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# Applied Mathematics for the Life and Social Sciences (PhD) Program Handbook

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2023-2024



**School of Human Evolution and Social Change**

**Applied Math for the Life and Social Sciences PhD Handbook**

**Arizona State University**

Last Revision: April 2023

**Prepared by:**

SHESC Committee of faculty, staff, and students

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## INTRODUCTION

This handbook outlines the graduate requirements and procedures set forth by the faculty of the School of Human Evolution and Social Change (SHESC) at Arizona State University. Our graduate degree programs are directed toward the attainment of excellence in Anthropology, Global Health, Environmental Social Science, and Applied Mathematics for the Life and Social Sciences as demonstrated by accomplishments in research, coursework, and examinations.

This handbook is a living document and SHESC will refer to the most current version for the enforcement of policy. Any student can petition for a specific exception to the current handbook if there are any discrepancies.

The current version of this document can be found on the [SHESC webpage](https://shesc.asu.edu/student-life/graduate-handbooks), at: <https://shesc.asu.edu/student-life/graduate-handbooks>. All previous Handbooks can be found at this link as well.

In addition to the requirements set by SHESC in this document, students must follow the [policies and procedures](#) established by the Graduate College.

## ADMISSIONS REQUIREMENTS

- Have earned a bachelor's degree or higher from a regionally accredited institution in the U.S. or the equivalent of a U.S. bachelor's degree from an international institution that is officially recognized by that country.
  - Although applicants are not required to have a specific type of bachelor's degree, most admitted students have a degree related to their graduate program of interest.
- Have maintained a "B" (3.00 on a 4.00 scale) grade point average (GPA) in the last 60 semester hours or 90 quarter hours of undergraduate course work. If students do not meet the minimum GPA requirements, their application may still be considered.
- The application standards for international students are the same as for domestic students, with the exception of submitting proof of [English proficiency](#) (for students whose native language is not English). After admission, international students are also required to obtain a U.S. visa, which includes submitting a graduate financial guarantee.

- All **international** transcripts must be submitted in the original language accompanied by an official English translation. Translations must be literal, complete versions of the originals and must be translated by a university, government official or official translation service. The English translation must be the original document with the official stamp of the institution or the translation service. You may not complete your own translation. **Photocopies and notarized transcripts are not acceptable**

### **Application Information**

SHESC's admissions are for the **Fall** semester. Graduate admission to SHESC consists of the following application dates for full consideration of funding and campus recruitment activities. Applications received after these dates will be considered at a lower priority for funding and visitation.

### **Deadlines**

**December 1** – Submission of online application

**December 15** – Receipt of all application supplemental materials

All application materials are submitted online through the Graduate Admissions [electronic application](#). The application consists of two categories of materials: those required by Graduate Admissions and those required by SHESC. The application will provide instructions regarding the required materials, which include:

- Basic application fee (Domestic \$70 and International \$115)
  - [Graduate Admissions](#)
- Personal statement/letter of interest
- Three letters of recommendation
- Current curriculum vitae or resume
- Official TOEFL scores
- Academic Record Form
- Official transcripts from all former institutions

Detailed instructions and mailing addresses for international transcripts can be found here: [Transcripts for Admission to ASU](#)

All domestic applicants will be considered for financial support. Applicants not in need of financial support should notify their prospective faculty advisor(s) at the time the

application is submitted. Funding resources greatly impact the admissions review process and the number of students who are admitted.

### **Contact Information**

#### **School of Human Evolution and Social Change**

900 S. Cady Mall, Tempe, AZ 85281

**Mailing:** P.O. Box 872402, Tempe, AZ 85287-2402

**Phone:** 480-965-6215 | **Fax:** 480-965-7671

**General Information Email:** [shesc@asu.edu](mailto:shesc@asu.edu)

### **Graduate Studies and Graduate School Applications**

Please email [shesc.grad@asu.edu](mailto:shesc.grad@asu.edu) to request information or for questions on the admission process. An advisor will get back to you within two business days.

### **Advising Support**

For academic advising – please contact the following staff members:

- **Carita Harrell**, Assistant Director of Academic Services, at [Carita.Harrell@asu.edu](mailto:Carita.Harrell@asu.edu) or 480-727-6137
- **Ellie Berz**, Academic Success Specialist, at [shesc.undergrad@asu.edu](mailto:shesc.undergrad@asu.edu) or 480-965-6215
- **Stefanie Bobar**, Academic Success Advising Coordinator Sr, at [shesc.undergrad@asu.edu](mailto:shesc.undergrad@asu.edu) or 480-965-6215
- **Wondra Lee**, Academic Success Advisor Sr, at [shesc.undergrad@asu.edu](mailto:shesc.undergrad@asu.edu) or 480-965-6215
- **Elissa Shapiro**, Graduate Academic Success Coordinator, at [shesc.grad@asu.edu](mailto:shesc.grad@asu.edu) or 480-965-6215
- **Maureen Towne**, Academic Success Specialist, at [shesc.undergrad@asu.edu](mailto:shesc.undergrad@asu.edu) or 480-965-6215

As a graduate student, you need to proactively seek a faculty supervisor in your first semester to help you develop an appropriate Interactive Plan of Study. Your supervisor must be a member of the graduate faculty for your program, which you can verify in the [online listings](#). Faculty members who serve as the head of each approach and degree program serve on the school's Graduate and Undergraduate Committee (GUC). If you have questions about any aspect of the program, you are welcome to bring those concerns to the appropriate members of the GUC.

## **STUDENT ADVISING**

## **Mandatory Orientation**

Mandatory orientation typically occurs the week of or before the Fall Semester. Each incoming graduate student will receive general information about the graduate program from the Director of Graduate Studies as well as the Approach Head of their program. Students should meet individually with their research advisors for personalized guidance about the graduate program, advice in first year class selections and discussion of other related matters.

## **Research Advisor**

The student must identify a faculty member (job titles are Assistant Professor, Associate Professor, Professor) of the School of Human Evolution and Social Change who agrees to serve as their research advisor and chair their Thesis/Dissertation Supervisory Committee. Co- advisors and co-chairs are allowed.

- The student will need to secure the appropriate number of ASU faculty as members of their Thesis/Dissertation Supervisory Committee after consultation with their advisor. These members in general will be from the [Graduate Faculty](#) — a classification defined and managed by the ASU Graduate College. All SHESC faculty members are on the Graduate Faculty, along with various researchers and lecturers. Most Graduate Faculty can be committee chairs or co- chairs.
- Additional professionals may be added to the Graduate Faculty by a request submitted by the Graduate Student Advisor to the Graduate College, with approval from the Director of Graduate Studies. Students who wish to add members to the Graduate Faculty should submit the following to the Graduate Student Advisor:
  - A short memo requesting this addition
  - The rationale
  - The requested member's curriculum vitae
  - [Committee approval request form](#)
    - For non-ASU participants the student should submit the name of the proposed member and a rationale for choosing to add that member to their Supervisory Committee for evaluation. Should the Supervisory Committee concur, the outside participant should be contacted by the student. The student shall then submit to the Graduate Student Advisor, who will present it to the Director of Graduate Studies for approval. With the



Director's approval, the request form will then be submitted to the Graduate College. Once the Graduate College approves the outside participant, the student should adjust their Interactive Program of Study accordingly.

### **Ph.D. Supervisory Committee**

This minimum three-person committee shall consist of:

- The research advisor as chair, or two research advisors as co-chairs
- Two members of the [Graduate Faculty](#) in the degree program (which includes all SHESC faculty, as well as other research staff and faculty from other ASU degree/research programs). If a student has co-chairs, only one additional committee member is required.
- Additional participants (e.g., Academic Professionals or external faculty members not on the SHESC Graduate Faculty) may serve as one of the committee members, pending approval by the Supervisory Committee, the Director of Graduate Studies, and the Graduate College.
- **Students must have at least half of their committee consist of SHESC faculty.** Exceptions can be made but must be approved first by the Supervisory Committee, Approach Head, and Director of Graduate Studies.
- If a student needs to change their chair or committee members, the process is to complete the [committee change form](#).

## **REGISTRATION AND ENROLLMENT**

All students are required to have proof of measles immunizations on file with [Health Services](#) prior to registration. Graduate students register through MyASU according to their enrollment appointment. Details regarding registration and tuition are provided in the [Registration and Tuition Payment Guide](#).

### **Course Load**

Graduate students employed as Research (RA) or Teaching Assistants (TA) must register for a minimum of nine credit hours. Students supported on work-study, other types of financial aid; or those on a U.S. Visa may be required to take a minimum

course load of more than nine credit hours. If you have advanced to PhD candidacy and are an RA or TA, 6 credits of enrollment is the required minimum.

Students should review the [registration and enrollment guidelines](#) in the Graduate College Policies and Procedures handbook for more information.

### **Continuous Enrollment**

Once admitted to the graduate degree program, students must be registered for a minimum of one credit hour during all phases of their graduate education, including the term in which they graduate. This includes periods when students are engaged in research, conducting doctoral fieldwork, working on or defending theses or dissertations, taking comprehensive examinations, taking Graduate Foreign Language Examinations or in any other way utilizing university resources, facilities or faculty time. Check your advisor if you have questions about summer registration.

Registration for every Fall and Spring semester is required. **Summer registration is required for students in which they are taking examinations, completing culminating experiences, conducting doctoral fieldwork and are registered in ASB/AML 799, defending theses or dissertations, are a TA/RA or graduating during the summer semester.** Any other questions please check with your advisor.

To maintain continuous enrollment the credit hour(s) must be one of the following:

- Appear on the student's Interactive Plan of Study
- Registered in Research (592, 692, 792), Thesis (599), Dissertation (799) or Continuing registration (595, 795)
- Any graduate-level course

### **Leave of Absence**

If a program of study must be interrupted, the student may apply for a Leave of Absence for a maximum of two semesters during their graduate program. The research advisor, Supervisory Committee, Director of Graduate Studies, and the Graduate College must endorse an application for leave status. This request must be filed and approved the semester before the anticipated absence. Students must submit a Leave of Absence request via their [Interactive Plan of Student \(iPOS\)](#). The student should briefly state the reason for needing a leave of absence and the duration (not to exceed two semesters per Graduate College guidelines). This petition will be submitted to an advisor and a docuSign form will be submitted to the Committee.

A student on leave is not required to pay fees but is also not permitted to place any demands on university faculty or use any university facilities.

Failure to maintain continuous enrollment without prior approval will result in the student being discontinued from the graduate program. A student removed from a graduate program for failure to maintain continuous enrollment may re-apply for admission. The application will be considered along with all the other new applications to the degree program. There is no guarantee of admission and not all prior credits or culminating events may count.

Please see Grades and Grievances for more information on grades and continued enrollment.

### **Grades and Grievances**

The final passing grade for research (AML/ASB 592/792) and dissertation (AML/ASB 799) is a Y. Research grades will be assigned at the end of each semester. Thesis and dissertation grades will be assigned after the student has successfully defended. SHESC students should refer to the Academic and Research Performance Evaluations section for more information regarding GPA and letter grade expectations.

Students who are seeking to appeal a grade should refer to The College's [Academic \(Grade\) Grievance procedures](#). Grade appeals should be addressed by the student as soon as possible after the grade in question is awarded.

Grades of "W" (withdrawal) or "X" (audit) are not valid for continuous enrollment purposes or minimum registration requirements. "W" grades are received when students officially withdraw from a course after the course-drop deadline or when they do not successfully complete an audited class. "X" grades are received when a student successfully completes audited 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 the "I" grade becomes permanent. The [Student Services Manual](#) provides more information about incomplete grades.

### **Drop/Add and Withdrawal Deadlines**

Registration deadlines determine the last day a student is able to [add, drop or withdraw](#) from classes. Each class has its own set of registration deadlines which are based on

the length of the class as well as the session in which the class is held. The drop/add/withdrawal deadlines listed on the [Academic Calendar](#) apply to classes scheduled in the regular A/B/C sessions. If a class does not follow the A/B/C session timelines, the drop/add/withdrawal deadlines are prorated. To determine the registration deadlines for a class in which a student is registered in is to sign in to MyASU and click on the calendar icon next to the class in the My Classes box. To determine the registration deadlines of a class in which a student has not yet registered, use the online [Class Search](#) to search for the class and hover over the dates on the class in the search results.

### **Medical/Compassionate Withdrawal**

If a student experiences a serious illness, injury or other significant personal situation that is preventing progress in classes or research, and the standard withdrawal options for the student are not appropriate for the situation, the student may request a [medical/compassionate withdrawal](#). All applications for the medical/compassionate withdrawal require thorough and credible documentation and must be approved by the College of Liberal Arts and Sciences Dean's Office. The student must complete all of the required steps in order to be considered for a medical/compassionate withdrawal.

Students are strongly encouraged to reach out to the [Student Advocacy and Assistance](#) if they are experiencing any kind of educational, personal or other campus impediment towards successful completion of their academic goals. Student Advocacy and Assistance links students with appropriate university and community resources, agencies, and individuals, collaborates with faculty and staff in the best interest of the students, and follows through to bring efficient closure to student concerns.

### **Voluntary Withdrawal**

Students may voluntarily withdraw from a specific degree program or from ASU at any time. Students who wish to withdraw should submit a [voluntary complete withdrawal form](#) to Graduate Admission Services. Submission of this form will not withdraw students from course(s) for any semester. Students may choose to complete the course(s) for which they are currently enrolled. If a student needs to withdraw from course(s) currently in progress or course(s) in the upcoming semester, the student should contact the Registrar's Office.

## **PROGRAM REQUIREMENTS**

The [Interactive Program of Study \(iPOS\)](#) is an official academic plan for students that maps the requirements for degree completion. It includes coursework, the student's Thesis/Dissertation Supervisory Committee and any additional milestones.

### **Pre-admission/Transfer Credits**

Graduate-level credits taken at ASU or other accredited institutions prior to admission to a SHESC graduate degree program are considered pre-admission credits (which is the same as transfer credits). Graduate students are allowed to include a maximum of 12 graduate-level credit-hours toward an Interactive Program of Study (iPOS). A previously awarded master's degree can be used to satisfy 30 credit hours toward the PhD. Only graduate-level courses with "B" grade or higher that were not used toward a previous degree may be eligible to apply toward the current degree program. See the [Graduate College guidelines](#) website for more details regarding pre-admission credits (refer to the Handbook section: *ASU Pre- Admission Credits* under the *Graduate Degree Requirements*). A previously awarded master's degree can be used to satisfy 30 credit hours toward the PhD.

### **Filing the Interactive Program of Study (iPOS)**

The student is expected to meet with their Supervisory Committee shortly after the committee's formation to formulate and approve their iPOS. It is the student's responsibility to submit and update their iPOS (found in "My Programs" section of MyASU) yearly and to include the iPOS requirements as noted in this handbook depending on their degree. This will be submitted to an advisor and be approved for this initial submission. Please see the iPOS [How-to guides](#) to help with clarification on how to submit these. You will submit a M.A. iPOS and Ph.D. iPOS.

**iPOS coursework requirements will be listed in upcoming sections.** The iPOS coursework and/or Supervisory Committee may need to be updated as the student advances toward completion of their studies. Ph.D. students must have an approved iPOS on file before taking their oral exams. It is the student's responsibility to ensure that the information on their iPOS is accurate before the student schedules their defense. Students must notify the Graduate Student Advisor when any changes are made to their iPOS. It is highly recommended that students meet with the Graduate Student Advisor regularly, preferably during each semester, to ensure that their iPOS is in order.

## **ACADEMIC AND RESEARCH PERFORMANCE EVALUATIONS**

### **Annual Evaluation**

Graduate students in the Anthropology program are evaluated each calendar year to provide each student with feedback on their academic performance. Students are evaluated on their academic progress and performance during the previous calendar year by the faculty in their Program / Approach. Additionally, each Spring semester before the final day grades are due, the student must meet with their entire Supervisory Committee (virtual meetings are permitted). This meeting should serve as an annual review of academic progress and are evaluated on their performance during the previous calendar year by the faculty in their Program/ Approach. During the meeting the student and committee members must complete the Mentoring Plan, which is to be submitted with the annual evaluation and progress reports due on January 20th. Students who defend their dissertation during the annual evaluation period are exempt from submitting a report.

All students with **one or more semesters completed** are required to submit the following materials to the Graduate Student Advisor by January 20th. The SHESC Annual Progress report is submitted with the documents below. Faculty will review, and then letters will be sent to the students. The mentoring plan is reviewed during the student meetings and signatures are obtained at that time.

- An updated CV
- The annual mentoring plan (Meet with your Faculty Advisor to come up with plan)
- An unofficial copy of the student's most recent ASU transcript (Can be found in MyASU)
- The Courses and Summary/Submit Approval pages of approved PhD iPOS (Screenshot the Summary/Submit page paste in a word document with approved signatures) Please see the iPOS [How-to guides](#) to help with clarification on how to submit these.

Plan: Public Administration and Policy, PhD  
 Requirements: 84 credit hours, a written comprehensive exam, an oral comprehensive exam, a prospectus and a dissertation

**iPOS**

Previous Next

**Course Summary**

Anticipated Graduation Term: 2023 Spring ASU Hours after Admit: 57.00 Cumulative GPA: 3.67  
 Approved Blanket Hours: 30 Blanket Hours: 30 Overall Graduate GPA: 3.667  
 IPOS Total Hours: 87.00 IPOS GPA: 3.667

Term	Session	Course	Class Nbr	Description	Hours	Grade	Institution	Transfer Verified	Concurrent	Status
2018 Fall	C	PAF 601	91450	Advanced Public Policy Seminar	3.00	A	ASU			✓
2018 Fall	C	PAF 602	71717	Adv Rsrch Design for Public Pol	3.00	A-	ASU			✓
2018 Fall	C	PAF 606	87363	Org Theory and Behav Seminar	3.00		ASU			⚠
2019 Spring	C	PAF 620	17571	PA Prof Development Workshop	3.00		ASU			
2019 Spring	C	PAF 604	14986	Intellect Foundns Public Admn	3.00		ASU			
2020 Fall		PAF 603		Adv Econ Public Admn & Policy	3.00		ASU			
2021 Spring		PAF 610		Adv Qualitative Methods	3.00		ASU			
2021 Fall		PAF 609		Adv Quant. Methods Sem.	3.00		ASU			
2018 Fall	C	PAF 574	72147	Diversity, Ethics, Public Change	3.00	B	ASU			✓

Submit all documents through the SHESC [Annual Progress Report](#). Final approval of the iPOS by the Graduate College confirms the appointment of the Dissertation Supervisory Committee and the approval of coursework toward degree requirements.

After the student evaluations are completed, each faculty member must send an email to each advisee summarizing the results of the evaluation (including their overall score, whether the student received an S, C, or U, comments on the student's performance -specifically what they are doing well and what they can do better-, and support for the student's next steps), including concrete recommendations for what should be accomplished in the following year.

**All evaluation emails should be sent to students by May 1<sup>st</sup> and copied to the Graduate Student Advisor, to be kept on record.**

***If a student receives a "C,"*** the letter must specify what the student must do to improve his/her/their status during the next calendar year (including deadlines).

***If a student receives a "U,"*** they shall be placed under probation. A Probation Letter, following the guidelines of the Graduate College ([Academic Probation and Dismissal Policies](#)) and outlining what the student must achieve by a specified deadline to return to Good Standing (Satisfactory), will be sent to the student by their Committee Chair and cc-ed to the Approach Head, the Graduate Director (Abigail York:

[Abigail.York@asu.edu](mailto:Abigail.York@asu.edu)), the Dean's Office contact (Kyle Rader; [kwrader@asu.edu](mailto:kwrader@asu.edu)), and the SHESC Graduate Student Advisor.

**A student who has received a “U” shall not be considered for any funding from SHESC, until they have been reinstated to an “S” standing.**

Failure to submit an annual SHESC Progress Report will result in a meeting with the student's Supervisory Committee and/or the Approach Head to discuss the student's progress in more detail, and may also result in the loss of privileges such as loss of office space, low priority for funding, or probation.

### **End of Semester GPA Review**

SHESC's require all students maintain an Overall GPA of 3.2 each semester, the Graduate College requires all students (M.A. and PhD) to maintain a 3.0 GPA each semester to be in good academic standing. Graduate students who do not meet these GPA requirements will go on academic probation.

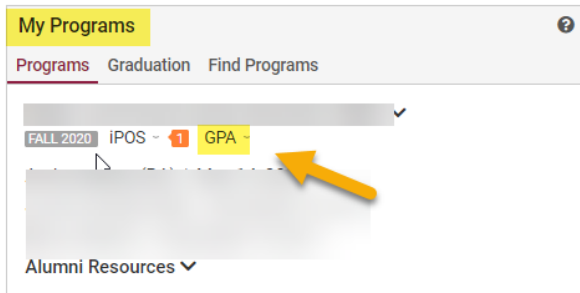
At the end of each semester, the Graduate Student Advisor will conduct a review of graduate student GPAs. The purpose of this review is to identify students who do not meet the minimum GPA requirements set forth by SHESC and the Graduate College. Students will receive an academic probation letter if their Overall GPA falls below 3.2 or if their iPOS GPA and Cumulative ASU GPA fall below the minimum requirements.

- iPOS GPA is calculated on all courses that appear on your approved iPOS.
- Cumulative ASU GPA represents all courses completed at ASU. and the
- Overall Graduate GPA is based on all courses numbered 500 or higher that appear on the transcript after admission to a graduate program or graduate non-degree. This includes shared coursework if in an approved accelerated bachelor's/master's program.

Academic probation that extends beyond two semesters will result in a recommendation to The College for termination from the graduate program.

Students with an approved iPOS can verify their GPAs in the “My Programs” section of MyASU.





Graduate students must carry a minimum of 3.00 in all GPAs

**Cumulative GPA:** [REDACTED]

Cumulative ASU GPA represents all courses completed in the graduate career at ASU.

**Overall Graduate GPA:** [REDACTED]

The Overall Graduate GPA is based on all courses numbered 500 or higher that appear on the transcript after admission to a graduate program or graduate non-degree. This includes shared coursework if in an approved accelerated bachelor's/master's program.

Updated as of June 10, 2020

**Plan of Study (iPOS) GPA:** [REDACTED]

The Plan of Study GPA is based on all courses that appear on the iPOS (with the exception of Law & transfer coursework)

Updated as of June 10, 2020

**What Constitutes Satisfactory Performance (“S”):**

- Maintain a 3.2 Overall GPA or better each semester. The Overall Graduate GPA is based on all courses numbered 500 or higher that appear on the transcript after admission (degree or non-degree). This includes shared coursework if in an approved accelerated bachelor's/master's program. (Students can find their Overall GPA in the 'Programs' tab under the “My Programs” section of MyASU.)
- Receive a grade of C+ or higher in a SHESC course.
- Successfully pass MA-paper, MA-paper presentation at MA-symposium, comprehensive exams/field statement, oral defense of proposal for dissertation.
  - When a student fails a degree requirement (i.e., MA paper, MA symposium, Comprehensive exams, Field Statement, Proposal Defense) and the concerns are judged by the student's mentoring committee to be remediable, the student may receive a “U,” be placed on probation and allowed to repeat the experience once.
  - If the student fails to pass the second time, a recommendation will be made to the Graduate College that the student be withdrawn from the Program.
  - When a student fails a degree requirement (i.e., MA paper, MA symposium, Comprehensive exams, Field Statement, Proposal Defense) and the concerns are judged by the student's mentoring committee to be non-remediable, a recommendation will be made to the Graduate College that the student be withdrawn immediately from the Program.
- Satisfy all program requirements in a timely manner (see below).
- Satisfy the [Graduate College criteria for satisfactory progress](#).
- Graduate students must **remain continuously enrolled** in their degree program. Failing to do so without a Graduate College approved request to Maintain Continuous Enrollment is considered to be a lack of academic progress. In such cases students

may automatically be dismissed from the program by the Graduate College.

***What Constitutes Concern about Performance (“C”):***

A status of concern (C) has no effect on a student’s ranking or access to funding. It is a serious warning by the student’s entire approach that the student is displaying behaviors that may lead to Unsatisfactory status (U), if left unaddressed. For example, if a student is consistently falling behind in meeting their degree milestones, if they are accumulating incomplete grades without addressing them, with poor TA or RA evaluations indicating a lack of professionalism, etc., then their approach will recommend the student receive a status of C and their chair will outline in detail what the student must do to return to a satisfactory status.

***What Constitutes Unsatisfactory Performance (“U”), any of the following:***

- An Overall GPA of less than 3.2
- Progress towards degree of 1 or less (7 semesters or more behind schedule)
- Failure to pass a degree requirement (i.e., MA paper, MA symposium, Comprehensive exams, Field Statement, Proposal Defense) but the concerns are judged by the student’s mentoring committee to be remediable
- Failure to fulfill TA or RA obligations as assigned by faculty resulting in termination of appointment.
- A grade lower than C+ in a SHESC course.

***Conditions under which Dismissal is recommended without granting probation:***

- Deception or falsification of statements in the admissions application process.
- Unauthorized periods of absence from the graduate program.
- Non-remediable failure of degree requirements (i.e., MA paper, MA symposium, Comprehensive exams, Field Statement, Proposal Defense).
- Seriously compromising relations of the School with the public (e.g., presentation of one’s own inflammatory positions as also representing those of SHESC or any of its members; acting in culturally inappropriate ways while on SHESC/ASU related business [e.g., drunk and disorderly behavior in public while doing fieldwork, harassment of members of the local community, etc.]).
- Breaches of ethical judgment and professional responsibility, including substantiated allegations of a Title IX violation (e.g., use of samples or information without consent or permit).
- Breaches of academic or scientific honesty (e.g., plagiarism, falsification of research data).
- Serious misuse of SHESC or ASU facilities and/or funds.

## CULMINATING EVENTS

The majority of SHESC graduate programs are PhD programs. Students without an MA/MS degree accepted into PhD programs begin in Phase I. Phase I culminates with a Master's degree (known as a "Master's-in-passing" or simply MIP) that is posted to their transcript. Pending approval of the culminating experience and MIP, such students continue into Phase II of the PhD program. Students with MA/MS degrees accepted into PhD programs begin in Phase II. All graduate students at ASU are subject to the [Graduate College policies](#).

### **PhD Phase I Procedures & Paperwork (pre-MA)**

1. Students must identify their faculty advisor during the Fall semester of their first year.
2. Students must file their PhD Interactive Plan of Study (iPOS) prior to January 20th during the Spring semester of their first year (see below for information on how to file the iPOS).
3. Students must notify the Graduate Student Advisor via email of their intention to earn the MIP at the beginning of the semester in which they intend to earn the degree (include ID number in the email) and then identify the remainder of the master's committee and submit the [SHESC Committee formation](#) document to the Graduate Student Advisor.
  - a. Notice that an MIP committee should have 3 members total. To facilitate the process, co-chairs, external members, and 4-person committees are not recommended for the MIP. Thus, the MIP committee may be somewhat different from the eventual PhD committee.
4. The Graduate Student Advisor will submit a MIP request form to the Graduate College, at which point the MIP iPOS will be generated and appear in MyASU. The Graduate College will not generate an MIP iPOS unless the PhD iPOS has been approved.
5. Students must complete their MIP iPOS as soon as possible after it has been generated. A student cannot apply to graduate with the MIP until their MIP iPOS has been approved. Students can apply to graduate via MyASU.
6. Students must make sure they apply to graduate with the Master's degree, not the PhD. The deadline to apply to graduate is posted

online with other [graduation deadlines](#), but occurs in early October in the Fall and early February in the Spring. There is a \$50 application fee but, if a student does not graduate in the semester for which they pay the fee, it will roll forward. Students only have to pay the fee once per degree.

7. Students must complete their research paper/portfolio and submit it to their Supervisory Committee for approval.
8. Students must present their approved MA paper/portfolio at the SHESC Research Symposium during the Spring semester.
9. Students must turn-in the signed MA/MS culminating experience paperwork to the Graduate Student Advisor upon successful completion of requirements.
  - a. [Deadlines of culminating experiences](#)

### **PhD Phase II Procedures & Paperwork (Post-MA)**

#### **1. Students must identify their faculty advisor during the Fall semester of their first year.**

2. Students must file their PhD iPOS during the Spring semester of their first year (see below for information on how to file your iPOS).
3. Students must identify the remainder of their doctoral committee and submit the [SHESC Committee formation](#) document to the Graduate Student Advisor.
  - a) The committee must have at least three members, **Students must have at least half of their committee consist of SHESC faculty.** Exceptions can be made but must be approved first by the Supervisory Committee, Approach Head, and Director of Graduate Studies. Except in unusual circumstances, committees with more than four members are not recommended.
  - b) The chair or co-chair must be a regular or research faculty within the School. Emeritus/a faculty normally may serve as sole chair for no more than one year after the date of their retirement. At least one other member must be a regular or research faculty within the School. The third (and possible fourth) members may be from within or outside SHESC.
  - c) For external members, students must fill-out the Graduate College's

[Committee Approval Request](#) form and turn it in to the Graduate Student Advisor along with the member's most recent CV. The student's committee members' names should be typed or printed, and they should sign in the "signature" column. Students do not have to fill out section II of the form. Once section I is completed, they can turn it in to the Graduate Student Advisor, along with the memo and statement, for circulation among the appropriate graduate committee members. Note that for Anthropology, all relevant approach heads sign the form before it goes to the Director of Graduate Programs and the SHESC Director. For non-anthropology degrees, the Program head signs the form before it goes to the Director of Graduate Programs and the director of SHESC. Students must update their iPOS to reflect their entire committee membership.

- d) If changes in committee membership later become necessary (after the iPOS has been filed and approved) the iPOS must be updated to reflect the new committee. It is highly recommended that students meet regularly with the Graduate Student Advisor to ensure their iPOS is up to date and accurate. If the chair or 2 or more members of the committee change, the SHESC paperwork must be redone as well.

### **Completing comprehensive examinations**

The student's supervisory committee must sign the [Comprehensive Exam form](#) and the student must turn it in to the Graduate Student Advisor. The date the supervisory committee notified the student of their exam results must be imputed in the field labeled "DATE of COMPREHENSIVE EXAMINATION/FIELD STATEMENT." The Graduate Student Advisor will get the head of the academic unit signature for the student. The results will show in the "My Programs" box in MyASU.

### **Defending the dissertation proposal**

Proposal defenses have a public component and may also have a private component. Generally, the student should reserve a room for 2 hours (maybe 3 so there is half an hour on either end for set up/break down). The front office staff can help reserve a room by phone 480-965-6215 or [shesc.grad@asu.edu](mailto:shesc.grad@asu.edu) and acquire any necessary equipment. Once the time/date/location of the student's defense is known, they must email that information to the communications program coordinator and the Graduate Student Advisor with a list of the committee members names and roles (i.e., chair, co-chair, committee member), the dissertation title, and a one-paragraph abstract. Send this information two weeks before the defense so that an announcement can run in the weekly Graduate and Faculty Digests. After the proposal defense, the student must

have their committee sign the [Dissertation Proposal form](#) and turn it in to the Graduate Student Advisor.

The Graduate Student Advisor will get the Graduate Director signature for the student. The results will be visible in the "My Programs" box in MyASU under the iPOS tab. Students will also be able to download their candidacy letter. If a student does not download the letter and the option to do so disappears, they must contact the Graduate Student Advisor, who can get them another copy. After defending their dissertation proposal, students should focus on conducting research for their dissertation and writing-up their dissertation thesis.

"Readers": There is no official process to have a "reader" for a dissertation. A reader will be ancillary and will not have any authority over whether a student passes or not and therefore will be an informal member. Should a student want a reader, they should have the approval of their Chair, and keep an electronic paper-trail.

Students should apply to graduate (via MyASU) by the deadline in the semester in which they anticipate defending. The deadline to apply to graduate is posted online with other [graduation deadlines](#), but occurs in mid October in the Fall and mid February in the Spring semester. There is a \$50 application fee but, if a student does not graduate in the semester for which they pay the fee, it will roll forward. Students only have to pay the fee for each degree.

***Students must schedule their dissertation defense at least 10 working days in advance.***

Students should refer to the [Graduate College's defense page](#), which contains information on:

- Overall defense procedures
- Deadlines
- Formatting
- Submitting to ProQuest

Dissertation defenses are public and must be held during business hours on days that the university is open for business. There are some blackout days when no defenses can be held, thus students should use the defense scheduling link in the "My Programs" box in MyASU under the defense tab to make sure the day they want is available. Generally, a room should be reserved for 2 hours (maybe 3 so there is half an hour on either end for set up/break down). The front office staff can help reserve a room by

phone 480-965-6215 or [shesc.grad@asu.edu](mailto:shesc.grad@asu.edu) and acquire any necessary equipment. Once the time/date/location of a defense is known, the student must use the defense scheduling link in MyASU to schedule their defense with the Graduate College.

Students must email their defense information (time/date/location) to the program coordinator and the Graduate Student Advisor along with a list of their committee members' names and roles (i.e., chair, co-chair, committee member), the dissertation title, and a one-page abstract. This information should be sent two weeks before the defense so that an announcement can run in the weekly Graduate and Faculty Digests. A student's committee will receive a docu-sign form 7 days prior to the scheduled date. It is strongly encouraged to remind committee members to sign the document.

Once the results are entered, students will see their results in the "My Programs" box in MyASU under the defense tab. Following a student's defense, a "next steps" link will appear with instructions for the Survey of Earned Doctorates and ETD/ProQuest.

Students should review the [Absent Committee Member Procedures](#) if a member of their committee cannot be present for their dissertation defense. Note that a minimum of 50 percent of a student's committee must be physically present. The Chair (or one co-chair) must be present. If a Proxy is used for one of the committee members, they must be approved to serve on a committee for the program and the School Director and Director of Graduate Studies must approve the appointment. Approvals must be forwarded (or cc-ed) to the Graduate Student Advisor who will inform the Graduate College of the proxy. An email should be sent to the Graduate Student Advisor asking that any outstanding "Z" grades on a student's transcript be changed to "Y."

### **Paperwork for Special Circumstances**

**Student Committee Approval:** If one or more of a student's committee members are outside SHESC or ASU and the student is unable to add them to their iPOS, they fill out the [Student Committee Approval](#) form and turn it in to the Graduate Student Advisor along with the proposed committee member's most recent CV, date of birth, and reason for addition. Per SHESC policy, at least 50% of the student's committee must be regular SHESC faculty. If the student has 2 external members they need a 4-person committee. The student's PhD Supervisory Committee formation documents must be correct and on-file with the Graduate Student Advisor to add an external member.

**Request to maintain continuous enrollment (Leave of absence):** Please see [Leave of Absence](#). By requesting to maintain continuous enrollment without course registration, a student affirms that they will not be making use of any University resources for the time period indicated. These resources include University Libraries,

laboratories, recreation facilities or faculty time. A leave of absence does not stop a student 's "time-to-degree clock." For a doctoral degree, students have 10 years total or 5 years after their written comprehensive exam, whichever is less. For a master's degree, students have 6 years total. Generally approved reasons for a leave of absence include illness of the student or a close family member.

**Request for an extension:** Students who need more time than the Graduate College allows for completing a PhD Degree can request an extension. To do so the committee must approve in writing of a timeline to include all future deliverables (see below) and must be approved by the Graduate Director, and then the student must fill-out a [petition to the Graduate College](#), have it signed by their committee, and turn it in to the Graduate Academic Success Coordinator. The Coordinator will submit the petition to the Graduate College. The petition should include:

- The reason the student has been unable to complete the degree by the deadline.
- A timeline of the work remaining until degree completion, including specific dates.
- A statement acknowledging that the student understands only one extension of time to degree may be granted. If they do not complete the remaining work and graduate according to the timeline, no further extensions will be granted, and they will be terminated from the degree program.

Generally speaking, a student must be advanced to candidacy for an extension petition to be considered. The maximum extension granted is typically one year.

**Enrollment and Degree Verification for Outside Agencies and Third Parties:** Arizona State University has contracted with the [National Student Clearinghouse](#) to process all enrollment and degree verification requests for employers, employment agencies, background search firms, and various other businesses that offer products or services based on the individual's status as an enrolled student.

Students who need assistance should [contact](#) the National Student Clearinghouse directly at 703-742-4200. If the National Student Clearinghouse can confirm the degree or enrollment, the response is immediate, and requestors will be able to print or obtain a PDF version of the verification. Enrollment verifications for each term will be available starting the first week of classes for that term. A fee will be charged for this service. To request an [Enrollment Verification](#):



- Go to MyASU and navigate to My Classes box
- Select Grades & Transcripts
- Select Transcripts & Test Scores
- Select Enrollment Verification

If a student needs special information on their enrollment verification, or if they need a specialty verification form completed, such as the Canadian or Alaskan form, they should submit an [Enrollment Verification Request Form](#) (see instructions on form) OR to any [registration location](#) (photo ID required for in-person visits.)

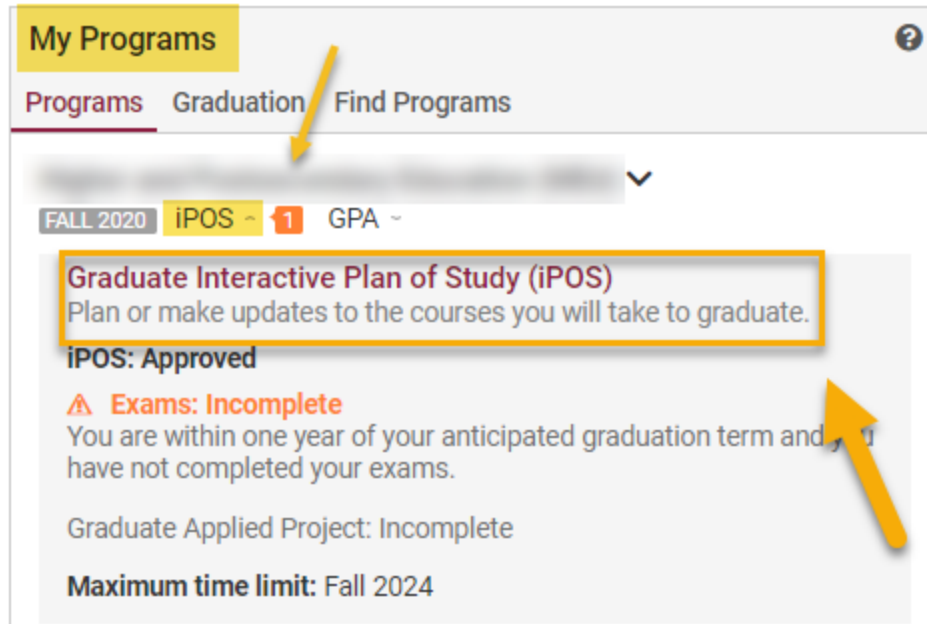
### **Enrollment Status**

If a student has advanced to candidacy, will be registered for fewer than 6 credit hours in a given semester, and has student loans they will need to contact the ASU Financial Aid Department with questions. You can contact them at 1-855-278-1080 or at the [following website](#).

### **Resources for the interactive Plan of Study (iPOS)**

The iPOS is a list of all coursework and credits taken that will be counted toward the degree. It must be filed by the time 50% of the credits for the degree have been earned. If it is not filed by that point, the student's registration will be cut-off until their iPOS is complete. A student's iPOS must be complete, updated, and approved at the time of all milestones, including the MIP, comprehensive exams, yearly annual evaluations, dissertation proposal, and dissertation defense. For a walk-through of the iPOS process that includes screenshots, see the [iPOS Training Manual](#).

**Access the iPOS:** Students can access their iPOS via *myASU* → *Programs* → *iPOS*



- Select the appropriate degree. For the PhD, the next screen should state that the requirements are: 84 credit-hours, a Written Comprehensive Exam, and a Dissertation.
- *Reminder: Pop-ups must be allowed on your internet browser when filing your iPOS!*

**Apply previous Master's degree from another institution:** Students who were awarded a Master's degree from a previous university can elect to apply a blanket 30 credit-hours from the degree to their doctoral iPOS.

- Students must have the Approach of the department signoff on the 30 credits.
- Students must select "yes" when asked whether they want to apply a previously awarded Master's.
- Students must select the appropriate Master's degree to apply. It should list the university and the year awarded.
- If a student does not see a link at the top of the page saying Previous Degree, they must contact the Graduate Student Advisor.
- If a student applies the blanket 30 hours from their previous Master's degree, they should not explicitly list any courses that were counted toward the Master's program of study/degree (i.e., they cannot count credits twice). However, if there are any courses that are required by a student's degree, which the student has already taken previously as part of their previous MA, then, with approval from the student's chair, the student may substitute those required courses for a different

course. Students should check with the Graduate Student Advisor for details.

- Students do not have to apply the blanket 30 hours from their previous Master's degree. They can transfer select courses, but no more than 9 credit hours.

**Master's in Passing (MIP) from ASU.** If a student is awarded a Master's in Passing from ASU as part of their movement through the PhD program, they **should not** apply the blanket 30 credit hours from the degree to their doctoral iPOS.

- They should select "no" when asked whether they want to apply a previously awarded Master's.
- They should import all the courses that they want to count toward their PhD off of their transcript (see "select courses" below).

**Select courses.** The easiest way for a student to do this is to pull directly from their transcript, then delete any excess courses.

- Reminder: A student needs to list a minimum of 54 hours of credit if they have applied a previously awarded Master's. If they are not applying a previous Master's, they must list 84 credits. If they list an extra hour or two because of a 4 credit-hour class, that is fine.
- Acceptable courses to list on the iPOS include levels 500 and above (except 595 Continuing Registration). They may have up to 6 credit hours of relevant 400 level courses on their iPOS with permission from their chair.
- Students should have a minimum of 12 hours of 792 Research or 592 Research.
- Students are required to list 12 hours *exactly* of 799 Dissertation work (no more, no less). *Students should be aware of this when registering, and always register in increments that will add up to exactly 12.*
- Students can list courses that are in progress and do not have a grade yet. If they are adding courses from the current semester after the semester has begun, they will appear on the student's transcript (not as future courses).
- To add courses that will occur in the future (not including the current semester), students must select the "Future Courses" button then fill-in the anticipated course and semester/year during which they would like to take it.

**Select transfer courses.**

- Many students may not need this option as their coursework will have been completed here at ASU or will have been applied via the previously awarded Master's.
- Students cannot list more than 9 hours of transfer work from another institution.

**Select an advisor.**

- Students have the option to list their entire committee or just their advisor/chair. SHESC prefers that they list their committee in its entirety. If a student has co-chairs, the system will not allow them to submit unless they list their committee in its entirety.
- A student's committee must match the committee that is listed on their [PhD Committee Approval](#) form, which should be on file with the Graduate Student Advisor.
- If a student does not have a [PhD Committee Approval](#) form on file, they will need to complete one and submit it to the Graduate Student Advisor before their iPOS can be approved.
- If one of their committee members is from outside SHESC or ASU and comes up as "not found" during the search, students must fill out the [Committee Approval Request form](#) and turn it-in to the Graduate Student Academic Support Specialist along with the individual's most recent CV.
- External members cannot be the sole chair, but can be a co-chair.

**Submit the iPOS.** Once submitted, it should say "pending in the academic unit."

**Screenshot the summary pages.**

- Students will want to take a screenshot of the Course Summary page.
- Students must have their chair sign off on the iPOS Course Summary page.
- If they have co-chairs they only need the signature of one person, though they will want to let their other co-chair and the members of their committee look at their iPOS to confirm that they also approve. (Note: a docu-sign process can be used if available.)

Plan: Public Administration and Policy, PhD  
 Requirements: 84 credit hours, a written comprehensive exam, an oral comprehensive exam, a prospectus and a dissertation

**iPOS**

Previous Next

**Course Summary**

Anticipated Graduation Term	2023 Spring	ASU Hours after Admit	57.00	Cumulative GPA	3.67
Approved Blanket Hours	30	Blanket Hours	30	Overall Graduate GPA	3.667
		IPOS Total Hours	87.00	IPOS GPA	3.667

Term	Session	Course	Class Nbr	Description	Hours	Grade	Institution	Transfer Verified	Concurrent	Status
2018 Fall	C	PAF 601	91450	Advanced Public Policy Seminar	3.00	A	ASU			✓
2018 Fall	C	PAF 602	71717	Adv Rsrch Design for Public Pol	3.00	A-	ASU			✓
2018 Fall	C	PAF 605	87363	Org Theory and Behav Seminar	3.00		ASU			⚠
2019 Spring	C	PAF 620	17571	PA Prof Development Workshop	3.00		ASU			
2019 Spring	C	PAF 604	14986	Intellect Foundns Public Admn	3.00		ASU			
2020 Fall		PAF 603		Adv Econ Public Admn & Policy	3.00		ASU			
2021 Spring		PAF 610		Adv Qualitative Methods	3.00		ASU			
2021 Fall		PAF 609		Adv Quant. Methods Sem.	3.00		ASU			
2018 Fall	C	PAF 574	72147	Diversity,Ethics,Public Change	3.00	B	ASU			✓

### Submit papers to the Graduate Student Advisor.

- Once a student has obtained their chair's signature, they must submit the signed Course Summary page to the Graduate Student Advisor, who will obtain the head of the academic unit's signature and electronically approve the iPOS.

### Update the iPOS as necessary.

- Projections do not always match reality. If a student does not register for courses they projected during the semester or if the prefix/number/title or number of credits do not match, a "course not found" error will be generated.
- Students are strongly advised to regularly check their iPOS to ensure their committee and all coursework are correct.
- If there are errors or outdated information, students can edit the iPOS and resubmit so that it is "pending in the academic unit."

## STUDENT CODE OF CONDUCT AND ACADEMIC INTEGRITY

### Academic Integrity

Academic dishonesty will not be tolerated, and if uncovered, appropriate actions will be taken. Students are expected to familiarize themselves with what constitutes violations

to the [academic integrity policy](#). Briefly, violations include but are not limited to: cheating on exams and assignments, plagiarizing, fabricating data or information, submitting the same work in different classes, etc. Students are encouraged to pay special attention to the definition of plagiarism to avoid unintentional mistakes and to discuss the topic further with their advisors and instructors if they are unclear on whether a particular action constitutes plagiarism.

Students are also strongly encouraged to reach out to The College's [Academic Integrity Officer](#) and to familiarize themselves with all potential resources the university provides to educate themselves about academic integrity.

Allegations of academic dishonesty will be reported to Amanda Smith, The College's [Academic Integrity Officer](#).

### **Understanding Academic Integrity**

[Academic Integrity](#)

### **Policy surrounding Academic Integrity**

[Student Policy](#)

### **Protecting the ASU Community**

[Why is Academic Integrity Important?](#)

### **Resources for students to help avoid academic integrity violations**

[Student Resources](#)

### **Resources for faculty, staff and teaching assistants to help avoid academic integrity violations**

[Faculty resources](#)

### **Student Code of Conduct**

Integrity is a character-driven commitment to honesty, doing what is right, and guiding others to do what is right. Arizona State University students and faculty are expected to act with integrity in their educational pursuits. The following link can assist in understanding academic integrity, student code of conduct, the policies surrounding these topics, and the impact and resources available to you.

[Student Code of Conduct | Arizona State University \(asu.edu\)](#)

### **Title IX**

ASU prohibits all forms of discrimination, harassment and retaliation. To view ASU's policy please see <https://www.asu.edu/aad/manuals/acd/acd401.html>.

Title IX protects individuals from discrimination based on sex in any educational program or activity operated by recipients of federal financial assistance. As required by Title IX, ASU does not discriminate on the basis of sex in the education programs or activities that we operate, including in admission and employment. Inquiries concerning the application of Title IX may be referred to the Title IX Coordinator or to the U.S. Department of Education, Assistant Secretary, or both. Contact [titleixcoordinator@asu.edu](mailto:titleixcoordinator@asu.edu) or 480-965-0696 for more information. Office located at 1120 S. Cady Mall, INTDSB 284. For information on making a report please go to [www.asu.edu/reportit/](http://www.asu.edu/reportit/).

## **FINANCIAL ASSISTANCE POLICIES AND PROCEDURES**

### **Financial Aid Policy and Procedures**

ASU has many forms of financial aid available, including scholarships, grants, federal work-study and loans. Students should check out these [options](#) to get started and get an idea of some of the financial awards for which they could be eligible.

In addition to financial aid packages with federal grants and loans, students can apply for scholarships specific to the university and The College to help pay for college costs. The School of Human Evolution and Social Change also offers a [collection of awards and fellowships for graduate students](#).

The Financial Aid office is available 24 hours/day, 7 days/week. Students can call toll free at: 855-278-5080.

For additional questions regarding financial aid, student should check out the answers to these frequently asked questions: [Financial Aid FAQs | ASU Students | ASU](#)

### **Graduate Fellowships and Assistantships**

The School of Human Evolution and Social Change provides a variety of financial resources and awards to graduate students. The awards, their requirements, and due dates are announced each semester through the Graduate Student Digest, sent to all SHESC graduate students via email. Students must make sure they are receiving the weekly Student Digest emails. If they are not, they should reach-out to the Graduate Student Advisor immediately.

The following awards, grants and fellowships are available to graduate students, assuming there are funds available in the Block Grant:

*Travel Awards:* Doctoral students can apply for Travel Awards up to \$1,000 to use towards travel to a conference. Within a year of receiving this award, students must

submit a one-paragraph report of their use of the funds and the experience they gained. This award is offered at least once each Fall and Spring Semester, and if there are funds, it is also offered during the Summer.

*Research Grants:* Doctoral students can apply for research grants up to \$3,000 (in exceptional circumstances a small number of grants above \$3,000, but not exceeding \$6,000, may be funded.) Students must be enrolled in at least six credits during the semester the award is offered. Awards may cover any research needs, including in-state, out-of-state and international travel.

*One-Credit Tuition/Insurance Coverage:* Doctoral students who have advanced to candidacy may apply for Tuition/Insurance Coverage to cover one-credit of tuition and insurance (if needed) to maintain continuous enrollment while they are in the field, collecting data or writing their dissertation.

*Summer Writing Fellowships:* Doctoral students who have advanced to candidacy may apply for a stipend and one-credit of tuition coverage as a summer award. This award is meant to allow students to focus their summer solely on writing and completing their dissertation. This award is offered when sufficient funds remain in the Block Grant by the end of the Spring semester.

*Completion Fellowships:* Students in the final academic year of a PhD program can apply for this fellowship which covers one credit of tuition and insurance (if needed) and a stipend for both Fall and Spring semesters. This award can only be received once. After receiving a Completion Fellowship a student is no longer eligible for school funding, even if they do not graduate during the term of the fellowship.

*Graduate Teaching Award:* This annual award honors the school's top teaching assistant or associate. Students must be in satisfactory academic standing for the three consecutive semesters prior to the award. The selection is determined by the members of the school's Graduate and Undergraduate Committee. Winners are announced at the Spring graduation awards reception at the School.

### **Assistantships and Apprenticeships**

The Teaching and Research Assistant role is an important one to the ASU community. A TA/RA appointment provides graduate students with professional development opportunities that are unique to academia while also supporting the university's teaching, research and service missions. See the [Graduate College TA/RA Handbook](#) for more information.



There are two kinds of assistantships at ASU; teaching assistantships (TAs) and research assistantships (RAs).

**Teaching assistantships (TAships).** The teaching assistant is an enrolled student appointed part-time by the university whose primary responsibility is in an instructional capacity. Teaching assistants may lecture, lead discussion groups, serve as an assistant to laboratory classes, tutor students, proctor examinations, grade tests and papers, and provide general assistance in the instructional process under the direct supervision of a faculty member.

**Research assistantships (RAships).** The research assistant is an enrolled student appointed part-time by the university whose primary responsibilities are research related. Graduate research assistants may assist faculty members in research and creative activities, perform administrative or editorial duties directly connected to research and creative activities, develop and evaluate instructional materials and/or curricula, or assume responsibilities for a designated research area under the direct supervision of a faculty member.

### **Reappointments**

TA/RA appointments are, by definition, term appointments. TAs/RAs should not assume reappointment merely because they did not receive a termination notification at the end of a term. Reappointments are subject to and contingent upon the continuing availability of funds, satisfactory academic progress and performance as determined by SHESC and/or the appointing unit. In considering reappointments, the appointing unit or project director must consider the TA's/RA's contribution to the objectives of the unit or project along with the assistant's/associate's academic progress.

### **Absence and Leave Policies for TAs/RAs**

A TA/RA should notify their supervisor in advance of an absence and, when possible, assist in obtaining a replacement or rearrangement of the duties. Excessive absences, regardless of the reason, are cause for termination before the end of the appointment period. TAs/RAs should consult with the supervising faculty member about specific policies regarding absence from service.

A supervising faculty member or academic unit can terminate a TA/RA who has abandoned their position. A TA/RA who has not reported for their assignment for three or more consecutive business days (or 3/5 of a regular week's workload) has abandoned their position. The supervising faculty member should send a letter via mail (return receipt requested) or email (read receipt requested) outlining the details in the original appointment letter, including the start date of the appointment and the length of

time the TA/RA has failed reporting for duty. The letter should at a minimum – outline the TA/RA responsibilities and the length of time in which they were not in communication with the faculty advisor, as well as any other difficulties or conflicts the faculty member experienced. The TA/RA then has two days (or 2/5 of a normal workweek) to reply and address the concern. After the two days, the appointing unit should send a confirming letter or email terminating the TA/RA appointment due to the abandonment.

### **Evaluation for TAs/RAs**

Students in TA or RA roles will be evaluated by their advising faculty member each term (A and B or C sessions) and may request to see copies of their evaluations. Students failing to meet benchmarks or satisfactory performance in their employment roles are at risk of losing funding, including loss of multi-year funding packages. Students failing to meet benchmarks or satisfactory performance in their employment roles will be provided a remediation plan developed by the Director of Graduate Studies and Graduate faculty (including Approach faculty or students' committee members). To regain eligibility for TA or RA funding, students must successfully complete the remediation plan. Completion of the remediation plan may not lead to reinstatement of a multi-year funding offer. Special circumstances may make it difficult for certain students to reach these benchmarks and exceptions may be made on a case-by-case basis.

### **Termination before End of Appointment Period**

The head of the appointing unit may make TA/RA assignments and re-assignments whenever warranted. TA/RAs are responsible and required to fulfill their assignment throughout the semester as outlined in an appointment letter until they receive a revised letter by the appointing unit. There are both voluntary and involuntary reasons that a unit may terminate a position before the end of the appointment period.

Appointing units have the right to rescind or modify TA/RA offers prior to the beginning of the appointment term or end of the appointment period, given reasonable cause. Reasons for the rescinding or modification of offers may include, but are not limited to the following: change in academic unit's financial situation; student misconduct; change in student's academic discipline or enrollment status; failure of student to accept offer by deadline indicated in offer letter and failure of student to complete required orientations or trainings as indicated in offer letter. Appointing units must issue a formal letter outlining causes for rescinding or modifying an offer.

In those cases, where the job performance of a TA/RA is not meeting expectations, the supervising faculty member should advise the student, both orally and in writing. The supervising faculty should attempt to help the TA/RA improve their performance before terminating the appointment. Additionally, a supervising faculty member, Director of

Graduate Studies, or head of the academic unit should document the reasons for the actions to terminate prior to the end of the appointment term. The Dean of the College of Liberal Arts and Sciences and the Dean of Graduate College should receive a copy of the letter outlining cause for termination prior to the end of the original appointment. Within 10 days of the receipt of the notice of termination, the TA/RA may appeal the decision at the unit and college level. The Dean of Graduate College should receive a copy of the appeal. Dismissal procedures found [in the document attached](#).

## **DEPARTMENT AND UNIVERSITY RESOURCES**

### **School of Human Evolution and Social Change Resources**

The School of Human Evolution and Social Change has a variety of resources to help students succeed in their program. A fulfilling academic career includes a sense of community and opportunities to help shape the School's future, as well as that of individual students. That is why SHESC sponsors an award-winning graduate student club and offers facilities and prospects promoting student collegiality and advancement.

***Association of All Graduate Students (AAGS):*** This student-led association provides a number of activities on the student's behalf and serves both as a forum where all students can voice their concerns, as well as a direct link with the School's faculty and administration and with other ASU graduate student associations.

***Graduate Lounge:*** Located in the School of Human Evolution and Social Change Building in Room 111, this room provides a space where graduate students can socialize or study while on campus. The lounge has tables and chairs for studying, couches for relaxing and refrigerators for food. In addition, informal collaborative meetings are conducted here.

***All Graduate Student and Leadership Meetings:*** At least once a year SHESC holds All Graduate Student and Leadership Meetings, which serve a dual purpose. They provide an opportunity for graduate students to ask questions or raise concerns directly to the school's directorate, while also providing the opportunity for the directorate to update graduate students on important trends, policies and issues affecting their academic career, research and teaching.

***New Student Orientation Series:*** Throughout the fall semester, the Director of Graduate Studies and the Graduate Academic Success Coordinator host a workshop series providing new SHESC graduate students information about navigating SHESC and ASU, successfully obtaining funding, submitting their iPOS, developing strong mentoring relationships, and finding the holistic support needed to sustain them through through graduate training journey.

### **Academic and Professional Resources**

There are many academic services available to graduate students in the School of Human Evolution and Social Change. Below is a list of resources that can help guide students through their academic journey either by providing guidance or by providing opportunities.

### ***Advising and Mentoring***

SHESC has adopted a mosaic mentoring model where students draw support from many mentors and advisors to support their diverse training goals, backgrounds, and lived identities. No single advisor or mentor is able to support a graduate student fully during their training. Instead, we encourage students to

*Faculty advisor/chair:* PhD students must proactively seek a faculty supervisor in their first semester to help them develop an appropriate interactive Plan of Study (see below). The advisor must be a member of the [graduate faculty](#) in the student's degree program.

*Committee members:* In addition to your advisor/chair, your committee helps determine your training curriculum and whether you pass major milestones in the degree program. Students are encouraged to proactively work with their committee to set expectations on curriculum, milestones, and dissertation projects. Committee members provide additional expertise and insights that can strengthen your training in SHESC.

*Staff advisor:* SHESC's Graduate Student Advisor can guide students through the application process, orientation, funding, course registration, degree progress, various ASU administrative situations and graduation.

*Approach Head:* The Approach Head can help guide students through the curriculum guidelines for the approach and also serves as one of the primary leadership contacts for students regarding policy changes approved by the approach, faculty, and GUC.

*Director of Graduate Studies:* The Director of Graduate Studies can provide advice about SHESC policy including curriculum and funding, as well as coaching and support for students navigating opportunities and challenges with faculty and staff.

*External advising/mentoring resources:* Students are encouraged to cultivate relationships with additional mentors and advisors beyond those above that enhance their training experience and sustain their well-being.

**Interactive Plan of Study (iPOS):** Students are required to file an interactive Plan of Study prior to completion of half of the credits toward their degree or sooner. We recommend filing by the end of the first year with approval by the School and the Graduate College. The iPOS will include specific degree requirements, such as courses and a culminating experience. SHESC's Graduate Student Advisor should be the initial contact for all students regarding these requirements. Once the iPOS has been approved at all levels, students can log into MyASU to complete or alter information

about their committee or courses, file a petition, and track degree milestones (such as comprehensive examinations, dissertation proposals and graduation deadlines). Links to information appropriate to your stage in the program will also be available via MyASU.

**Graduate and Undergraduate Committee (GUC):** Faculty members who serve as the head of each approach and degree program serve on the school's graduate and undergraduate committee, along with the Directors of Graduate and Undergraduate Studies. If you have questions about any aspect of the program, you are welcome to bring those concerns to the appropriate member of the Graduate and Undergraduate Committee.

### ***Collections***

Our school and its Center for Archaeology and Society manage extensive archaeological, ethnographic and evolutionary anthropology [collections](#), primarily from Arizona but also representing Mesoamerica, Africa and Asia. Of the more than 250,000 individual and bulk specimens available for research, teaching and exhibitions, about 200,000 are digitized. Type and comparative collections are also available in a variety of materials: ceramics, fauna, pollen, seeds, non-human primates, fossil hominids, and dental casts. Individual faculty members also maintain artifacts, human remains and/or related digital materials relevant to their teaching and research.

### ***Field Schools***

Several faculty members across Anthropology conduct field schools around the world providing hands-on experience and unique learning opportunities. Specific program dates and registration deadlines are posted on SHESC's [Field Schools section at the bottom of SHESC's Study Abroad page](#).

### ***Graduate Computing Lab***

SHESC graduate students will have 24/7 access via key code to Room 146 of the School of Human Evolution and Social Change Building, a state-of-the-art computing lab equipped specifically for our graduate student needs. Students can bring their own laptop or use the School's computers, peripherals and wireless access. Additional software is also available from MyASU's "my apps." Use the My Help/Help Desk area on MyASU to submit a request for technical assistance.

### ***Proposal Writing***

ASM 579 – Proposal Writing is offered each Fall semester for advanced graduate students. Proposal writing and reviewing are covered, with a focus on the National Science Foundation Dissertation Improvement Grant format, along with a number of professional development topics.

### ***Subject Librarian***

The Social Sciences Librarian, [Mimmo Bonanni](#), serves as the main library contact for SHESC, handling Anthropology, Global Health, Museum Studies, and Equity, Justice, and Sustainability. He is available to help students with their research needs by assisting in locating specialized resources, using citation software to manage citations and create custom bibliographies, and by providing consultations for theses and dissertations, as well as research/teaching assistant duties. We strongly encourage students to reach-out to Mimmo and get acquainted with all the resources he has prepared tailored to specific fields.

### **Student Support Services**

#### ***International Students***

International students who have been admitted to ASU must go to the International Scholars and Students Office ([ISSC](#)) located inside the 1<sup>st</sup> floor of the Student Services Building in Room #170, with their passport and immigration documents as soon as they arrive on campus. During the first week or so, international students must carry a few photocopies of their passport's photo page, since various offices will need a copy of it. International students must be enrolled full-time throughout their academic year (9 credit hours). Their passport and I-20 or DS-2019 must be kept valid at all times. Upon returning to the U.S. for continued study or employment international students must obtain a [travel signature](#). International students will also need to ask the ISSC about how to obtain a social security card. Their website is a great source for information ([Global@ASU](#)). International students must also attend the **mandatory [international student orientation](#)**.

#### ***Student Accessibility and Inclusive Learning Services***

The [Student Accessibility and Inclusive Learning Services](#) (SAILS) provides services to qualified students on all ASU campuses: Downtown, Polytechnic, Tempe, and West. All new students who need to register with the DRC must log into [SAILS Connect](#) to get started. If a student is already registered, they must sign-in to [SAILS Connect](#) to start requesting their accommodations. If they have any questions or experience any difficulties with this process, they should contact the Graduate Student Advisor for assistance. SHESC seeks to establish equal access for all students and looks forward to working with them.

#### ***Veterans' Services***

[Career and Professional Development Services](#) is proud to offer assistance for veterans on resumé writing, interviewing preparation, job search strategies and employment services. In partnership with the Pat Tillman Veterans Center, CPDS supports veterans

in their professional development and career exploration and offers the following services:

- Career Advising
- Career Events
- Major and Career Exploration
- Resumé and Cover Letter Reviews
- Interviewing Techniques and Practice
- Career Assessments
- Career Workshops and Webinars
- Hands-on Learning Opportunities
- Job and Internship Search Strategies
- Employer Information Sessions
- On-campus Interviews
- Job and Internship Postings
- Test Preparation for Grad School Applications
- Personal Statement Assistance
- Connection to Service Opportunities
- Networking Tips
- Virtual Services and Resources
- Professional Mentoring

Many veteran friendly employers actively recruit in [Handshake](#), ASU's online career and internship portal. In addition to the resources below, this office is available to assist you virtually and in-person with a variety of career-related topics, including job and internship search strategies, resumé writing, interviewing and career exploration. To meet with a Career Advisor, students can log into [Handshake](#) to schedule an in-person or virtual appointment.

### ***Student Wellness***

[10 Best Practices in Graduate Student Wellbeing](#) is a short guide for ways to help graduate students better care for themselves under the increasing demands of graduate school.

[Graduate Wellness Resources](#) is a guide to Financial, Social, Emotional, and Physical Health and Wellness Resources for ASU Graduate Students.

For more information please visit [Wellness@ASU | Live Well @ ASU](#)

### **Business Services**

## ***Student Accounts***

Upon admission, students receive an ASURITE UserID, an activation code and instructions to [activate their account](#). This site allows students to activate their ASURITE User ID from an off-campus computer and create their own password. After asking the student to review the policy and security information, the system verifies the student's identity by requesting their date of birth. Students must then select their password. It is highly recommended to use letters in upper and lower case, numbers and symbols in the password, for security reasons.

The system will then ask if the student has an email account. If a student wants to continue using their existing email system, they should select "Yes, I have an email account" and then enter the address of their personal email. This will ensure that they get all correspondence ASU sends them. All official university business and announcements take place on official university email addresses. It is the student's responsibility to arrange so that messages sent to their official ASU email account reach them.

If a student wants to use the ASU email as their primary email, they have two options. First, ASU has partnered with Google to provide ASU email via a gmail interface. More information can be found at [Sign-In](#). Some students love this interface, whereas others prefer to use another client program. In this case, ASU Gmail can be configured for IMAP. You can also set up ASU email on your smartphone and use email forwarding. More info at [ASU Help](#).

## ***ID Card/Sun Card***

The ASU student ID card, often referred to as the Sun Card or Pitchfork ID Card, will be issued after a student registers for classes. This card is a student's student identification card, library card, copy card, and sometimes their building and elevator key. Students can also use it as a credit card for things like vending machines, charging items to their student account, and paying for phone calls, if they sign-up for this service. The Sun Card gets students into the Student Recreation Complex (i.e., the gym) and when validated, gets them into some ASU athletic and cultural events for free or at a reduced rate. Validation for the current semester can be obtained at the Gammage Center or University Athletic Center ticket offices.

The ASU Sun Card can be obtained at the beginning of the semester after a student registers for classes. The Sun Card office is in the Lower Level of the Memorial Union (south end) inside Union Station, MU 59 (during the first couple weeks of classes, the Sun Card office offers their services on the 2<sup>nd</sup> floor of the MU). Students will be asked to fill out a card with their name, ASU ID number, and classification (Student,



Faculty/Staff, or Other). Students pay \$25 for their card with cash, check, Visa, or MasterCard, or they can have the charge posted to their University Student Account. Valid proof of identity is required so the student's identity can be verified before their Sun Card is created. Afterward, their picture is taken and the card is produced on the spot. The process takes about three to five minutes. You may also upload a photo at the [website](#) and have a card mailed to you.

### ***Bus and Light Rail Passes***

ASU offers the U-Pass, an annual transit pass that grants unlimited access on all Valley Metro bus routes and the METRO light rail. With the [U-Pass](#), students can travel between the Tempe and Downtown Phoenix campuses, hitch a ride to the airport, or arrive at nearly any destination in the greater-Phoenix area. Many students park at light rail stations and ride the light rail into campus. These passes can be obtained from the [Parking and Transit Services office](#) in the University Towers by the Sun Devil stadium at any time, or a few other locations at the beginning of each semester (look for emails about locations). Bus schedules can be found at [Valley Metro Bus Accessibility](#).

### ***Parking and Biking***

As on many large campuses, parking is an expensive hassle. The best alternative is for a student to live near campus and ride their bike. Tempe is, however, a very busy city so it is essential to be highly alert for bad drivers, wear a helmet, and obey all bike laws –expensive tickets are given for violations (e.g., for riding on the sidewalk against vehicle traffic or not having a front light on at night.) Safe bike riding, bussing or walking, if a student lives near campus, are strongly recommended.

If a student must drive, they can purchase parking decals for the year (August 16th through August 15<sup>th</sup> of next year) from the [Parking and Transit Services Office](#) in the University Towers by the Sun Devil stadium. The price of parking decals ranges from \$210 (lot 59E, open air parking about 15-20 minutes walk from main campus) to \$780 (for several covered parking structures). For daily use, it is best to obtain the sticker as soon as possible after a student arrives on campus to get as close to the SHESC buildings as possible (Structure 2 or 3). Proof of current emissions certificate, registration (out-of-state is fine) and ID are required.

For quick loading and unloading trips, students can park for 20 minutes in one of the two loading zone spaces behind the SHESC building (turn South on Forest Ave from University Dr).

### ***Other Transit Options***

ASU provides [free on-campus shuttles](#) at the Tempe Campus that transport students from outlying parking areas and campus buildings to other on-campus destinations, as well as free intercampus shuttles that connect all four ASU campuses. Bike racks are located around campus and accommodate thousands of bikes each day for those who choose biking as a transportation option. And, the City of Tempe's [Orbit Shuttle system](#) is a free neighborhood circulator that makes stops at the Tempe campus as well as nearby restaurants, shopping centers and other local points of interest. The City of Phoenix operates a similar free shuttle called the [DASH](#).

## Curriculum for Ph.D. in Applied Mathematics for the Life and Social Sciences

### Admitted with a Bachelor's Degree

Admitted With A Bachelor's	Semester Hours	
Required Core Courses	15	Phase I
Master's in Passing Elective Hours*	15	
<b>Complete Phase I (for students w/o Master's)</b>		
Required Numerical Analysis Course	3	Phase II
Elective Hours*	27	
<b>Present Comprehensive Exams and Defend Dissertation Proposal</b>		
Required Research Hours	12	Dissertation
Required Dissertation Hours	12	
<b>Total Semester Hours Required</b>	<b>84</b>	

\*All courses should be in consultation with the student's advisor or chair.

All students admitted with a bachelor's degree to the Ph.D. in Applied Mathematics in the Life and Social Sciences program are automatically admitted into Phase I and must complete the following:

- I. **Phase I: Required Core Courses**
  - a. AML 610 Topics in AMLSS (3 credits)
  - b. AML 612 AMLSS Modeling Seminar(3 credits)
- II. **Phase I: Other Requirements and Research Courses**
  - a. ASM, AML or BIO: courses in evolution, ecology or social sciences (400 level or above) (3 credits)

- b. one graduate-level course in biostatistics (3 credits)
  - c. one graduate-level School of Mathematical and Statistical Sciences course approved by graduate chair (3 credits)
  - d. APM, AML, MAT 590 or 790 Reading and Conference (6 credits)
  - e. Student must complete 30 credit hours before passing to Phase II
  - f. Student needs two completed research papers for portfolio
- III. **Complete Master's in Passing** (Masters Degree Granted)
- a. Present master's research at Graduate Symposium (in April or May of second year)
  - b. Present portfolio to be reviewed by a subcommittee appointed by the graduate committee
- IV. **Phase II: Elective Hours** (39 credits)
- a. Elective hours in consultation with student's chair (*39 credits*)
    - i. *At least 6 credits must be in the Life Sciences, and*
    - ii. *At least 6 credits from the Social Sciences*
- V. **Comprehensive Exams and Dissertation Proposal Defense**
- VI. **Dissertation and Research Credits** (24 credit hours)
- a. AML 592 or 792 Dissertation Research (*maximum of 12 credits*)
  - b. AML 799 Dissertation (*12 credits*)
- VII. **Completion of Program**
- a. Present dissertation orally in an open forum

**Admitted with a Master's Degree**

Admitted with a Master's	Semester Hours	
Required Core Courses	18	Phase II
Elective Hours*	12	
Present Comprehensive Exams and Defend Dissertation Proposal		
Required Research Hours	12	Dissertation
Required Dissertation Hours	12	
<b>Total Semester Hours Required</b>	<b>54</b>	

\*All courses should be in consultation with the student's advisor or chair.

All students admitted with a master's degree to the Ph.D. in Applied Mathematics for the Life and Social Sciences program are automatically placed into Phase II and must complete the following:

- I. **Phase I: Required Core Courses**
  - a. AML 610 Topics in AMLSS (3 credits)

- b. AML 612 AMLSS Modeling Seminar (3 credits)
- II. **Phase I: Other Requirements**
  - a. ASM, AML or BIO courses in evolution, ecology or social sciences (400 level or above) (3 credits)
  - b. One course in Biostatistics (3 credits)
  - c. One course from the School of Mathematical and Statistical Sciences approved by graduate chair (3 credits)
  - d. APM, AML, MAT 590 or 790 Reading and Conference (6 credits)
- III. **Phase II: Elective Hours**
  - a. Elective hours in consultation with student's chair (39 credits)
    - i. At least 6 credits hour must be in the Life Sciences, and
    - ii. At least 6 credit hours from the Social Sciences
- IV. **Comprehensive Exams and Dissertation Proposal Defense**
- V. **Dissertation and Research Credits**
  - a. AML 792 Dissertation Research (*maximum of 12 credits*)
  - b. AML 799 Dissertation (*12 credits*)
- VI. **Completion of Program**
  - a. Present dissertation orally in an open forum

## **COURSE OFFERINGS IN APPLIED MATHEMATICS**

Additional courses may be applied with prior approval. Students are also encouraged to check each semester for Topics courses in Applied Mathematics and related fields (not listed below due to rotating topics and instructors).

### **Applied Biological Sciences (ABS):**

ABS 560-Ecological Modeling (offered at Polytechnic Campus)

### **Applied Mathematics for the Life and Social Sciences (AML):**

AML 520-Agent-Based Modeling (cross-listed ASM 520)

AML 610-Topics in Applied Mathematics for the Life and Social Sciences

AML 612-Applied Mathematics for the Life and Social Sciences Modeling Seminar

### **Applied Mathematics (APM):**

APM 503-Applied Analysis

APM 504-Applied Probability and Stochastic Processes

APM 505-Applied Linear Algebra

APM 530-Mathematical Cell Physiology

APM 531-Mathematical Neuroscience I

APM 532-Mathematical Neuroscience II

APM 533-Mathematical Population Biology I

APM 534-Mathematical Population Biology II  
APM 535-Mathematical Models in Medicine  
APM 541-Stochastic Modeling in Biology  
APM 560-Applied Dynamical Systems  
APM 570-Applied Linear Operators  
APM 575-Perturbation Methods in Applied Mathematics

## **Complexity**

The following list was compiled by Complex Adaptive Systems Initiative (CASI) as graduate course offerings in Complexity at ASU. Note some courses overlap with above listings. Please contact CASI regarding applying these courses towards the Graduate Concentration in Complex Adaptive System Science.

ABS 560 Ecological Modeling  
AML 520 Agent Based Modeling  
AML 591 Modeling in Game Theory  
AML 591 Probability Theory  
AML 610 Topics in Applied Mathematics for the Life and Social Sciences  
AML 612 Applied Mathematics for the Life and Social Sciences Modeling Seminar  
ANB 602 Current Issues in Animal Behavior  
APM 598 Mathematical Methods for Complex Adaptive Systems  
ASM 591 Dynamic Modeling in Social and Ecological Systems  
ASM 591/BIO591 Readings in Complexity  
ASM/BIO/SOS 570 Fundamentals of Complex Adaptive Systems Science  
BIO 522 Populations: Evolutionary Ecology  
BIO 545 Populations: Evolutionary Genetics  
BIO 591 Topics in Mathematics for Life and Sustainability Science  
CSE 561 Modeling and Simulation Theory & Application  
GIS 598 Local Statistical Modeling  
GLG 495/598 Environmental Systems Biology  
PAF 591 Complexity in Public Policy & Management  
PAF 591 Introduction to Policy Informatics  
PAF 691 Social Dynamics and Policy Informatics  
PSY 576 Dynamics in Psychology  
PSY 598 Dynamics in Perception, Action and Cognition  
PUP 598 Modeling and Simulating Urban Environments  
SES 494/591 Fundamentals of Complexity  
SES 591 The Origins of Life  
SES 598 Environmental Systems Biology  
SES 598 Fundamentals of Complexity  
SOS 591 Adaptation Resilience Transformation  
SOS 591 Agent-Based Modeling for Sustainability  
SOS 591 Applied Robustness Analysis in Social-Ecological Systems  
SOS 591/AML 591/BIO 591 Ecological Modeling  
SOS 598 Social Network Analysis

## **COURSE OFFERINGS IN LIFE/SOCIAL SCIENCES**

Recommendations for coursework in specific focus areas. Additional courses may be applied with prior approval.

**Note:** Most courses do not have specific prerequisites, but students are highly encouraged to contact instructors prior to enrollment to determine the extent of Life/Social Sciences background necessary.

### **Anatomy and Physiology:**

BIO 506-Clinical Gross Anatomy  
BIO 561-Comparative Animal Physiology  
BIO 563-Environmental Physiology  
BIO 564-Cellular Physiology and Signaling

### **Biochemistry:**

BCH 501-Current Topics in Biochemistry  
BCH 561-Advanced Topics in Biochemistry  
BCH 564-Bionanotechnology  
PLB 540-Plant Biochemistry

### **Cellular/Molecular Biology and Biophysics:**

BIO 550-Advanced Cell Biology  
MCB 555-Advanced Molecular and Cellular Sciences  
MCB 556-Advanced Molecular and Cellular Biology II  
PHY 542-Topics in Biophysics

### **Ecology:**

BIO 521-Landscape Ecology  
BIO 522-Populations: Evolutionary Ecology  
BIO 524-Ecosystems  
EVO 520-Evolution and Ecology of Emerging Infectious Diseases

### **Evolutionary Biology and Genetics:**

BIO 543-Molecular Genetics  
BIO 545- Populations: Evolutionary Genetics  
BIO 546-Principles of Human Genetics  
BIO 549-Phylogenetic Biology and Analysis  
BIO 552-Developmental Genetics

### **Neuroscience:**

BIO 568-Stress and the Brain  
BME 521-Neuromuscular Control Systems  
BME 524-Fundamentals of Applied Neural Control

MIC 527-Neuroimmunology  
PSY 526-Neuroanatomy

**Sustainability:**

SOS 511-Methodology of Sustainability Research and Problem Solving  
SOS 513-Science for Sustainability  
SOS 515-Industrial Ecology and Design for Sustainability  
SOS 530-International Development and Sustainability  
SOS 532-Sustainable Urban Dynamics  
SOS 535-Sustainable Ecosystems  
SOS 540-Statistical Modeling for Sustainability