote six credit hours to writing the thesis by registering for SOS 599: Thesis or SOS 596: Scientific Paper. Students will not be able to enroll in these hours until they have an approved supervisory committee on their iPOS and have an approved proposal on file with the graduate coordinator. Students may register for SOS 592: Research with approval from their committee chair, but these hours are not necessary for the plan of study. All master's degree candidates must enroll for at least one credit hour within the School of Sustainability during the semester in which the thesis or scientific paper is defended, including summer.

If a thesis is defended past Graduate Education's defense deadline, the student will be required to register for at least one credit hour, e.g., SOS 595: Continuing Registration, in the following semester, even if the defense happens before the start of that following semester. For example, if the defense takes place in spring but after the defense deadline for spring graduation, then the student will still have to register for SOS 595 in summer and will be a summer graduate.

Graduate Education has less involvement with the defense of the scientific paper. However, students doing the scientific paper option must have all revisions, if required by the student's supervisory committee, completed and approved by their committee before the end of the semester. If this deadline is missed, then the student will be required to register for at least one credi hour, e.g., SOS 595: Continuing Registration, in the following semester.

For example, if all transactions for the spring semester are due on May 3 and the revisions to the scientific paper are not approved until May 10, then it is too late for the final grade to count for a spring completion date. The student will have to enroll in one credit hour in the summer and be a summer graduate.

Addendum B: MA and MS Milestones

MA and MS Program Milestones

Below are suggested activities and critical milestones students should be aware of each semester. Critical milestones are highlighted.

| First Year (Fall) | | |
|---|--|------------------------------|
| Activity | Timing | Notes |
| Attend Graduate Fall Welcome and Camp SOS | Aug. (Fall Welcome) & Sept. (Camp) | Fall Welcome is required |
| Meet with mentor, discuss plan of study (iPOS) and goals | By Sept. 15 | Required |
| CRITICAL: Meet faculty Meet with faculty whose research areas align with your interests; you're trying to find a faculty advisor (chair) by Mar. 1 and 2 committee members | NOW and throughout the semester | Required |
| Attend Graduate Luncheons (held twice each semester) | Sept. and Nov. | |
| Attend iPOS workshop and use check sheet to create a draft iPOS; review with mentor (or advisor if you have one) | Nov. | Strongly Recommended |
| Attend funding workshops; investigate/apply for financial aid opportunities | Every Semester | Strongly Recommended |
| Seek out internships and research opportunities | Every Semester | |
| Successfully complete courses; must maintain 3.25 GPA | Every Semester | Required |
| First Year (Spring) | | |
| Activity | Timing | Notes |
| Attend Welcome Back Mixer | Jan. | |
| Meet with mentor/advisor, discuss iPOS, committee and goals | By Feb. 15 | Required |
| CRITICAL: Meet faculty Meet with faculty whose research areas align with your interests; you're trying to find a faculty advisor (chair) by Mar. 1 and 2 committee members | NOW and throughout the semester | Required |
| Attend Graduate Luncheons (held twice each semester) | Feb. and Apr. | |
| CRITICAL: Establish faculty advisor (committee chair) | By Mar. 1 | Required |
| CRITICAL: Submit iPOS (with committee chair listed) | By Mar. 1 | Required |
| CRITICAL: Submit Annual Review survey and updated resume/CV | By Mar. 1 | Required |
| Participate in Graduate Recruitment Visit (share your experience) | Mar. | |
| CRITICAL: Establish entire committee; add to iPOS | By the end of Spring or early in coming Fall | Required by Next Semester |
| CRITICAL: Hold research proposal meeting with entire committee (proposal must be approved before you can register for Thesis/Scientific Paper) | Between the end of Spring and end of coming Fall | Required by Next Semester |
| Complete the Graduate Program Annual Satisfaction Survey | Apr. | |
| Attend funding workshops; investigate/apply for financial aid opportunities | Every Semester | Strongly Recommended |
| Seek out internships and research opportunities | Every Semester | |
| | - | |

| Second Year (Fall) | | |
|--|--|---|
| Activity | Timing | Notes |
| Attend welcome back mixer | Aug. | |
| CRITICAL: Establish entire committee and add them to iPOS | By Sep. 1 | Required |
| Meet with advisor/committee, discuss iPOS, research and goals | By Sep. 15 | Required |
| Attend Graduate Luncheons (held twice each semester) | Sept. and Nov. | |
| Apply for SOS PhD program (if continuing on to the PhD) | Sep Nov. 15 (all app materials due by Dec. 15) | |
| <u>CRITICAL</u> : Hold research proposal meeting with entire committee (proposal must be approved before you can register for Thesis/Scientific Paper) | Due before the end of Fall Before Oct. 31 to prevent registration issues | Required |
| Attend funding workshops; apply for financial aid opportunities | Every Semester | Strongly Recommended |
| Seek out internships and research opportunities | Every Semester | |
| Successfully complete courses; must maintain 3.25 GPA | Every Semester | Required |
| Second Year (Spring) | | |
| Attend Welcome Back Mixer | Jan. | |
| Attend Graduation Exit Session | Late Jan. | |
| Meet with committee, discuss iPOS, research and possible defense dates | By Feb. 1 | Required |
| Attend Graduate Luncheons (held twice each semester) | Feb. and Apr. | |
| CRITICAL: Apply for graduation (see university deadlines) | Mid-Feb. | Required |
| CRITICAL: Update iPOS (if needed) | By Mar. 1 | Required |
| CRITICAL: Submit Annual Review survey and updated resume/CV | By Mar. 1 | Required |
| Participate in Graduate Recruitment Visit (share your experience) | Mar. | |
| Confirm day and time of defense with entire committee | By Mar. 15 | Strongly Recommended |
| CRITICAL: Thesis students, schedule defense with Grad Ed through MyASU and submit draft to thesis editor 10 days before the defense Scientific Paper Students, submit paper to committee at least 10 days before defense | By Apr. 1 | Required |
| Contact Grad Coordinator about advertising defense (at least 2 weeks before defense) | By Apr. 1 | Required |
| Fulfill graduation ceremony requirements (submit forms, pay for cap & gown, etc.) - only if participating in one or both ceremonies | Mid-semester | |
| Seek out job opportunities for post-graduation | Mid-semester | |
| CRITICAL: Defend thesis or scientific paper | No later than mid-April (see Grad Ed specific deadlines) | Required |
| CRITICAL: Thesis students, complete final steps: Send copy of pass-fail form (no matter the results) to Grad Coordinator immediately after defense Work on revisions (if applicable) and resubmit to committee Submit revised/final thesis to thesis editor for format review; work on format changes until approved Submit format-approved thesis to ProQuest | After Defense (note Grad Ed strict deadlines) | Required for Thesis Students |
| CRITICAL: Scientific Paper students, complete final steps: Send copy of pass-fail form (no matter the results) to Grad Coordinator immediately after defense Work on revisions (if applicable) and resubmit to committee Submit final paper to Grad Coordinator | After Defense (note Grad Ed strict deadlines) | Required for Scientific Paper Students |
| Complete the Graduate Program Annual Satisfaction Survey | Apr. | |
| Successfully complete courses; must maintain 3.25 GPA | Every Semester | Required |