



# School of Complex Adaptive Systems Graduate Programs Handbook

Doctor of Philosophy | Master of Science |  
Graduate Certificate & Concentrations

**2023-2024**



School of Complex Adaptive Systems  
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## Welcome!

Welcome to the School of Complex Adaptive Systems at Arizona State University. Many phenomena of critical relevance to human society are dynamic systems that change over individual and evolutionary time scales in response to the social and natural environment. That is, they are complex adaptive systems (CAS). As a consequence, life and societies share special properties and processes like *near-decomposability, nested hierarchies, scale-free networks, self-organized criticality, non-linear causality, and emergence* that are inherent in CAS. The spread of epidemics, evolution of species, ecological impacts of urban growth, pathways of gene regulatory networks, ecological impacts of urban growth, firing of neurons in our brains, dynamics of economies, and human drivers of climate change all involve CAS.

Human societies have made the modern world more complex than ever before, with nearly 8 billion individuals, living in urban centers of millions of inhabitants, divided into innumerable social and economic roles, and organized into hierarchies many levels deep. As a result, earth's biophysical systems and human society are increasingly and more tightly interlinked in a web of dynamic interactions that spans the globe, and which can propagate and amplify cascades of unexpected and undesirable consequences. Without a better understanding of the non-linearities and unexpected, emergent properties of CAS, we face growing uncertainty about the future of the complex socio-ecological systems in which we live.

To respond to this global challenge confronting humanity's future, ASU has created unique, transdisciplinary educational programs in complex adaptive systems science. Our goal is to provide you with the education and experience in the concepts and advanced methods needed for approaching diverse phenomena in life, society, and technology as CAS. These educational programs are tightly integrated with diverse, university-wide research on CAS at Arizona State University, and emphasize the value of a CAS perspective to giving science, policy, and professional practice better insight and a more active role in seeking solutions to a broad array of critical issues facing us today.

We expect that graduates from the program will become leaders who transform the ways in which we carry out research, conduct business, design buildings and products, run governments, provide healthcare, manufacture goods, grow food, and educate future generations. We welcome you to this first of its kind school and wish you success in its educational programs and in your career after graduation.

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## Welcome to Arizona State University!

**ASU is a comprehensive public research university, measured not by whom it excludes, but by whom it includes and how they succeed; advancing research and discovery of public value; and assuming fundamental responsibility for the economic, social, cultural and overall health of the communities it serves.**

## Arizona State University Charter

ASU is a comprehensive public research university, measured not by whom it excludes, but by whom it includes and how they succeed; advancing research and discovery of public value; and assuming fundamental responsibility for the economic, social, cultural and overall health of the communities it serves.

<https://www.asu.edu/about/charter-mission-and-values>



## Land Acknowledgement

The School of Complex Adaptive Systems acknowledges the twenty-two Native Nations that have inhabited this land for centuries. Arizona State University's four campuses are located in the Salt River Valley on ancestral territories of Indigenous peoples, including the Akimel O'odham (Pima) and Pee Posh (Maricopa) Indian Communities, whose care and keeping of these lands allows us to be here today. The School of Complex Adaptive Systems acknowledges the sovereignty of these nations and seeks to foster an environment of success and possibility for Native American students and patrons. We are advocates for the incorporation of Indigenous knowledge systems and research methodologies.

## Commitment to Justice, Equity, Diversity, and Inclusion

Arizona State University is going through a process of examining its colonial past and culture and how it has historically benefitted from injustices, inequalities, exclusions, and pressures to conform, as well as how these in turn impact how we think about and behave toward the future. This is a process that requires our faculty, staff, and students to reflect on the intellectual, ethnic, and cultural diversity of our nation, and to become agents of change as we advance Justice, Equity, Diversity, and Inclusion (JEDI) in the world. We aspire to become a space where our students learn from the broadest perspectives and grow empowered and motivated to curb injustice, inequity, uniformity, and exclusion. We engage in the advancement of multiple forms of knowledge with the most inclusive understanding possible of the issues we are addressing through our scholarly activities, promoting openness. At ASU, we believe that diversity involves addressing and redressing unequal power dynamics between different groups, including categories such as race, ethnicity, religion, country of origin, sexual orientation, socioeconomic background, age, cultural identity, intellectual perspective, physical and mental abilities, and veteran experience.

As part of ASU and a broader national and global community that is still impacted by racism, oppression, discrimination and the systematic extermination of non-human life, the College of Global Futures is fully committed to lead by example, and embed Justice, Equity, Diversity, and Inclusion (JEDI) in all aspects of its work. This includes working closely with students to ensure that the courses they take, the environment they work in, and the experience they have within the College of Global Futures and its associated schools and programs reflect this commitment.

In Fall 2020, the College formed two school-based committees, consisting of faculty, staff, and students, to study current strategies toward justice, equity, diversity, and inclusion; progress toward stated goals; and needs for change. The committees met regularly with individuals and communities, including

students, faculty, and staff, and began work toward strategic plans to further address and support JEDI across the college. However, these initiatives will not have any impact unless everyone in our community does their part toward changing the organizational structures and practices of academia and education institutions that still abide by and promote injustices, inequity, uniformity, and exclusion.

Moving forward, the college will continue to invest in and support responsive and impactful JEDI initiatives that engage faculty, staff, and students as we work together to build a just, fair, and sustainable future.

## Student Responsibilities: Diversity and Inclusion

ASU is committed to building excellence, enhancing access to exemplary education, and having an impact on our community, state, nation and the world. Doing this requires our faculty, staff, and students to be diverse so that we learn from the broadest perspectives, and engage in the advancement of knowledge with the most inclusive understanding of the issues we address through our scholarly activities.

Diversity is defined in terms of representation and inclusion. Representation reflects the extent to which our students, staff, faculty, and administrators proportionately reflect the regional and national populations served by our public institution. Inclusion encompasses empowerment and amplifying voices among all members of the university community in the areas of scholarship, teaching, learning, and governance. Both are integral to how we ensure a just and equitable environment for everyone who is part of it, and one that is not undermined by bias, prejudice, harassment, or other forms of discriminatory attitudes and behaviors.

As a result, diversity is not only measured by race, ethnicity, country of origin, and gender, but also includes cultural identity, disability, gender identity, intellectual perspective, national origin, physical and mental abilities, religion, sexual orientation, socioeconomic background, veteran experience, and age. These aspects of identity belong to all members of our community and make us richer.

It is imperative that students treat each other and those they interact with, including instructors, faculty, and staff, with respect, kindness, and dignity. Discrimination will not be tolerated.

Resources for exploring diversity and inclusion at ASU are included below. For additional information on discrimination, harassment, and abuse, including what to do if you experience these, the [ASU has Office of Inclusion and Community Engagement](#) has additional resources, including information about ways to report your concern, such as the [ASU Hotline](#), [Incident Report Form](#), and a [Student Advocate](#) you can talk with about your situation.

- [Dispelling Stereotypes video series](#)
- [To Be Welcoming implicit bias classes](#) from ASU/Starbucks Global Academy (30-60 mins each)



**Empowering dynamic, creative people to design a future for everyone**

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## Purpose of the Handbook

This handbook serves as an initial resource for answers to common questions; however, students are also encouraged to consult with their advisor. The primary reference for graduate students on rules and regulations is the Arizona State University (ASU) Academic Catalog. Each student should become familiar with the Academic Catalog and the ASU Graduate College website and policies. The policies listed in this handbook are from ASU Graduate College, the College of Global Futures, and the School of Complex Adaptive Systems.

The handbook is updated annually and is a guide for graduate students admitted to the following complexity-related graduate degrees at ASU:

- Complex Adaptive System Science, Doctor of Philosophy (planned for Fall 2023)
- Complex Adaptive Systems Science, Master of Science
- Doctoral Certificate in Complex Adaptive Systems Science
- Concentrations in Complex Adaptive System Science within the following degrees
  - Anthropology, Doctor of Philosophy
  - Biology, Doctor of Philosophy
  - Environmental Social Science, Doctor of Philosophy
  - Sustainability, Doctor of Philosophy

You may also find this handbook on the website: [SCAS.ASU.EDU](http://SCAS.ASU.EDU)

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## Program Administration and Contacts

The Directors of the School of Complex Adaptive Systems (SCAS) are the representatives to the administration and are responsible for implementing university policies. Although the Directors have final authority on many issues, students are encouraged to consult with program advisors first about procedures and policies.



**[Manfred Laubichler](#)**

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Professor in the College of Global Futures

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**[Michael Barton](#)**

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### **Mary Kivioja**

Manager of SCAS Graduate Programs

Academic Advisor

[MKivioja@asu.edu](mailto:MKivioja@asu.edu) or [Biomimicry@asu.edu](mailto:Biomimicry@asu.edu)

(480)727-0478

## **General Questions**

[complexity@asu.edu](mailto:complexity@asu.edu)

## **ASU Contacts**

The below contacts can provide assistance based on your needs.

<b><u>ASU Online Contact</u></b>	General Inquiries	asuonline@asu.edu	480-884-1525
<b><u>ASU Online Enrollment</u></b>	Help with admissions, Applications, Enrolling in courses	asuonline@asu.edu	1-866-277-6589
<b><u>Graduate Admissions</u></b>	Applications, Transcripts, Withdrawal Requests	gograd@asu.edu	480-965-6113
<b><u>Graduate College</u></b>	Policies, Procedures, iPOS, Graduate Programs	grad-gps@asu.edu	480-965-3521
<b><u>Registrar's Office</u></b>	Registration, Citizen Status Verification, Enrollment Verification	registrar@asu.edu	480-965-3124
	Official Transcripts and Name Changes	academicfiles@asu.edu	480-965-7276
	Residency Classification	residency@asu.edu	480-965-3256
	Applying for graduation and diplomas	graduation@asu.edu	480-965-3256
<b><u>Student Business Services</u></b>	Student account services: tuition, billing, refunds, receipt and payment processing, support for past due accounts, third party sponsorship assistance	sponsorbilling@asu.edu	1-855-278-5080

## **Faculty in School of Complex Adaptive Systems**

Current faculty are listed on the SCAS (<https://scas.asu.edu/people/faculty/>) website. Faculty interests and expertise are summarized on the SCAS website. You may be able to find more details about SCAS faculty in the ASU iSearch online directory (<https://isearch.asu.edu/asu-people/>)

All SCAS regular faculty are eligible to serve on graduate supervisory committees. However, not all may be able to chair or co-chair doctoral committees in all SCAS programs. Check the faculty listings for each

program at the Graduate college or contact the SCAS Graduate Programs Coordinator for which faculty member can serve in which role.

## Student Success Teams

### Enrollment Counselors:

Finding the best program for your goals, application assistance, guidance and updates throughout the admissions process, and preparing you for your first day of classes. Request Info at [Become a student | Admission](#)

### Academic Advisors:

Course scheduling, requirements for majors and certificates, staying on track to graduate, academic policies, transferable credits, and questions or concerns about the program. Students are assigned an academic advisor when accepted into the program. To contact your advisor, email [biomimicry@asu.edu](mailto:biomimicry@asu.edu) or [mkivioja@asu.edu](mailto:mkivioja@asu.edu).

### Success Coach:

Helps identify and overcome obstacles, navigate ASU resources, short-term and long-term planning, strengths-based approach, and personal connection to ASU. To connect with your coach, visit: My ASU > eAdvisor > Success Coaching

## Your new ASU email address

It is important that students check the ASU email account at least once per week, so they do not miss important notices. Arizona State University, CGF, and SCAS conduct their business via ASU email only. However, students may forward their ASU email to another preferred account if this is a more convenient way to follow ASU email.

Graduate students in the School of Complex Adaptive Systems are added to an email list so that they receive important information about school deadlines, scholarships, jobs, workshops, and events. Students who are not receiving emails should contact the SCAS Graduate Programs Coordinator to be added to the list.

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## Complexity at ASU

The formal organization of complex adaptive system science at ASU began with the founding of the Center for Social Dynamics and Complexity (CSDC) as an interdisciplinary research center spanning the life, behavioral, and social sciences to build scientific and educational capacity in Arizona in a dominant research area of 21st century complexity science. This was rapidly followed by the establishment of additional complexity-related centers and research groups that established ASU as a leader in developing and applying theory and methods of CAS science—especially for social and biological systems. These organizations were united under the umbrella of the Global Biosocial Complexity Initiative in 2018 (<https://complexity.asu.edu>).

In 2020, ASU established the Global Futures Laboratory ( <https://globalfutures.asu.edu>) and College of Global Futures (<https://collegeofglobalfutures.asu.edu>), housing three schools: the School of



Sustainability, the School for Future Innovations and Society, and the School for Complex Adaptive Systems. These three schools work collaboratively through a collective shared mission of ensuring a livable planet. The School of Complex Adaptive Systems was established within the College of Global Futures due to the unique interdisciplinary nature of complexity coupled with its fundamental mission to build a work that creates conditions conducive to life.

For more information about the College of Global Future, visit: <https://collegeofglobalfutures.asu.edu/>

## Mission

The mission of the School of Complex Adaptive Systems (SCAS) is to advance and disseminate fundamental knowledge about the structure and function of natural, social, and technological complex systems. It will develop solutions and suggest interventions that enhance resilience and stability of some of the most critical aspects of our shared global futures, with a focus on sustainability, health, economics, technology, social stability, and innovation. SCAS focuses on complex systems science as a common language and framework, a way of thinking and knowing, and as a set of skills required to address problems that transcend traditional disciplinary boundaries. SCAS promotes excellence in education and research in an integrated academic structure without unnecessary internal disciplinary barriers and by wide-ranging international collaborations. These features of SCAS are designed to reflect the fundamental nature of complex adaptive systems, allowing for strategic and timely responses with a focus on global challenges and collaborative solutions.

## Goals

1. The School of Complex Adaptive Systems is to conduct fundamental and use-inspired research directed at finding adaptable, sustainable solutions to significant environmental and social problems of global interest by using quantitative and qualitative methods, combining multiscale, empirically grounded research studies and data with formal analysis and modeling.
2. The School of Complex Adaptive Systems will integrate research approaches that focus on multi-dimensional feedback and evolutionary processes that characterize complex adaptive systems. By emphasizing interconnections between system components and systems at different scales it will focus on solutions and designs for human well-being and a more sustainable world.
3. The School of Complex Adaptive Systems will combine analytic and design approaches by using techniques from engineering such as prototyping, and further develop practices of participatory problem solutions.
4. The School of Complex Adaptive Systems will produce a next generation of critical and analytical thinkers capable of envisioning, understanding, and solving complex social, economic, and biological problems in the context of Global Futures.
5. The School of Complex Adaptive Systems aims to produce a new generation of professionals who can use complex systems concepts and methods to bridge across disciplines and knowledge domains in order to address future challenges that span multiple dimensions of a complex world. The School will work jointly with other academic units to train complex systems scientists with the

knowledge to collaborate with domain specialists who need to apply complex systems approaches to specific problem areas. It will also provide educational opportunities to next generation scholars in other fields who desire to add expertise in complex systems approaches to their disciplinary course of study.

6. The School of Complex Adaptive Systems will develop academic programs in complex adaptive systems analysis that benefit from synergistic activities found only in an integrated, cross-disciplinary faculty.
7. The School of Complex Adaptive Systems will engage in enhancing public awareness, education, fundamental research, and problem solving focused on dynamic, systemic, and relational approaches to sustainable development and Global Futures. The major global challenges facing us today are complex, defy a simple understanding, and require a complex systems approach to find robust ways to navigate, manage, and steer complex systems towards pathways to solutions.




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## Complex Adaptive System Science Overview

In keeping with the goals of The New American University, the College of Global Futures is committed to establishing ASU as a global center for interdisciplinary research, discovery and development. The School of Complex Adaptive Systems offers an online Master of Science (MS) in Complex Systems Science Degree, a PhD Certificate in Complex Adaptive Systems Science, PhD Concentrations in Complex Adaptive Systems Science, and is planning a PhD degree in Complex Adaptive Systems Science. Students selecting the Certificate or Concentrations must be enrolled or be accepted into a doctoral degree program at Arizona State University.

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## Complex Systems Science (Master of Science) - Online

The interdisciplinary Master of Science in Complex Systems Science program will assist students in developing skills in theoretical foundations, modeling, problem solving, critical thinking, and the importance of direct experience through research or related activities in the context of complex systems

science. Complex Adaptive systems science focuses on the behavior and consequences of highly interactive and networked systems by investigating the common principles underlying these diverse structures. The program will focus on the general theoretical foundations, modeling methods and a broad overview of application domains. Complex systems are at the core of all real-world challenges ranging from health, sustainability, engineering, economics, urban and social systems and basic sciences. Expertise in complexity will allow graduates to contribute to practical and theoretical solutions in a vast number of areas thus fitting with ASU's charter to advance research and discovery of public value; and assuming fundamental responsibility for the economic, social, cultural and overall health of the communities it serves. Students will engage in different learning modalities including practical exercise and guided research projects.

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## Program Content

### Program Curricula and Course Information

#### Complex Systems Science (Master of Science) – currently online only

A total of 30 credit hours are required to complete this program: 24 credit hours of coursework and a 6 credit hour applied project.

The required foundational and core methods courses provide all students in the program with a common understanding of key theory and concepts of complex adaptive system science (CASS), and expertise in the advanced methods needed to apply CASS approaches in diverse fields.

Building on this fundamental base, students can then gain in depth knowledge of how CASS approaches can be used in specific research and applied domains. Finally, students will have the opportunity to design and carry out a project that utilizes their knowledge of CASS in real-world context through an applied project, guided by a faculty mentor.

#### Required Foundation Courses: must take all three (9 credit hours)

- CAS 501 Fundamentals of Complex Systems Science: Evolution (3)
- CAS 502 Fundamentals of Complex Systems Science: Computation (3)
- CAS 503 Fundamentals of Complex Systems Science: Collectives (3)

#### Required Core Methods Courses: choose at least two (6 credit hours)

- CAS 520 Methods for Complex Systems Science: Agent Based Modeling (3)
- CAS 521 Methods for Complex Systems Science: Network Analysis (3)
- CAS 522 Methods for Complex Systems Science: Dynamical Systems (3)
- CAS 523 Methods for Complex Systems Science: Statistics and Dimensionality Reduction (3)

#### Elective Courses: choose at least three (9 credit hours)

- CAS 540 Complex Socio-Ecological Systems (3)
- CAS 541 Complex Urban Systems (3)
- CAS 542 Sustainability as a Problem of Complexity (3)

- CAS 543 Complexity Economics (3)
- CAS 544 Innovation in Complex Systems (3)
- CAS 545 Disease as a Complex System (3)
- CAS 546 Bio-Inspired AI & Optimization (3)
- CAS 547 Sense-Making Complexity (3)

\*Can include methods courses beyond the required two.

### **Applied Project (6 credit hours)**

- CAS 593 Applied Project (6)

## **Course Descriptions**

### **CAS 501: Fundamentals of Complex Systems Science- Evolution** | 3 Credits

Most systems are complex. Complex systems share a number of critical features across all domains. This includes the fact that all complex systems are historical, path-dependent products of adaptive evolution. Foundations of Complex Systems: Evolution explores the evolutionary and adaptive dimensions, processes and mechanisms, and consequences of complex systems in a systematic way across the social, behavioral and life sciences and engineering.

Faculty: [Manfred Laubichler](#)

### **CAS 502: Fundamentals of Complex Systems Science- Computation** | 3 Credits

Most systems are complex. Complex systems share a number of critical features across all domains. This includes the fact that all complex systems process information and perform computations in the broadest sense. Foundations of Complex Systems: Computation explores the informational and computational dimensions of complex systems with an emphasis on how complex systems acquire, process, store and transmit information in a systematic way across the social, behavioral and life sciences and engineering.

Faculty: TBD

### **CAS 503: Fundamentals of Complex Systems Science- Collectives** | 3 Credits

Most systems are complex. Complex systems share a number of critical features across all domains. This includes the fact that all complex systems are collectives. Foundations of Complex Systems: Collectives explores how complex systems act through collective behavior, decision making and computation in a systematic way across the social, behavioral and life sciences and engineering.

Faculty: [Bryan Daniels](#)

### **CAS 520: Methods for Complex Systems Science- Agent Based Modeling** | 3 Credits

Most systems are complex. Complex systems share a number of critical features across all domains. This includes the fact that all complex systems are collectives. Foundations of Complex Systems: Collectives explores how complex systems act through collective behavior, decision making and computation in a systematic way across the social, behavioral and life sciences and engineering.

Faculty: [Sean Bergin](#)

### **CAS 521: Methods for Complex Systems Science- Network Analysis** | 3 Credits

Most systems are complex. Complex systems share a number of critical features across all domains. This includes the fact that all complex systems are collectives. Foundations of Complex Systems: Collectives

explores how complex systems act through collective behavior, decision making and computation in a systematic way across the social, behavioral and life sciences and engineering.

Faculty: [Enrico Borriello](#)

### **CAS 522: Methods for Complex Systems Science- Dynamical Systems** | 3 Credits

Most systems are complex. Complex systems share a number of critical features across all domains. This includes the fact that all complex systems are collectives. Foundations of Complex Systems: Collectives explores how complex systems act through collective behavior, decision making and computation in a systematic way across the social, behavioral and life sciences and engineering.

Faculty: [Bryan Daniels](#)

### **CAS 523: Methods for Complex Systems Science- Statistics and Dimensionality Reduction** |

3 Credits

Most systems are complex. Complex systems share a number of critical features across all domains. This includes the fact that all complex systems are collectives. Foundations of Complex Systems: Collectives explores how complex systems act through collective behavior, decision making and computation in a systematic way across the social, behavioral and life sciences and engineering.

Faculty: [Bryan Daniels](#)

### **CAS 540 Complex Socio-Ecological Systems** | 3 Credits

A prime example of complex systems are combined socio-ecological systems representing the multiple ways humans interact with their environment. Complex Socio-Ecological Systems will explore these interactions in past, present and future and across a number of different scales with a special emphasis on how such processes can be modeled.

Faculty: [Sean Bergin](#)

### **CAS 541: Complex Urban Systems** | 3 Credits

The trend of urbanization is accelerating. By 2050 more than 75% of all people are projected to live in urban areas. Urban Systems as Complex Systems explores the patterns and processes of urbanization through the lens of complex systems science with a special focus on how CSS can advance solutions to pressing challenges of urbanization.

Faculty: [Shade Shutters](#)

### **CAS 542: Sustainability as a Problem of Complexity** | 3 Credits

Sustainability Challenges are complex challenges. Sustainability as a Problem of Complexity explores in a systematic way the interconnected nature of sustainability challenges and presents a complex systems science based framework for developing sustainability solutions.

Faculty: TBD

### **CAS 543: Complexity Economics** | 3 Credits

The economy is clearly a complex system. Yet both Micro- and Macro economics are predicated on abstractions that reduce the inherent complexity of economic interactions. Complexity economics introduces a complementary approach to economic modeling based on a number of complex systems approaches, methods and concepts.

Faculty: [Joffa Applegate](#)

**CAS 544: Innovation in Complex Systems** | 3 Credits

Innovation is a central property of complex systems. Without innovation there would be no evolution of complex systems. This course will explore the dynamics of innovation in complex systems across a number of different domains. Including biological, social, cultural and technological innovations. It will focus on the common principles and differences guiding innovation dynamics. It will also focus on unintended consequences of innovation, such as cascading effects and innovation traps and investigate why certain systems fail to innovate. Students will be able to identify common features of innovation across complex systems.

Faculty: [José Lobo](#) and [Manfred Laubichler](#)

**CAS 545: Disease as a Complex System** | 3 Credits

Disease is a complex problem. Disease as a Complex System analyzes multiple interconnected dimensions of disease from the molecular to the socio-economic, from disease causation to treatment and health care solutions from a complex systems science perspective.

Faculty: [Manfred Laubichler](#)

**CAS 546: Bio-Inspired AI & Optimization** | 3 Credits

This course is meant to provide a survey of a variety of algorithms for optimization and multiagent control that are inspired by natural systems. Algorithms inspired by biological or physical systems can often be viewed as idealized models of those antecedent systems. Consequently, this class will also explore potential problems (and solutions) in these algorithms that are analogous to fundamental but less well-known issues in the biological and physical systems that inspire them.

Faculty: [Ted Pavlic](#)

**CAS 547: Sense-Making Complexity** | 3 Credits

Students learn to build heterogeneous simulations of real world sociotechnical or environmental situations applying complex adaptive systems concepts as lenses, and rendering them as palpable experiences using multi-modal media techniques. Cases will come from field studies around the world ranging from weather and heatscapes to media infrastructures and cities.

Faculty: [Xin Wei Sha](#)

**CAS 593: Applied Project** | 6 Credits

The applied project in the complex systems science degree involves the synthesis of materials from foundation, methods and elective courses in the form of a literature review based analysis of a specific real world problem followed by an applied project. It also involves the creation of a portfolio of student accomplishments. The applied project is a modeling and research project in any of the applied or foundational areas of complex systems science. Students will define this project with a faculty mentor and apply a selection of methods covered in the methods courses to a dataset.

Faculty: Student chooses faculty advisor

## Course Materials

All course required course material will be listed in the individual course syllabi which students have access to once they are enrolled in a course.

## Plan of Study (iPOS)

The [interactive plan of study](#) (iPOS) is the student's official contract with their faculty advisor(s), SCAS, and the university. It lists all the classes the student plans to take to complete the degree and indicates who is on the student's supervisory committee. The academic unit's graduate support staff should be the primary contact regarding iPOS and degree requirements. It contains specific degree requirements such as core and elective coursework, as well as any culminating experience that must be included before it can be approved.

While completing the iPOS, keep in mind that this is a "plan" for completing Program requirements and that changes, most likely, will need to be made in future semesters.

The iPOS is completed through the online system called the Interactive Plan of Study accessed through MyASU. Revisions to the iPOS are easily made online and should be made each semester if needed. You can access your iPOS by visiting:

***My ASU > My Programs and Degree Progress > iPOS > Graduate Interactive Plan of Study (iPOS)***

The screenshot shows a web interface titled "My Programs and Degree Progress" with a help icon. Below the title are three tabs: "Programs", "iPOS" (which is selected and underlined), and "Graduation". The main content area displays the following information for the "Biomimicry (MS)" program:

- Biomimicry (MS)**
- Graduate Interactive Plan of Study (iPOS)
- POS Approved >
- Anticipated Graduation Term: Summer 2017 >
- Graduation deadline: Fall 2021
- Course Change - Pending in Academic Unit >
- Contact: (480) 965-1768 | [sols.grad@asu.edu](mailto:sols.grad@asu.edu) ✉

The Graduate College offers many tools to assist you with completing your graduate program. At the link below you will find a few helpful guides that will assist you with using these tools. The link below provides step-by-step instructions on how to submit your iPOS.

<https://graduate.asu.edu/current-students/completing-your-degree/how-guides>

SCAS requires that students in online programs file an iPOS no later than the end of your second A/B session after initial enrollment, and are strongly encouraged to do so by the end of the first A/B session, to ensure a successful journey and order of classes. **A student is not eligible to apply for graduation without an approved iPOS.**

After filling out the iPOS online, please inform the CGF graduate program office that you have completed your iPOS so we can go in and look through the iPOS and send it to the Director for approval. If there are changes that need to be made we will email you with instructions on what to do.

Students should check the iPOS each semester. If you have a change in plans, or if the computer system identifies errors, update your iPOS. To update an iPOS, submit a Course Change request in the my.asu.edu online system. Students can remove courses not taken from the iPOS and/or add courses taken that were not originally listed on the iPOS.

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## **Complex Systems Science (PhD) - planned to start Fall 2023**

The CAS PhD program will promote the development and testing of robust theory and sophisticated methods in a wide array of research settings. This is needed to develop a deeper understanding of the nature and dynamics of complex adaptive systems, grounded in concrete examples and applications. Students in the PhD in Complex Systems Science program will develop skills in theoretical foundations, modeling, problem solving, and critical thinking. By embracing this complex systems perspective on human and natural systems, and importantly, the multi-dimensional interconnections between them, graduates of this program will become advocates and leaders of a new kind of science with the potential to fundamentally transform society.

A total of 84 credit hours are required to complete this program: 30 credit hours of coursework at the Masters level, 30 credit hours of coursework at the Doctoral level, and 24 credit hours of research and dissertation.

Further details will be forthcoming.

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## **Complex Adaptive Systems Science (PhD Certificate)**

PhD Certificate in Complex Adaptive System Science is open to any student in good standing in a doctoral degree program at Arizona State University.

This interdisciplinary graduate program helps train the next generation of scientists in advanced concepts and methods needed for approaching diverse phenomena in the social and life sciences as complex adaptive systems (CAS). This educational program is tightly integrated with diverse, ongoing,



university-wide research on CAS at Arizona State University and emphasizes the value of a CAS perspective to providing science with better insight and a more active role in seeking solutions to a broad array of critical issues facing our society today.

Complex Adaptive System Science concepts and tools can serve as a common language to promote interdisciplinary collaborations needed to come to grips with the intellectual and societal challenges of the 21st Century. This certificate helps students become fluent in the common language of complexity while also ensuring that they receive a solid foundation in the domain knowledge of existing academic disciplines. By broadly embedding an understanding of CAS-relevant approaches into the practice of normal science, this program seeks not only to transform science, but also promote the development and testing of more robust theory and more sophisticated methods by applying CASS-enabled science in a wider array of research settings. This is needed to develop a deeper understanding of the nature and dynamics of CAS, grounded in concrete examples and applications rather than abstract theory.

This is a companion program to the PhD Concentrations in CASS (below). It is designed for students who are unable to participate in the CASS doctoral concentration for programmatic reasons, but want to enhance their doctoral studies with structured training in CASS.

Additional information about program requirements, courses, and faculty can be found at: <https://complexity.asu.edu/education>.

## Applying to the PhD Certificate in Complex Adaptive System Science

Students who wish to apply for a PhD Certificate in Complex Adaptive System Science must be currently enrolled or accepted in a doctoral degree program at Arizona State University. Application is made online at: [ASU Complexity Program Application](#)

Application to the Certificate program requires a letter of intent, current curriculum vitae, one letter of recommendation, and current transcripts. Applications are reviewed on a rolling basis by the Associate Director for Educational Programs and the faculty in the School of Complex Adaptive Systems.

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## PhD Concentrations in Complex Adaptive Systems Science

PhD Concentrations in Complex Adaptive System Science are open to students who have been accepted to several doctoral programs at Arizona State University. These currently include:

- Anthropology, Doctor of Philosophy
- Biology, Doctor of Philosophy
- Environmental Social Science, Doctor of Philosophy
- Sustainability, Doctor of Philosophy

This interdisciplinary graduate program helps train the next generation of scientists in advanced concepts and methods needed for approaching diverse phenomena in the social and life sciences as complex adaptive systems (CAS). This educational program is tightly integrated with diverse, ongoing, university-wide research on CAS at Arizona State University and emphasizes the value of a CAS perspective to providing science with better insight and a more active role in seeking solutions to a broad array of critical issues facing our society today.

Complex Adaptive System Science concepts and tools can serve as a common language to promote interdisciplinary collaborations needed to come to grips with the intellectual and societal challenges of the 21st Century. This certificate helps students become fluent in the common language of complexity while also ensuring that they receive a solid foundation in the domain knowledge of existing academic disciplines. By broadly embedding an understanding of CAS-relevant approaches into the practice of normal science, this program seeks not only to transform science, but also promote the development and testing of more robust theory and more sophisticated methods by applying CASS-enabled science in a wider array of research settings. This is needed to develop a deeper understanding of the nature and dynamics of CAS, grounded in concrete examples and applications rather than abstract theory.

Additional information about program requirements, courses, and faculty can be found at: <https://complexity.asu.edu/education>.

## **Applying to the PhD Concentration in Complex Adaptive System Science**

Students who wish to apply for a PhD Certificate in Complex Adaptive System Science must be currently enrolled or accepted in a doctoral degree program at Arizona State University. Students should select the CASS Concentration option when applying to any doctoral program in which it is offered.

Application to the Certificate program requires a letter of intent specific to Complex Adaptive System Science, in addition to any other application materials required by the participating doctoral degree programs. If a student is accepted into the home degree program, the application is then forwarded to the School of Complex Adaptive Systems. Applications are then reviewed by the Associate Director for Educational Programs and school faculty.

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## **Program Content**

### **PhD Certificate and PhD Concentrations in Complex Adaptive Systems Science**

A total of 15 credit hours are required to complete these programs: 12 credit hours of coursework and 3 credit hours of dissertation.

These transdisciplinary graduate programs help train the next generation of scientists in advanced concepts and methods needed for approaching diverse phenomena in the social and life sciences as complex adaptive systems (CAS). This program will give students a solid foundation in the concepts,

methods, and applications of CAS science in their chosen field of study. Students must meet the degree requirements of their home discipline. However, the Certificate and Concentration programs are designed to be completed without adding additional time to completion of the PhD degree. Course requirements are the same for the Certificate and Concentrations. The differences between the two programs involve the composition of the PhD supervisory committee and dissertation content.

### Required Core Course for Concentrations and Certificate (3 credit hours)

- CAS 570 (also cross-listed as ASM/BIO/SOS 570) Fundamentals of Complex Adaptive Systems Science

### Required Methods and Applications Courses for Concentrations and Certificate: one from each category (9 credit hours)

- One course in the mathematics of complexity
- One course in the methods of complexity
- One course in the application of complex adaptive systems science in the student's field of study

A list of courses approved to satisfy each of these categories can be found here:

<https://scas.asu.edu/degree-programs/graduate-programs/phd-concentration-cass/>

### Dissertation/Research (3 credit hours)

- **Certificate:** 3 credit hours of dissertation research with a CASS faculty member. Students are strongly encouraged to apply concepts and methods in their doctoral research.
- **Concentrations:** 3 credit hours of dissertation research with a CASS faculty member. The student's doctoral dissertation must represent a significant contribution to the theory, methods, and/or application of CASS approaches within the student's primary discipline.

### PhD Supervisory Committee

- **Certificate:** At least one member of the supervisory committee must also be a member of the CASS Graduate Faculty.
- **Concentrations:** The chair or co-chair of the supervisory committee must also be a member of the CASS Graduate Faculty.

For specific course descriptions please utilize ASU Catalog Search here:

<https://webapp4.asu.edu/catalog/courselist> [You need to log-on to your My ASU, first]

## Graduate Faculty for Graduate Certificate and Concentrations in Complex Adaptive System Science

The PhD Certificate and Concentrations in Complex Adaptive System Science are designed for students enrolled in degree programs outside of SCAS. The Graduate Faculty for these programs includes faculty in other academic units and degree programs beyond SCAS. They can serve as members, co-chairs, and chairs of PhD supervisory committees in their respective degree programs, meeting the committee requirements of the Certificate and Concentrations. A complete listing of the Graduate Faculty in Complex Adaptive System Science can be found on the Graduate College graduate faculty website, as well as which faculty can co-chair or chair committees in which concentration:

<https://graduateapps.asu.edu/graduate-faculty/degree/CASS>

## Admissions and Enrollment

Applicants must register and enroll in courses in the semester they applied to. To change the starting semester, the student must notify their Advisor and request the change through their myASU page. The only opportunity to change the starting semester, without a fee, is before the student is officially accepted into the program.

These are federally established categories, relevant for financial aid and international visa considerations.

	Fall & Spring Semesters	Summer
<b>Full Time</b>	9+ credit hours	3+ credit hours
<b>¾ Time</b>	7-8 credit hours	
<b>Half Time</b>	5-6 credit hours	2 credit hours
<b>Less than half time</b>	1-4 credit hours	1 credit hour

## Enrollment Guidelines and Requirements for Graduate Students

### How to Add a Class

The easiest way to add a class is by signing into [My ASU](#), clicking on the Registration link in your My Classes box, and selecting Add. You may add a class to your schedule up until the drop/add deadline for that class.

Adding a class after the drop/add deadline is considered a [Late Add](#) and requires instructor, department and college approval.

Policies and procedures for late adds vary by college/school.

### Late Registration

Registering for any class after the [deadline](#) requires approval from the college or school offering the course and is an exception to university policy. There is no guarantee that a late request will be approved.

Courses for which the deadline to register has passed are marked in the schedule of classes by a red "add" button.

When this button is selected, students are directed to a page that prompts them to select the appropriate link for the college offering the course. The link connects the student to a customized page with step-by-step instructions on how to request a late add for that particular course. Policies and procedures vary by college/school. See the list below for detailed information and instructions.

For specific policies and instructions on late registration, visit:

<https://students.asu.edu/lateregistration/graduate>

### How to access your courses in Canvas

Canvas is a fully featured learning management system (LMS) designed to facilitate the delivery of instruction. Canvas may be used by ASU instructors to teach all or part of your classes. How instructors use their courses may vary to some extent, but many features will remain consistent across all of your courses.



For example, you can use Canvas to:

- Access course materials (e.g., lectures, videos, reading assignments, etc.)
- Check your grades
- Participate in online discussions or group activities
- Submit assignments
- Take online quizzes/tests
- View course announcements

Canvas can be accessed in your MyASU. It should appear as a small icon near the top of the screen. Once you click on the link it will take you to the Dashboard where your courses should appear.

Below you'll find a series of instructional articles to help get you started with Canvas. Some articles address our custom ASU Canvas environment, while other articles are provided by the Canvas Community (such as: [Canvas Student Guides](#)).

NOTE: Guides and documentation found on the Canvas site may vary slightly as features are added or changed. When in doubt, please contact the [ASU Experience Center](#) for assistance!

### Maintaining Continuous Enrollment

Graduate students planning to discontinue registration for a semester or more must submit a petition for a leave of absence. This request **must be submitted and approved before the anticipated semester of non-registration. Students may request a leave of absence for a maximum of two semesters during their entire program.**

Students can submit a Leave of Absence request via their Interactive Plan of Study (iPOS). Go into the iPOS and select 'Add Petition'. From the drop down menu, select 'Leave of Absence'. Fill out the form and submit it.

Students who do not register for a fall or spring semester without an approved Leave of Absence are considered withdrawn from the university under the assumption that they have decided to discontinue their program.

A student with a Graduate College approved leave of absence is not required to pay tuition and/or fees,

but in turn, is not permitted to place any demands on university faculty or use any university resources. These resources include university libraries, laboratories, recreation facilities or faculty time.

### Academic Calendar

It is the student's responsibility to know and regularly check deadlines. ASU Online regularly offers classes in the fall, spring, and summer terms with the following components:

Fall/Spring Session A: first 7.5-week session

Fall/Spring Session B: second 7.5-week session

Fall/Spring Session C: full semester (15 weeks)

Summer Session A: first 6-week session

Summer Session B: second 6-week session

Summer Session A + B: 12-week session

Summer Session C: 8-week session

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## Finances

### Cost

The cost of Doctorate, Certificate and Master programs vary depending on several factors: residency, online only, full-time, and program fees. ASU and other AZ-based university employees are eligible for tuition reduction. Please check the [tuition waiver rules](#) for details. Additional tuition information: <https://igrad.asu.com/dashboard>; <https://admission.asu.edu/aid/graduate>

The tuition estimate calculator is a great tool for financial planning: [Tuition Calculator](#)

### Financial Support

Students can apply for financial aid before they apply for admission to the university; however, students must be admitted to a degree-seeking program of study in order to be offered financial aid. See graduate [admission information](#). **Please note that only US students are eligible for loans or teaching and research assistantships however, all students are eligible for scholarships.**

### Financial Aid Recipients

Full-time and half-time credit requirements may be different for financial aid disbursement purposes. Please review the [Award Disbursement Rules](#) to determine the required enrolled hours needed for financial aid disbursement.

Additional Financial Aid information can be found at <https://students.asu.edu/financialaid/apply/graduate>

Financial Aid Contact: 855-278-5080 (toll-free)

Financial Aid for International Students:

<https://students.asu.edu/financialaid/apply/international>

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## Grades

### Grade Point Averages

Graduate students must maintain a minimum 3.00-grade point average (GPA) to maintain satisfactory academic progress and to graduate. The minimum 3.00 GPA must be maintained on all GPA's (Plan of Study (iPOS) GPA, Overall Graduate GPA, and Cumulative GPA).

1. The iPOS GPA is calculated on all courses that appear on the student's approved iPOS.
2. The Cumulative ASU GPA represents all courses completed at ASU during the graduate career.
3. The Overall Graduate GPA is calculated on all courses numbered 500 or higher that appear on the transcript.

Transfer credits are not calculated on the iPOS GPA or the Graduate GPA.

Courses lower than a "C" cannot appear on the iPOS but will be included when calculating the Graduate GPA. **Courses with an "I" grade cannot appear on the iPOS.**

### Coursework Grades

Graduate-level courses are those numbered 500 or higher. All core courses required by a graduate program must be at least 500-level. Courses with grades of "D", "E", "W", or "I" and audited courses (graded as "X") cannot be included on an iPOS. Courses applied to a previously awarded degree cannot be included on an iPOS.

A grade of "I" (incomplete) is given by the instructor only when a student doing acceptable work is unable to complete a course because of illness or other conditions beyond the student's control. The student and instructor must complete a [Request for Grade of Incomplete form](#) if no grade has been reported. The grade of "I" should be granted only when the student can complete the unfinished work with the same instructor. However, an "I" may be completed with an instructor designated by the department chair if the original instructor becomes incapacitated or is not on campus. The student must arrange completion of the course requirements with the instructor.

Students who receive a grade of "I" in graduate courses (500 level or above) have one calendar year to

complete the course for a grade. If after one calendar year the student has not completed the courses for a grade, the grade of "I" will become a permanent part of the transcript.

To repeat the course for credit, a student must reregister and pay fees. The grade for the repeated course will appear on the transcript but will not replace the permanent "I."

Graduate students may register to audit one or more courses with the approval of the supervisory committee chair and the consent of the instructor involved. An audited course does not count toward the minimum number of credits required for international students with visa restrictions, students employed as TA/RAs, or students receiving financial assistance. Courses taken for audit do not satisfy the Graduate College continuous enrollment policy.

### Grade Appeal and Academic Grievance Process

The College of Global Futures follows the [university policy for grade appeals](#). Outlined on the college's website are the [steps a student can take](#) if they wish to appeal a grade or the results of a defense or exam. This process only applies to courses and programs offered through the College of Global Futures. If the course or program is offered through another unit, the student will need to reference that unit's process. You can find information about which unit offers a course by clicking "Full Class Details" on the course in the course search tool and you will see the unit next to "Offered by".

It is recommended that this process be pursued in the semester following the issuance of the grade in dispute (but before commencement) to protect the student from retaliation. Students who believe they are victims of retaliation should immediately contact the [Dean of the college](#).

### Academic Record Changes

A student may apply for an academic record change for a prior semester when an application for a grade change is inappropriate to correct the student's records. An academic record change includes adding or dropping a class, changing grade options, or adjusting semester hours.

An academic record change is subject to the approval of:

1. the class instructor
2. the chair of the department offering the course, AND
3. the standards committee of the college offering the course.

### Repeating ASU Courses

Graduate students (degree or non-degree) may retake any course at ASU; however, all grades are part of the student's permanent academic record and remain on the student transcript as well as in all GPA calculations.

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# Progress in Your Program

## Satisfactory Progress

Students are responsible for reading and following satisfactory academic progress policies for the ASU Graduate College, SCAS, and the Biomimicry Center

## Graduate College Satisfactory Academic Progress Policy

All graduate students are expected to make systematic progress toward completion of their degree. This progress includes satisfying the conditions listed below and achieving the benchmarks and requirements set by the individual Degree Programs. If a student fails to satisfy the requirements of their Degree Program and/or the benchmarks outlined below, the student may be dismissed from their Program based on the Academic Unit's recommendation to the Graduate College. The Graduate College Dean makes the final determination.

1. Maintain a minimum of 3.00 GPA on both the iPOS and Graduate GPAs. If either GPA falls below 3.00, the student must develop, with their advisor, an academic performance improvement plan that includes the conditions and timeframes for making satisfactory academic progress in their Degree Program.
2. Satisfy all requirements of the Graduate Degree Program.
  - a. The iPOS GPA is calculated from all courses that appear on the student's approved iPOS.
  - b. The Graduate GPA is calculated from all courses numbered 500 or higher that appear on the transcript, with the exception of courses counted toward an undergraduate degree at ASU (unless shared with a master's degree in an approved bachelor's/Master's Degree Program); and courses identified as deficiencies in the original letter of admission. The student is considered to be on academic probation until the conditions specified in the academic performance improvement plan are met and both GPAs are above 3.00.
3. Complete the student's Graduate Degree Program prior to the maximum time limit for graduation (six years for master's; ten years for doctorate).
4. Successfully complete the culminating experience of a dissertation, capstone MS project.

Graduate students must enroll for courses in EACH Fall and Spring semester (does not include Summer) until they graduate. Further, students must be enrolled in courses that meet the Program requirements. Failing to do so without a Graduate College-approved Request to Maintain Continuous Enrollment (LOA) is considered a lack of academic progress and may lead to automatic dismissal of the student from the Degree Program. Persistent "w" and "I" grades during multiple semesters on an iPOS or transcript may reflect lack of academic progress. If the student fails to enroll for a semester, the Graduate College automatically drops the student from the Program and University. The student would have to reapply, pay the application fees, and be readmitted to continue the Degree Program. There are no special considerations for the new application – the application for readmission is evaluated against the pool of current applications for that year and readmission is NOT guaranteed.

Full Graduate College policies and procedures can be found at:

[https://graduate.asu.edu/sites/default/files/asu-graduate-policies-and-procedures\\_032019.pdf](https://graduate.asu.edu/sites/default/files/asu-graduate-policies-and-procedures_032019.pdf)

Students who are not able to fulfill a requirement by its deadline may submit a petition in writing to their Program Director and the Grad AD requesting an extension to complete the requirement. The petition must:

- Explain extenuating circumstances as to why the requirement cannot be met
- Describe what has been done and will be done to get back on track
- Give the date(s) as to when the requirement will be completed
- Include a letter of support from the student's advisor


Students will be notified whether or not the Program Director and the Grad Associate Director have granted an extension by email or letter. Consequences of unsatisfactory performance and progress will directly affect consideration of eligibility for BMU academic year TA and RA positions. Programs and individual faculty, in addition, may use progress determinations to inform funding decisions.

## Withdrawals

### Withdrawing from a program

If a student wishes to withdraw from his/her graduate degree program and the university, they must complete the [Voluntary Withdrawal form](#). Students must separately complete the appropriate forms with the University Registrar to withdraw from their courses.

### Drop/Add and Withdrawal Deadlines

Registration deadlines determine the last day you are 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 your class does not follow the A/B/C session timelines, the drop/add/withdrawal deadlines are prorated. The best way to determine the registration deadlines for a class you are registered for is to sign in to [My ASU](#) and click on the calendar icon  next to the class in the My Classes box. To determine the registration deadlines for a class you have not yet registered for, use the online [Class Search and Course Catalog](#) to search for the class and click on the Dates column in the search results.

### Drop/add deadline

This is the last day to add a class or to drop a class without receiving a grade of "W" on your transcript. Adding a class after the drop/add deadline is considered a [Late Add](#) and requires instructor, department, and college approval. All withdrawals after this date will result in a grade of "W" on your transcript for each class withdrawn.

### Course withdrawal deadline

This is the last day to request a withdrawal from a class while staying enrolled in other classes in the same session. A withdrawal from a class after this date is only available as part of a complete session withdrawal (see below).

### Complete session withdrawal deadline

This is the last day to request a complete withdrawal from a session. As part of a complete session withdrawal, you must withdraw from all of your classes in the session.

### Other Types of Drops/Withdrawal

There are appropriate circumstances when students may need to withdraw from the university (i.e. medical withdrawal, compassionate leave). The policies for such withdrawals are the same for both undergraduate and graduate students. Examples include:

- Medical and Compassionate Withdrawal
- Military Activation Withdrawal
- Instructor-initiated Drop
- Instructor-initiated Withdrawal

For information about these types of withdrawal, please visit: <https://students.asu.edu/drop-add>

### Appeals

SCAS and the Biomimicry Program Manager provide the College of Global Futures (CGF) Associate Dean of Graduate Programs with a copy of the letter recommending dismissal of the student, along with supporting documentation. Appeals must be made within 10 days of the notification date. CGF then notifies students who appeal in writing that the College appeal has been received and will be reviewed. Possible outcomes of an appeal are:

1. The CGF Associate Dean notifies the student in writing of a successful appeal. The letter will include any stipulations or restrictions (e.g., continuation in the program is under the condition of academic probation, contingent on corrections within a time frame).
2. The CGF Associate Dean notifies students in writing of an unsuccessful appeal and that they will be recommended to the Graduate College for dismissal. Possible reasons for dismissal are:
  - GPA is lower than a 3.0
  - Non-satisfactory progress
  - Requirements for admittance with deficiencies are not met

### Academic Probation

A student may be placed on academic probation if they meet any of the following criteria:

- The student does not meet GPA or grade requirements as outlined in the satisfactory academic progress policy;
- The student has more than one incompletes on their transcript since starting the program;
- The student does not meet milestones specified in the graduate handbook by the deadlines expressed therein; or
- The student fails to complete the program within the time to completion specified in the graduate handbook.

Students will be notified by email by their program when placed on probation and may be required to complete a probation agreement with Mary Kivioja and Dayna Baumeister. Students typically have one semester to advance to good standing before dismissal is considered. The student will be notified in

writing if/when they advance to good standing. Failure to return to good standing within the time limit set in the probation letter may result in dismissal from the academic program.

A student may be dismissed from a graduate program with or without first being placed on probation if:

- The student is on academic probation because their GPA has fallen below the minimum GPA as outlined in the Satisfactory Academic Progress Policy section or below 3.00 for all post-baccalaureate courses taken at ASU, and the student fails to bring the GPA to required levels by the deadline specified in the probation letter;
- The student receives a lower grade than what is required while on academic probation;
- The student has more than one permanent incompletes since starting the program;
- The student fails to meet conditions stipulated in their probation letter; or
- The student violates terms of the [Student Code of Conduct](#).

Students will be notified by email and letter (sent to the student's listed mailing address) if they are being recommended for dismissal from the program. For a ground campus International student to be dismissed effective immediately, the school's advisor must provide a written document to the international student (as early in the process as possible) letting them know that being withdrawn from a degree program can have immediate consequences regarding their visa status.

### **Academic Probation and Dismissal Appeal Process**

A student may appeal any action concerning academic probation or dismissal by petitioning through their school within 10 business days, using the [College of Global Futures Grade Appeal and Academic Grievance Form](#).

Appealing probation status follows the Grade Appeal and Academic Grievance Process. The dismissal appeal process follows the process outlined below. Students can voluntarily withdraw from their degree program at any time during the dismissal/appeal process, thereby avoiding having a dismissal on their record.

### **Dismissal Appeal Process – School Level:**

The designated person or committee within the school reviews the student's appeal. Possible outcomes include:

1. If the student does not appeal within the specified timeline in their letter, the school designee will notify the student in writing that they will be recommended to the Graduate College for dismissal.
2. The school designee notifies the student in writing of a successful appeal. The letter should include any stipulations or restrictions. For example, if the student is allowed to continue in the program under the condition of academic probation, the letter must outline specifically what the student needs to accomplish and in what timeframe to obtain academic good standing.
3. The school designee notifies the student in writing of an unsuccessful appeal. The letter will state that the school is recommending dismissal from the degree program. The student has the right to appeal the recommendation of dismissal to the college and they should send their appeal to Lisa Murphy ([lisa.m.murphy@asu.edu](mailto:lisa.m.murphy@asu.edu)) and the point of contact they've been working with in the school within 10 business days.

### Dismissal Appeal Process – College Level:

The school provides the college-level designee with a letter recommending dismissal of the student, along with supporting documentation. The designated person or committee within the college reviews the student's appeal. Possible outcomes include:

3. If the student does not appeal within the specified timeline in letter, the college designee will notify the student in writing that they will be recommended to the Graduate College for dismissal.
4. If the student does appeal within the specified timeline in the letter, the college designee will notify the student in writing that the college-level appeal was received and will be reviewed.
5. The college designee notifies the student in writing of a successful appeal. The letter should include any stipulations or restrictions (e.g. if the student is allowed to continue in the program under the condition of academic probation, the letter must outline specifically what the student needs to accomplish and the timeframe to obtain academic good standing).
6. The college designee notifies the student in writing of an unsuccessful appeal and that they will be recommended to Graduate College for dismissal.

### Graduate College Review of Dismissal:

If the student does not appeal at the college level, or if the appeal is denied, the college designee sends a recommendation for dismissal to the Graduate College along with supporting documentation. Graduate College reviews the case, notifies the student of the final dismissal decision and sends copies of the notification to the school and college.

## Graduation

### Graduation (Master's Degree)

Every student is required to apply for graduation in the semester in which they plan to complete their degree or certificate. The university lists the graduation application deadline on the [Academic Calendar](#). Students can apply after the deadline but will have to pay a late fee in addition to the graduation application fee. A separate application is required for each degree or certificate program.

The graduation deadlines and procedures are set by the office for the Graduate College and are available online at <https://graduate.asu.edu/current-students/completing-your-degree>. Deadline dates vary slightly depending on the calendar year, so students should check them carefully in advance of the semester they plan to defend their thesis/dissertation. It is very important that students become familiar with these deadlines so that graduation can occur during the expected term.

Students must apply for graduation through MyASU in accordance with the University Registrar policies. See [Application for Graduation](#). Students must meet all University and the Graduate College degree requirements prior to the conferral of their degree.

## Awarding of a Graduate Certificate

A student will be eligible for the official posting of the graduate certificate to their transcripts when all applicable coursework has been successfully completed and the office for the Graduate College scholarship requirements have been met. Students must submit an iPOS for the graduate certificate program, and apply for graduation.

## Steps in completing a graduate degree and graduating

1. **Register.** Students MUST register for at least one credit hour during the semester in which they plan to graduate. For students graduating during the summer, enrollment in any one summer session (8-week, 1st 5-week, or 2nd 5-week) fulfills the requirement.
2. **Update the iPOS and make sure that it's approved.** See "Plans of Study" above.
3. **Complete Culminating experience: capstone, thesis and/or dissertation.**
  - Have you received final format approval from Graduate College? Was your pass/fail form processed by Graduate College?
4. **Apply for graduation.** Apply for graduation through the MyASU graduation tab. If the application for graduation is made after the deadline, the student will be assessed a late fee and his/her name does not appear in the commencement program.
5. **Register for commencement.** If planning to attend, sign up via MyASU. Get academic regalia at ASU's Bookstore or find it online.
6. **Attend commencement,** if desired.
7. **Receive an official degree or certificate.** Once the Registrar's Office confers your completion of the MS program, or PhD program students will be mailed their official degree. This takes anywhere between 8–10 weeks. For certificate students, there is no official paper stating your graduation but you can request a transcript which will show that you have successfully completed the certificate program.

### Online resources for graduation

- [Checklist to ensure graduation](#)
- [How to graduate: Doctor of Philosophy](#)
- [How to graduate: Master's with Portfolio](#)
- [Culminating Experience: capstone, thesis, dissertation.](#)
- [Formatting your thesis or dissertation](#)
- [Preparing for your defense](#)
- [How to guides?](#)
- [Graduation Deadlines](#)

## After graduation

### ASU Transcripts

Official and unofficial transcripts are available through University Registrar Services. Visit their website for instructions, fees, and FAQs

## Career Services and Internships

The College of Global Futures has a career advisor dedicated to helping the college's degree-seeking students discuss career options and perform company and occupational research. The advisor also assists with resumes and cover letters, interview preparation, job search strategy, and other employment-related topics. Full time opportunities are communicated through the School of Complex and Adaptive Systems internal LinkedIn group, which you are strongly encouraged to join. Additional employment, internship, career fair, and mentorship opportunities are available through ASU's career resource, Handshake.

Graduate students can also pursue internships, either for elective credit or no credit. There are many local sustainability internship opportunities posted on [SustainabilityConnect](#). These have been curated for the undergraduate sustainability program, but are open to any College of Global Futures student.

The school also offers a Job SHARE Program, which allows students to shadow alumni in their jobs for a day. Information is sent out in fall and spring to students about how to participate in the program.

To book an appointment, please visit the [College of Global Futures Advising](#) site.

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## Need Help?

### Student Resources

Online services are available to ASU Online graduate students as well as in-person services for ground students.

#### Graduate Student Tool Kit

The toolkit was developed to be a resource for new graduate students and help them prepare for online courses and succeed in their program. Hosted in Canvas, the Toolkit offers an introduction to ASU's online Learning Management System. The Graduate Toolkit provides information about the following::

- An iPOS overview
- Important policies for graduate students
- Programmatic handbooks and insights
- An introduction to the student support team
- An overview of student resources
- A brief review of using My ASU

- How to register for classes and purchase textbooks
- Financing your degree
- Academic Integrity
- Computer Requirements
- What to expect in the classroom
- How to prepare for Academic Rigor
- Strategies for Success

## Tutoring

Tutoring is available through the following websites or by calling 480-965-9072 to make an appointment:

- <https://tutoring.asu.edu/online-tutoring>
- <https://tutoring.asu.edu/student-services/graduate>.

Tutoring for specific courses can be found at: <https://tutoring.asu.edu/tutor-search>

Statistics tutoring is available at: <https://tutoring.asu.edu/student-services/graduate>

Grad students also have access to the [Graduate Academic Success Center](#) (GASC) or by calling 480-956-9072. The GASC includes tutoring (online/in-person), writing center, workshops, and writing camps.

## Graduate Writing Center

ASU's [Online Graduate Writing Center](#) specifically serves students enrolled in 500, 600 and 700 level classes. Using Adobe Connect, this real-time, appointment-based assistance allows students to meet one-on-one with a graduate writing consultant to receive feedback on their writing projects at any stage in their development and writing process.

The center is open Sundays–Thursdays with appointments available between the hours of 2 pm and 10 pm.

## Research @ ASU

ASU invests in research and creates opportunities for its students to be creative thinkers.

[Find Solutions](#)

## Mentoring

Receive support and career-focused guidance for your academics and career pathways.

[Get Mentorship](#)

## ASU Libraries

Access extensive colleges and databases for research and projects.

[Explore ASU Libraries](#)

## Graduate Student Centers

Students have access to computer labs, meeting spaces and quiet study places at each ASU campus.

[Find my Center](#)



### Updating Student Name for Official Records

You can update your name both officially in the ASU system and specifically for your diploma. To update your name on all official records you may submit the Name Change Application to the Outgoing Transcripts section of the University Registrar Services. Their email is [academicfiles@asu.edu](mailto:academicfiles@asu.edu) Here is a link to the form:

<https://students.asu.edu/forms/name-change>

To update your name on your diploma you may submit the Diploma Name form. Here is a link to this form: <https://students.asu.edu/forms/diploma-name>

## Additional Resources

Information about other student services such as libraries, online tutoring, career services, and disability resources can be found at the following websites:

- <http://asuonline.asu.edu/student-resources/student-services>
- <https://graduate.asu.edu/current-students/enrich-your-experience/resources-and-services>

### Graduate and Professional Student Association

GPSA will give a voice to you and other graduate and professional students. [More Info](#)

### Family Resources

Find support services for families, including child-care referrals, special family workshops and events.

[Resources for families](#)

### Culture and Identity

Join a community rooted in culture or ethnic identity to contribute personal heritage and values to ASU.

[Culture at ASU](#)

### Make an Impact

Engage in service, civic leadership and social entrepreneurship in a variety of settings.

[Create Change](#)

### ASU Career and Professional Development

Expand your network and find support from others in your career path.

[Career/Professional Opportunities](#)

### Campus Safety

ASU provides a safe, healthy, and secure environment, with the goal of maintaining a healthy and secure campus community for students, staff, and faculty. [Safety at ASU](#)

### The ASU Student Accessibility and Inclusive Learning Services

Formerly known as The DRC [Disability Resource Center] is a great resource for students with disabilities. It provides services to qualified students with disabilities on all ASU campuses. For convenience, students

will find offices located at the Downtown, Polytechnic, Tempe, and West locations. You can contact any Accessibility office with the following information:

Phone: 480-965-1234

FAX: 480-965-0441

Email: [DRC@asu.edu](mailto:DRC@asu.edu)

### ASU Counseling Services

ASU Counseling Services offers confidential, personal counseling and crisis services for students experiencing emotional concerns, problems in adjusting, and other factors that affect their ability to achieve their academic and personal goals.

For more information visit: <https://eoss.asu.edu/counseling>

### Wellness Resources

Graduate school necessarily stretches us. When we strive to achieve experiences, content and context expertise, and professional mastery, we rely on every part of our intellectual, emotional, physical and purposeful self. Stretching in these ways is inherently stressful, and according to the National College Health Assessment (NCHA) graduate students report stress, feeling exhausted, and anxiety to be factors that can surface in different ways than they did in undergrad.

Read up on some of the ways you can care for yourself through increasing academic rigor and demands at this link: [10 Best Practices in Graduate Student Wellbeing](#)

Your wellness is important to us. ASU provides many resources to help with financial, emotional, physical, and social concerns. Please utilize these opportunities for support by clicking this link: [Graduate Wellness Resources](#)

### Technical Support

ASU provides a number of resources to help you plug in and stay connected to the technology you'll need to complete your degree online.

Visit [contact.asu.edu](http://contact.asu.edu) for frequently requested information or visit the [My ASU Service Center](#) where you can easily search for answers to your questions using ASU's Knowledge Base or access 24/7 live chat with one of our ASU Help Desk agents. You can also request services or report an issue by creating a support case and our field of experts will route your request accordingly and follow-up by email or your preferred contact method.

### Troubleshooting Tips for Accessing Online Courses

If you are having issues accessing your courses, here are a few things to try before you contact the ASU Help Center.

- **First:** Try a different browser. If that doesn't work:
- Sign out of My ASU (don't just close the browser window).
- Clear your browser cache.
- Disable your browser's pop-up blocker.
- Log back in and try again.

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## Overarching University Policies

The policies outlined below are those consistent across ASU, ASU Online, the Graduate College, the College of Global Futures, and the School of Complex Adaptive Systems (SCAS).

Guided by ASU's commitment to excellence, access, and impact, the Office of Student Rights and Responsibilities (OSRR) supports a safe and inclusive environment that fosters the intellectual, personal, social, ethical development of all students. In partnership with university departments and programs, we help students see themselves as responsible members of a diverse community. SRR provides students with the opportunity to consider the ways in which their conduct may define and impact their college experience-personally and in relationship with others.

For more information about SRR and FAQs for students and parents, please visit: [Student Rights and Responsibilities | Arizona State University](#)

### Student Responsibility

It is the responsibility of each student to understand and observe all procedures and requirements specified by the ASU Graduate College, the College of Global Futures, and the School of Complex Adaptive Systems. **It is a requirement for all students to read and understand the Graduate Handbook and the ASU Academic Catalog as well as adhere to the Student Code of Conduct (described below).** Faculty and staff provide academic advice and assistance; however, the ultimate responsibility for meeting degree and other requirements remains with the student. Students should frequently check their MyASU account. All ASU students are required to have an active ASU email.

### Graduate College Handbook

The Graduate College oversees all graduate programs and upholds university rules and policies. All graduate students are responsible for familiarizing themselves with these policies in addition to specific academic unit policies. The [ASU Graduate Policies and Procedures](#) guide cover all university-level requirements.

### Professional Ethics

As a graduate student, you have joined a larger community that is engaged in the quest for knowledge, understanding, and equity for all. You have committed yourself to honest, ethical, and cooperative learning and inquiry. You represent this university community in many ways. Please consider that responsibility in your conduct. All your work, including research and courses, must be original, accurate, and documented, and must reflect individual effort and integrity.

## Culture of Respect

ASU is a community and a professional work environment. Graduate students are expected to treat their peers, teachers, students, staff, and members of the ASU community with respect and work with them in a professional manner. Complexity graduate students are representatives of the College of Global Futures, the School of Complex Adaptive Systems, and the University; SCAS expects its students will be good representatives who recognize that poor behavior on the part of one student impacts all by creating a negative perception of the College, the School, and the University.

## Academic Integrity

The College of Global Futures takes academic integrity seriously and requires students to:

1. have a good understanding of [what academic integrity is](#) and [why it's important](#);
2. understand what types of activities and behaviors violate the [student honor code](#) and [ASU's academic integrity policy](#);
3. have an awareness that [resources](#) exist to help prevent academic integrity violations; and
4. [report all academic integrity violations](#) as soon as they arise.

Each college/school has an [academic integrity officer](#) who can address questions related to academic integrity. If there are questions about a particular course, students should reach out to officers from the college/school that offers the course.

Newly admitted graduate students will receive a "priority task" in My ASU directing them to complete an online module on academic integrity. The module consists of a PowerPoint that outlines academic integrity and students must take a quiz and pass with an 80% or higher.

## Student Rights and Responsibilities, and Code of Conduct

The aim of education is the intellectual, personal, social, and ethical development of the individual. The educational process is ideally conducted in an environment that encourages reasoned discourse, intellectual honesty, openness to constructive change, and respect for the rights of all individuals. Self-discipline and a respect for the rights of others in the university community are necessary for the fulfillment of such goals. The [Student Code of Conduct](#) is designed to promote this environment at Arizona State University. All Students are expected to adhere to the [Student Code of Conduct](#).

The Student Code of Conduct sets forth the standards of conduct expected of students who choose to join the university community. Students who violate these standards will be subject to disciplinary sanctions in order to promote their own personal development, to protect the university community, and to maintain order and stability on campus.

The OSRR investigates allegations of student misconduct and determines whether a violation of the [Student Code of Conduct](#) has occurred. Students who are found responsible for violations of the Student Code of Conduct are encouraged to reflect on their behavior through the use of educationally based sanctions that assists the students in making informed choices and developing in a holistic manner.

For more information about the OSRR and FAQs for students and parents, please visit:

<https://eoss.asu.edu/dos/srr>

## Sexual Harassment

Sexual Harassment is defined as unwelcome behavior of a sexual nature that reasonably interferes with the working/learning environment and creates a hostile, intimidating, or offensive environment or takes the form of seeking sexual favors in exchange for a promise of a benefit or a threat of a penalty. Sexual harassment is a violation of ASU policy as well as a state and federal law. More information about this policy is available at <https://sexualviolenceprevention.asu.edu/>.

## Title IX Compliance

[Title IX of the Education Amendments of 1972](#) protects individuals from discrimination based on gender in any educational program or activity operated by recipients of federal financial assistance. Sexual harassment, which includes acts of sexual violence, is a form of sex discrimination prohibited by Title IX. ASU does not discriminate on the basis of gender in the employment, education programs or activities it operates. ASU is committed to providing an environment free from discrimination based on sex and provides a number of resources and services to assist students, faculty, and staff in addressing issues involving sex discrimination, including sexual violence. For more details regarding Title IX, visit: <https://cfo.asu.edu/titleIX>

## Religious Beliefs and Practices

No employee, agent, or institution under the jurisdiction of the Arizona Board of Regents shall discriminate or retaliate against any student, employee, or other individuals because of an individual's religious belief or practice or an absence thereof. Furthermore, administrators and faculty members must reasonably accommodate individual religious practices. A refusal to accommodate is justified only when undue hardship would result from each available alternative of reasonable accommodation. No administrator or faculty member shall retaliate or otherwise discriminate against any student, employee, or prospective employee because that individual sought a religious accommodation pursuant to this policy. More information is available at <https://cfo.asu.edu/equity-and-inclusion>.

## Discrimination Complaints and Equal Opportunity Policy Statement

ASU promotes equal opportunity through affirmative action in employment and educational programs and activities. Discrimination is prohibited on the basis of race, color, religion, national origin, citizenship, sex, sexual orientation, gender identity, age, disability, special disabled veteran, or Vietnam-era veteran status. Equal opportunity includes, but is not limited to, recruitment, hiring, promotion, termination, compensation, benefits, transfers, university-sponsored training, education, tuition assistance, and social and recreational programs. More information is available at <https://cfo.asu.edu/equity-and-inclusion>.

Any complaint of alleged discrimination or harassment may be filed with the Office of Equity & Inclusion for investigation and resolution. Any employee or student may visit with the Office's staff to discuss, in confidence, any concern without fear of jeopardizing job or academic standing within the University. ASU's Office of Equity and Inclusion phone: (480) 965-5057

## Student Anti-Retaliation Statement

Students have the right to be free from retaliation. Threats or other forms of intimidation or retribution against a student who files a complaint or grievance, requests an administrative remedy, participates in an investigation, appears as a witness at an administrative hearing, or opposes an unlawful act, discriminatory practice, or policy are prohibited and subject to university disciplinary procedures. Students with complaints of retaliation should utilize the procedures available under the University Code

of Conduct, the Student Code of Conduct, the Graduate Student Grievance Procedure, the Student Employee Grievance Procedure, the Sexual Harassment Policy, nondiscrimination policies, or other available administrative procedures as appropriate. For assistance with procedures, students should contact the Dean of the academic college if the circumstances relate to a course or academic evaluation, the Director of the Office of Equity and Inclusion if the circumstances relate to a claim or discrimination or harassment, or the Dean of Students for all other circumstances.

### **Social Media Training & Guidelines for Students**

ASU is an innovative, technologically advanced University and its students are encouraged to use all forms of communication — including social media — to better themselves and their communities. The messages we share on social media can have a powerful impact on our lives and the lives of others.

In the use of social media and all types of communication, we follow the Code of Conduct and the Sun Devil Way

- The ASU Code of Conduct encourages “self-discipline and a respect for the rights of others in the university community.”
- The Sun Devil Way encourages achievement, engagement, and responsibility in our educational endeavors.

Our university is part of a diverse, global community that includes people of varying backgrounds and belief systems; varying ethnicities and national origin; and varying sexual orientation. Part of your educational experience is to seek to understand people different from yourself and to have respect and empathy for them as fellow human beings. This need for respect and empathy extends to the way we communicate, especially on social media.

The university is also where you may begin to build your public and professional reputation and persona. The way you communicate and conduct yourself on social media can have a lasting impact — positive or negative — on your social, academic, and professional life. You should always think through the consequences of the messages you post.

Visit [Online Social Networking Guidelines](#) for guidelines to consider when using social media.