

**Data Science, Analytics and  
Engineering  
Ph.D. Graduate Handbook  
2024 - 2025**

**MANUAL OF THE PH.D. DEGREE IN  
DATA SCIENCE, ANALYTICS, AND ENGINEERING**

**ARIZONA STATE UNIVERSITY**

**2024 – 2025**

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## **I. Introduction to the Data Science, Analytics, and Engineering Program**

The Data Science, Analytics, and Engineering (DSE) program is a collaboration of the School of Computing and Augmented Intelligence (SCAI), which serves as the administrative home, and the School of Mathematical and Statistical Sciences (SoMSS). The program is multidisciplinary, drawing faculty members from SCAI, SoMSS, the School of Electrical, Computer, and Energy Engineering (ECEE), the School of Manufacturing Systems and Networks (MSN), and the School of Arts, Media, and Engineering (AME) at Arizona State University (ASU). The combined faculty offers an advanced academic program leading to the Doctor of Philosophy (Ph.D.) degree. The program is designed to instill the capability of building and deploying state-of-the-art data analysis and engineering tools to meet the societal need for data-driven discovery of new knowledge and decision-making that enhances business and government performance and scientific investigation. The program requires core and elective coursework, a qualifying exam, a comprehensive exam, a prospectus, a written dissertation, and an oral defense of the dissertation. The Ph.D. degree is offered to exceptional students who have completed, with distinction, a Bachelor's or Master's degree in engineering, computer science, mathematics, statistics, or a closely related field.

Here at ASU's School of Computing and Augmented Intelligence (SCAI), we envision a society where secure, accurate, and current information is ubiquitously available and data is seamlessly collected, managed, and converted into information that entertains individuals, empowers businesses, and guides the decisions of both in their daily affairs.

We envision our school as an international community recognized by its international colleagues as a leader in developing and enabling an information-driven society and by students as a preferred educational program for acquiring the knowledge and skills necessary to contribute to this vision.

We envision a community of scholars cooperatively engaged in transdisciplinary research addressing the grand challenges of modern society and supporting the intellectual growth of students and colleagues.

Our mission is to benefit society through excellence in education, use-inspired research from foundational to translational, and leadership in service to the profession and community. We seek to provide a supportive environment that promotes creativity, diversity, multidisciplinary teaming, scholarship, and ethical behavior to advance knowledge and practice in computing, information, and decision technologies to enhance society.

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

Title IX protects individuals from discrimination based on sex in any educational program or activity operated by recipients of federal financial assistance. As required by Title IX, ASU does not discriminate based on sex in our education programs or activities,

including in admission and employment. Inquiries concerning the application of Title IX may be referred to the Title IX Coordinator, the U.S. Department of Education, Assistant Secretary, or both. Contact [titleixcoordinator@asu.edu](mailto:titleixcoordinator@asu.edu) or 480-965-0696 for more information. Office located at 1120 S. Cady Mall, INTDSB 284. For information on how to submit a report, please go to [www.asu.edu/reportit/](http://www.asu.edu/reportit/).

## II. Objective of the Handbook

The purpose of this handbook is to provide guidance and information related to admission, degree requirements, and general policies and procedures. Please note that you will find differences between the Graduate College Policies and Procedures and the Data Science, Analytics, and Engineering program requirements in some cases. In these cases, Data Science, Analytics, and Engineering programs have established higher standards. Students must satisfy both sets of requirements. Please note that policies and procedures are occasionally amended to improve the program. Changes will be communicated to students through their ASU email, our primary communication form. We will also post any updates to this handbook on our website <https://scai.engineering.asu.edu>.

## III. ASU Resources

We believe graduate education provides an opportunity to grow in our knowledge and expertise, and during our studies, we may face challenges and hardships that can affect our wellbeing. The Graduate College and the ASU Graduate Student Association have compiled resources and best practices guides to help your educational journey. We encourage you to contact a SCAI Graduate Advising Office graduate advisor if you need additional guidance and support.

- [Graduate Wellness Resources](#) – a one-page guide to Financial, Social, Emotional, and Physical Health and Wellness Resources for ASU Graduate Students was developed by the GPSA.
- [10 Best Practices in Graduate Student Wellbeing](#) – proven ways to help graduate students better care for themselves under the increasing demands of graduate school
- [Success Coaches](#) - Part concierge, part support system, your coach will be there every step of the way to help you overcome hurdles between you and your goals.
- [Financial Aid](#) - A dedicated team for all your financial, funding, scholarship and FAFSA questions.
- [Pat Tillman Veterans Center](#) - Support team and services to ensure success among military students.
- [ASU Help Desk](#) - The ASU Helpdesk is available 24/7 to provide you with Technical support and assistance with your courses.
- [ASU Library](#) - All the resources of a traditional library, at your fingertips... articles, eBooks, tutorials, and the research help needed to support your academic success!
- [Student Accessibility and Inclusive Learning](#) - Also known as “SAILS” provides services to qualified students with disabilities on all ASU campuses.

- [Career Services](#) - Whether you are a student looking for an internship, an alum looking for a job or an employer looking to recruit, Handshake can get you connected.
- [Alumni Association](#) - Online students are welcome and encouraged to attend alumni events in their area.
- [ASU Online Social Media](#) - Stay up-to-date on university happenings and fun ways to connect with classmates and the university.
- [Sun Devils Connect](#) - An ASU Online Facebook group dedicated to current students. Connect and network with other students around the country and get the insider scoop on ASU Online events, competitions and opportunities.
- [Slack](#) - Live chat with your Success Coach, instructors, classmates or join a social channel.
- [ASU Bookstore](#) – Shop for your textbooks, computers, tablets, and other accessories as needed.

#### IV. **Data Science, Analytics, and Engineering Faculty**

The members of the faculty of Data Science, Analytics, and Engineering have diverse backgrounds and knowledge. They are available to assist you in your plan of study and your educational and career goals. We encourage you to take the opportunity to make individual appointments with faculty members with whom you have common research interests. Please refer to the [SCAI website](#) for a list of the faculty names, areas of expertise, and research interests.

#### V. **Admission and Eligibility to the Doctoral Degree Program**

The doctoral degree in Data Science, Analytics, and Engineering requires a **background in advanced mathematics and engineering fields with quantitative modeling and computational skills**. However, in some cases, students with non-traditional educational backgrounds will be considered for admission. These students may be required to take undergraduate-level fundamental courses to prepare them better for the program coursework. A student is encouraged to contact the School of Computing and Augmented Information, Advising Office, Centerpoint Suite 105, to obtain advice on their educational pursuits.

##### **A. Eligibility**

Before applying to the PhD DSE program, students are required to have completed 2 semesters or 6 credit hours of calculus, equivalent to Calculus I and II. Discrete math is also recommended before admission.

##### **B. Application**

All students are required to submit a complete application with the Office of Graduate Admission <https://students.asu.edu/graduate> and pay the required fee to have their application properly processed.

##### **C. Application Deadlines**

- **January 15 for Fall Enrollment**
- **September 15 for Spring Enrollment**

To receive full consideration, please submit all required documents by the deadline.

#### **D. GRE Scores**

All students are required to submit an official Graduate Record Examination (GRE) score directly to the Office of Graduate Admission. Students with an exceptional background who have graduated with a bachelor's degree from ASU may petition to request a GRE waiver by contacting the SCAI Advising Office. Admission decisions are made based on the entire application packet. We do not require specific subject GRE scores. The ASU Institution code is 4007. If a department code is required, use 0000 for GRE.

#### **E. English Proficiency**

The University requires all international applicants from a country whose native language is not English to provide the Test of English as a Foreign Languages (TOEFL) or the International English Language Testing System (IETLS) scores. DSE uses average scores 575 (paper-based) or 90 (internet-based) for TOEFL or 7 for IETLS or 65 for Pearson, or 115 for Duolingo for admission. **Note that your application will not be processed until the University receives official English Proficiency scores. These scores are valid two years from the start date of the degree program.** Exemption from the English Proficiency requirement can be met by visiting the Graduate Admission site under [English Proficiency](#). Please address all English Proficiency questions to the Office of Graduate Admission. The ASU Institution code is 4007. If a department code is required, use 99 for TOEFL.

#### **F. Transcripts**

At the time of application, students can upload their unofficial complete transcripts (bachelor's and master's degree). Once matriculated at ASU, students are required to submit an official transcript and degree certificate.

#### **G. Personal Statement**

The application must include a personal statement. The statement should: 1) explain professional goals and your reasons for enrolling in the doctorate program; 2) describe any research experiences; 3) indicate personal research interests; and 4) identify two or three ASU DSE faculty with matching research interests.

#### **H. Letters of Recommendation**

DSE requires two (2) letters of recommendation, at least one of which must come from a faculty member of the applicant's former University. There is no standard form for letters of recommendation. Our current application process allows students to electronically submit the recommenders' names and the emails of the recommender while completing the application. The Office of Graduate Admission will send an email to the recommender alerting them to submit a recommendation online. Without direct conflict of interest, we encourage letters from people who know you well, such as teachers, professional associates, and supervisors. Consider acquaintances who can comment on your academic, emotional, intellectual, and professional development.

#### **I. Curriculum Vitae (CV) or Resume**

All students are required to upload their CV or resume for full consideration. A comprehensive CV should include prior degree, work experience, conference presentations, publications, and past research.

### **J. GPA Requirement**

Students applying directly from an undergraduate program must have a minimum cumulative GPA of 3.0 in the last 60 credit hours of the undergraduate degree and have been involved in some form of research at the undergraduate level. Students who are applying following a master's degree must have a minimum GPA of 3.25 for the last degree awarded.

### **K. Application Evaluation**

The Data Science, Analytics and Engineering Graduate Program reviews and evaluates a student's application. Several factors. These factors are the student's undergraduate cumulative GPA in the last 60 hours, major, institution, previous degrees awarded, personal statement, letters of recommendations, standardized test scores, and performance in individual courses.

### **L. Deficiencies**

Students in the PhD programs are admitted from a variety of backgrounds. To ensure that all students have an adequate background in data science at the undergraduate level, all students need to show competence in 4 areas: algorithms and data structures, probability and stats, calc III, and linear algebra. Many students meet this requirement by taking courses in these areas during their undergraduate studies. Students who have not taken the equivalent of these courses may be assigned deficiencies in these courses upon admission. Assigned deficiencies must be completed with a grade of B or higher in their first year in the program.

Below is a list of pre-requisites along with the associated ASU course numbers:

- CSE 310: Data Structures and Algorithms
- IEE 380 Probability and Statistics for Engineering Problem Solving
- MAT 242 Elementary Linear Algebra or MAT 342 Linear Algebra or MAT 343 Applied Linear Algebra
- MAT 267 Calculus for Engineers III

Deficiency coursework completed with a "C" or better grade at the undergraduate level will satisfy the requirements. A "B" or better grade is required for all assigned deficiency coursework at the post-baccalaureate level.

Students have three options to meet the assigned deficiency exam: Waiver process, Test-out exam, or enrolling in the course. For exceptional students, based on the request of the student's advisor and in concurrence with the Program Chair, the student may be allowed to take a graduate course instead of the deficiency course.

**Students must submit the Deficiency Waiver Options 1 and 2 before the first day of the semester of the admission term.**

**Option 1: Deficiency Re-Evaluation**

Students wishing to have their course syllabi examined as evidence that deficiencies have been satisfied must submit a petition. The request must be submitted using the [Petition for Reevaluation of Deficiency Course](#) form along with supporting documents such as a syllabus, catalog description, and university transcripts (including the grade scale), to prove that you have met the requirements. Once the petition has been reviewed, it is final. There will be no future petitions or consideration requests. If the petition is not approved after the evaluation, the student may choose to take the deficiency test-out Examination.

**Option 2: Deficiency Test-Out Exam**

An online course proficiency examination (career catalyst) is available for students to take entering with deficiencies (listed in the admission letter). These exams establish whether a student possesses basic knowledge of the course material sufficient to have an assigned deficiency waived. Each subject examination attempt costs \$59, which is payable at the time of registration.

**Below is the testing period, in which the Exam needs to be completed depending on the start of the semester admitted, it is the only opportunity for deficiency test-outs. No other arrangements will be made for students to test out of assigned deficiencies.**

<u>Admit Term</u>	<u>Exam Deadline</u>
Fall	Before the first day of the semester of the admission term
Spring	Before the first day of the semester of the admission term

**Note:** There is no Career Catalyst exam for MAT 242, and MAT 267. For deficiencies in Mathematics courses, MAT 242 and MAT 267, the applicant is required to contact the Director of Undergraduate Programs in the School of Mathematical and Statistical Sciences.

**Option 3: Enrolling in the Course**

Students who could not clear their assigned deficiency through the waiver process or deficiency test-out exam are required to enroll and pass the course(s) in their first year. A student has a total of two (2) attempts to pass a deficiency course.

**M. Notice of Admission**

DSE program submits its recommendation of admission to the Office of Graduate Admission and the final notice of admission decision is notified in writing via email by the Office of Graduate Admission. You may check your application status on MyASU (myasu.edu).

## **N. Admission Deferrals**

Students will be able to defer their admission to the following Fall, only. Specifically, any student with admission for Spring in any year can defer to Fall of the same calendar year. A student admitted for Fall in any year can defer for at most one year to the Fall of the following calendar year. Any student deferring their admission should not assume that any funding will also be deferred. The deferral with funding requires the approval of the faculty member who has committed to fund the student. Specifically, it is assumed in all cases that a guarantee of funding for an incoming student is only a commitment for funding for a student who has not deferred admission.

## **O. Pre-Admission Credits and Transfer Credits**

A student can transfer up to thirty credit hours from an earned Master's degree from another accredited institution plus up to 12 credits not used in any previous degree program with the approval of the Program Chair. Credit for course work taken from an accredited institution can be awarded subject to the following constraints:

1. Transferred credit should satisfy degree requirements. Per the Graduate College, transfer credits cannot count towards core requirements unless the credit was earned at ASU.
2. 0-30 hours of graduate credit from a previously earned Master's degree may be transferred with approval from the academic unit. Note that a student is not guaranteed to be able to transfer all 30 credits from a previous Master's degree if the credits do not satisfy degree requirements.
3. 0-12 additional credit hours can be transferred if they were not used towards a previously earned degree. A student must prove by a Master's plan of study from the previous institution that these credits were not required for their Master's as stated in the ASU Graduate College Pre-admission credits policy. Pre-admission credits must have been taken within three years of admission to the ASU degree program to be accepted. If coursework older than 3 years from the admission term of a new program is being applied towards the program as pre-admission coursework, the maximum time limit may be updated to reflect the start date of the pre-admission coursework.
4. Courses transferred should match or be sufficiently similar to courses offered at ASU.

A student who wishes to transfer credits from another institution should contact the graduate advisor in the SCAI Advising Center to initiate the transfer credit process.

See the Pre-Admission Credit section of the [Graduate College Policies and Procedures Manual](#) for more details.

## P. Transfer Between Programs

Students wanting to change from a Master's to a Ph.D. in Data Science, Analytics, and Engineering must submit a new application to the Graduate College. Admission to the Ph.D. program can be denied. If admitted, the student can use only twelve credits from the original program to the new program on courses taken within the last three years with grades of "B" or better.

A student who would like to transfer from the PhD program to a master's program should submit a [Degree Change Request form](#) with the SCAI Advising Office. The student can submit an official "Request" through MyASU if approved. A request to transfer from the PhD program to a master's program is subject to program approval. Students requesting to transfer 12 or more credits require approval from the DSE Graduate Program Chair and the Dissertation Chair or co-chairs. Otherwise, a [petition](#) is needed. Students should familiarize themselves with the [Graduate College pre-admission transfer policy](#).

The student's program of study after a transfer from the PhD program to a master's program should satisfy the master's program degree requirements in effect at the time of the transfer. After a transfer from the PhD program to a master's program, students must submit a new plan of study (iPOS) and select a culminating event option (Thesis or Capstone Course).

## VI. Doctoral Degree Requirements

Degree requirements for the Ph.D. include a minimum of 84 semester hours beyond the bachelor's degree and deficiency courses. A maximum of 30 credit hours taken during the master's degree can be applied to a Ph.D. degree if coursework is approved as applicable to the doctoral degree.

The Ph.D. is comprised of five (5) milestones, which all students are required to pass successfully before graduation:

- a. Completion of the core coursework,
- b. Passing the Qualifying Examination on the core coursework within one (1) year of matriculation into the program,
- c. Filing an approved Plan of Study,
- d. Passing of the Written and Oral Comprehensive Examination and approval of the written dissertation prospectus to advance to candidacy,
- e. Successful oral defense of an approved written dissertation.

Assigned deficiency courses must be completed by the end of the first year (including summer). A grade of B or better must be achieved in each deficiency course. A grade of B or better in a course that follows a pre-requisite deficiency course does not waive this requirement.

### A. Core Courses

All incoming students are required to complete the four (4) core courses, of which at least three (3) must be completed in their first year for full-time students or within two (2) years for part-time students. Per the Graduate College, transfer credits cannot count

towards meeting the core requirement unless the credit was earned at ASU. The core courses are:

- CSE 511 Data Processing at Scale (3)
- CSE 543 Information Assurance and Security (3)
- CSE 572 Data Mining (3) or IEE 520 Statistical Learning for Data Mining (3) or EEE 549 Statistical Machine Learning: From Theory to Practice (3)
- IEE 670 Mathematical Statistics (3) or STP 502 Theory of Statistics II: Inference (3) or EEE 554 Probability and Random Processes (3)

### **B. Qualifying Examination**

The Qualifying Exam is a written exam covering the core courses offered after each Spring semester's end. Students should take the core courses as soon as they are eligible after entering the program. After completing the core courses, they must take the Qualifying Exam at the first offering. The Exam is intended to determine if the student can succeed in the PhD program as indicated by mastery of the core material and demonstrating the likelihood of being able to perform independent research. As such, some questions may require the integration of knowledge from multiple courses and require original thoughts. Students who fail are allowed only one (1) re-examination, which should be taken at the next scheduled examination date. A student must have a cumulative and graduate GPA of 3.0 or higher, have obtained a C or better for every core course, and have completed all assigned deficiency courses to sit for the Qualifying Exam. Specific details on the form and content of the Exam will be provided to students upon registration with the SCAI Advising Office.

Qualifying exams are held at the end of each Spring semester. Students are required to show their competency in the four (4) core components of the PhD program, as indicated in section VI in the Graduate Handbook. Students take four (4) one-hour online exams, one in each of the program's core components. Students are graded for each Exam with a High Pass, Pass, or Fail grade. A student passes the qualifying requirements by

- (1) achieving a pass on all four exams, and
- (2) achieving a High Pass in at least one of the exams.

A student who has not passed the qualifying Exam has one (1) attempt to retake the Exam (s). The retake should occur at the next exam offering time after the noted failure as follows:

- A student who has four (4) Passes, but no High Pass must retake at least one (1) of the four (4) exams and achieve at least one (1) High Pass to pass the qualifying exams.
- A student with two (2) or three (3) Passes (or High Passes) must retake the Exam (s) they exams they failed. After the retake, they must meet the stated requirements for passing the qualifying exams. (Passes on exams in all competency areas. At least one High Pass from the competency areas).
- A student who has three (3) or four (4) failures must retake all exams. After the retake, they must meet the stated requirements for passing the qualifying exams. (Passes exams in all competency areas. At least one High Pass from the competency areas).

### **C. Formulation of the Plan of Study**

After completing the core courses and passing the Qualifying Examination, students will be required to develop and submit a Plan of Study (iPOS) through MyASU. A minimum of 84 credit hours is required in the Plan of Study. In addition to the Required Core, students must complete the Area Requirements for Data Engineering or Data Analytics. The Plan of Study must have the following required minimum components:

#### **Required Core (12 credit hours)**

- CSE 511 Data Processing at Scale (3)
- CSE 543 Information Assurance and Security (3)
- CSE 572 Data Mining (3) or IEE 520 Statistical Learning for Data Mining (3) or EEE 549 Statistical Machine Learning: From Theory to Practice (3)
- IEE 670 Mathematical Statistics (3) or STP 502 Theory of Statistics II: Inference (3)\* or EEE 554 Probability and Random Processes (3)

\*STP 502 should not be taken without first taking STP 501 or comparable course (STP 501 may count as an elective).

#### **Area Requirements (9 credit hours)**

##### **Data Engineering Requirements:**

- CSE 510 Database Management System Implementation (3), and
- CSE 515 Multimedia and Web Databases (3), and
- CSE 546 Cloud Computing (3)

OR

##### **Data Analytics Requirements:**

- CSE 575 Statistical Machine Learning (3), and
- CSE 578 Data Visualization (3), and
- IEE 578 Regression Analysis (3), IEE 620 Optimization I (3), APM 523 Optimization (3) or EEE 589 Convex Optimization (3).

#### **Electives (39 credit hours)**

- Approved elective courses, of which up to 3 credit hours of DSE 790: Reading and Conference are allowed, with approval.
- Up to 12 credit hours of DSE 792 Research, beyond the required credit hours in the Research item.

#### **Research (12 credit hours)**

- A minimum of twelve credit hours of DSE 792 Research are required, and up to 24 credit hours are allowed on the plan of study.
- Students with DSE 792 Research over 12 credit hours can add the excessive credit hours to the Electives item.

**Culminating Experience (12 credit hours)**

- DSE 799 Dissertation (12)

**A maximum of six (6) credit hours of 400-level coursework may be used on an approved iPOS (400-level courses taken for a grade of Pass/Fail cannot be included on an iPOS). Students must get approval from the Program Chair before enrolling and completing 400-level coursework, except for the course that is a deficiency requirement. Courses with grades of D (1.00) and E (0.00) cannot be included in an IPOS.**

**D. Dissertation Supervisory Committee**

The role of the supervisory Committee is to provide guidance and direction for the student's educational and research plan. As such, the Committee must have the necessary expertise to guide and evaluate research in the proposed dissertation area. Four (4) committee members are required, including the committee chair or two (2) co-chairs. The Chair and Co-chairs must be selected from the approved program list of graduate DSE faculty by the Graduate College. On a case-by-case, a one-time approval can be given for an individual to serve as the co-chair for a student's dissertation. The Committee must be made up of at least three (3) members who are in the DSE graduate faculty. The supervisory Committee must be approved by the Chair of the DSE Graduate Program Committee and by the Dean of the Graduate College before taking the Comprehensive Examination.

The first step in forming a Supervisory Committee is securing a Chair of the Committee. The student must file an iPOS with the Committee Chair no later than the semester after completing the 24th credit or the first semester after taking the Qualifying Examination. It is also the joint responsibility of the student and their Committee Chair to file an iPOS identifying the overall committee composition no later than the semester after completing the 40th credit of the preliminary iPOS.

**E. Comprehensive Examination**

The Comprehensive Exam ensures that the student is prepared to research their major area and has integrated the knowledge covered in their Plan of Study. The Exam consists of two (2) parts, a Written Comprehensive Exam and an Oral Comprehensive Exam. The written portion will be a take-home exam. All committee members will submit questions to the student's dissertation chair, who will compile the questions and distribute the Exam to the student. The student will have fourteen calendar days to complete the Exam. The Committee will determine Pass or Fail based on all the questions. Upon passing the written portion of the Exam, the Oral Comprehensive Exam will be scheduled to clarify the written exam responses as necessary and may cover additional questions from the intended research area and Plan of Study. The Comprehensive Examination may not be scheduled until successfully passing the Qualifying Exam. The Comprehensive Exam must be taken no later than the semester after completing the 60th credit of iPOS coursework. The committee chair will advise the student of the expectations of the Exam.

The student first schedules the Examination with the advisory committee chair. Care must be taken to ensure that the entire Examination will fall into one of the two (2) regular semesters.

The Exam consists of two (2) parts: a) a written exam and b) oral defenses of both the Comprehensive Exam and the Dissertation Prospectus. While separate, the two (2) oral portions of the Exams may be held at the same time. **The student is required to bring a Report of Doctoral Comprehensive Examination and Doctoral Dissertation Prospectus forms, which are available on the SCAI [website](#), to the oral Examination. After completion of the Examination, the Chairperson should submit the form to the Graduate Academic Advisor.**

Steps of the Comprehensive Exam:

1. The student will submit a research proposal to the advisory Committee. Guidelines for proposals are presented in the Dissertation Prospectus below. The student should inform the Advising Office that the Exam is to begin.
2. The members of the Committee will submit written questions to the Dissertation Chair of the Committee one (1) week after submission of the research proposal. These questions should be related to the research area suggested by the student or to the coursework taken by the student.
3. The student will have 14 consecutive calendar days to develop written responses to the questions. The candidate should submit one complete set of answers to all questions to each committee member.
4. The general knowledge (oral portion) of the comprehensive Exam will be held within two (2) weeks of submission of the written responses. This Examination will be related to the research area's fundamental concepts and the student's written responses. A separate oral exam will cover the dissertation prospectus. These two (2) oral exams can be held at the same time.
5. The final Pass/Fail is determined based on the combined responses to the written and oral examination questions. A majority vote by the Committee and a passing vote by the committee chair are required to pass.
6. Passing the prospectus examination makes the student a candidate for the Ph.D. degree. The Graduate College will inform the student and DSE Office when candidacy is granted.

#### **F. Retaking the Exam**

Failure of the comprehensive examinations and the dissertation prospectus is considered final unless the supervisory Committee and the Graduate Program Chair recommend and the Dean of the Graduate College approves a re-examination. If the student fails at any junction in the examination portion, they are not allowed to proceed to the next examination portion until a re-examination of the failed portion has been passed by petitioning and obtaining approval by the Graduate Program Chair and the Dean of the Graduate College.

**Failing Comprehensive Exam:** Re-examination may be administered on a timeline recommended by the committee chair and made in consultation with the committee,

which should be no later than 12 months from the date of the original examination. The Graduate College may dismiss a student from the degree program if the student's petition for re-examination is not approved, or if the student fails to successfully pass the retake of the comprehensive examination(s).

Students choosing to appeal the results of their comprehensive examinations must follow the grade appeals process outlined by their academic unit.

### **G. The Dissertation Prospectus**

The dissertation prospectus is a research proposal that precedes the dissertation. This document introduces the doctoral student's proposed original contribution to the field of Data Science, Analytics, and Engineering. This will be created through doctoral research and the writing of the dissertation. The prospectus should raise an important issue in the field and discuss how solving this issue can contribute to the discipline. The doctoral student should work with their advisor or co-advisors to prepare the prospectus. The committee members review the prospectus for originality and contribution. An oral delivery and a committee review of the Dissertation Prospectus should be scheduled. The oral prospectus defense is a part of the Comprehensive Exam and may be held in conjunction with the general knowledge defense. It is recommended that students consult with their dissertation advisors on specific research outcome requirements during their doctoral study period. This can include the qualitative and quantitative requirements of journal or conference papers, technical reports, presentations, software codes, etc.

While the format of the proposal is up to the Committee Chair, the written proposal document typically contains:

1. A title page with the author's name, committee members' names, institution, and date.
2. A table of contents.
3. An introduction explaining the nature of the research.
4. A clear statement of the research problem.
5. A thorough review of all relevant literature.
6. An argument that the problem is of sufficient relevance and importance to study.
7. A description of the proposed methodology and argument for its acceptability.
8. A statement of the expected contributions of the research.
9. A plan/schedule for completion of the research.
10. A complete bibliography following an accepted style.

The final version of the proposal is a binding agreement between the student and the Committee and will be enforced by the DSE Program. Satisfactory completion of the research, as outlined in the proposal, will result in an approved dissertation. Following the approval of the written dissertation, the student must schedule and pass a final oral defense.

**Failing Prospectus Defense:** Failure of the proposal/prospectus oral defense is considered final unless the supervisory committee and the head of the academic unit recommend, and the Dean of the Graduate College approves, a second proposal defense.

If a second defense is approved, students must submit the new prospectus by the end of six months (beginning from the date that the first PhD dissertation proposal defense was held). If the academic unit does not grant the students permission to retake the proposal defense, or if the students fail to pass the retake of the proposal defense, the Graduate College may dismiss the students from the degree program.

### **H. Dissertation Defense and 10-Day Rule**

Defense of a dissertation comprises submission of an approved dissertation followed by its successful oral defense. Students are required to submit a paper based on the dissertation research to a DSE-related refereed journal or conference before the final Examination. They are strongly encouraged to present papers from their research work at conferences during their research period. These publications are normally jointly written with the advisor and other appropriate faculty. Successful oral defense of the dissertation fulfills the DSE 799 requirement. Students work with their supervisory Committee and the academic unit's graduate support staff to identify a suitable date and reserve a room (for in-person defenses). **Defenses that are held without being scheduled with the Graduate College are considered invalid.**

#### **Steps to Preparing for Your Defense**

##### Before defense:

1. Obtain a consensus of approval from the committee chair and the members to proceed with the oral defense.
2. Students must be physically present at the oral defense of their dissertation. It is expected that oral defenses will be held on an ASU campus (for in-person defenses) and during regular business hours (8am-5pm AZ Mountain Standard Time) to facilitate student, faculty, and public accessibility. A student has the option to include a virtual link to encourage audience attendance. When there are sound educational reasons for holding a defense under different circumstances, contact the SCAI Advising office to consult with Graduate College for approval before scheduling the defense.
3. Schedule a date and time with your Committee for the oral defense.
4. Important: Ensure that a minimum of 50% of the official Committee is physically present at the defense. If at least 50% of the Committee cannot be physically present, the defense must be rescheduled. The chair or one co-chair must attend the defense. If this is not possible, the defense must be rescheduled. The student cannot submit a committee change after the defense is scheduled (see more in appendix I)
5. Visit the Graduate College website to become familiar with the dates and deadlines on format approval and oral defense.

##### 10 days before the defense:

These steps are required to be completed 10 business days from the date of the oral defense.

1. Follow the instructions [here](#) to reserve a room with SCAI.
2. Schedule your defense through your iPOS/My ASU.

3. Submit a [defense announcement](#) request to the SCAI main office. You will need to include your dissertation title, abstract, full names of your committee members, defense date/time/place, and your name as you want it to appear on the announcement.

On the day of the defense:

1. Set up all your equipment at least one half-hour prior to your presentation to make sure they work.

After the defense:

1. Your Committee will discuss the results of the Exam with you and may have additional comments for you. In the end, the Committee will make a recommendation: Pass, Pass with minor revisions, Pass with major revisions, or Fail.
2. Failing the dissertation defense is final.
3. Revisions are normal and are expected to be completed within one (1) year. This includes remaining registered until the finished document has been uploaded through MyASU on ProQuest. All committee members must submit the preliminary defense results via the defense results tab in the iPOS within 10 days after the defense occurrence. If the Committee requires revisions, they must be completed and approved by the Committee before a full "Pass" can be designated in the iPOS. If the Committee's requested revisions are not completed by the graduation deadlines for the semester of the defense, the student will need to maintain continuous enrollment until they are completed. If they are not successfully completed within one (1) year of the defense, resubmit the document and a re-defense of the thesis or dissertation may be required to ensure the research's currency.
4. Follow the steps on MyASU to upload your final dissertation through the Graduate College and ProQuest.

## **VII. General Information/Policies and Procedures**

### **A. Master in Passing**

After completing 30 credit hours in the Ph.D. program and successfully passing the PhD Qualifying Exam, students can request a Master in Passing. For students to be awarded the Master in Passing, the 30 completed credit hours must include 12 credit hours of core coursework and 9 credit hours of Area. Eligible students will work with the Graduate Academic Advisor to file a Master in Passing Plan of Study (MIP/IPOS). The non-thesis master's degree in data science has a culminating event requirement; a Capstone Course (FSE 570); however, PhD students interested in and eligible to obtain a Master's in Passing degree may satisfy the culminating event requirements by completing the PhD Qualifying Exam. After the MIP/iPOS has been approved and the culminating event requirements have been met, students must then file for graduation via MyASU ([myasu.edu](http://myasu.edu)), which includes a fee.

**B. Research Standards for Publication of Dissertation**

Graduate research is the study of an issue of sufficient breadth and depth to be publishable in a DSE-related journal. The effort should reflect a minimum of 1,500 hours of thoughtful work for a dissertation (Ph.D.). The research should follow the 'scientific method' and thus be both objective and reproducible. The dissertation should demonstrate independent, original, and creative inquiry. There should be predefined hypotheses or developmental goals and objectives that are measurable and can be tested. The document should demonstrate written English proficiency and conform to the Office of Graduate College format guidelines.

**C. Financial Assistance and/or Fellowships**

The Data Science, Analytics, and Engineering goal is to provide support to all incoming Ph.D. students. According to the student's academic performance and past academic research, funding offers will be extended to individual students with the highest academic achievements. We encourage students to highlight their academic accomplishments in their personal statement and resume.

**D. Continuous Enrollment**

Once admitted to a graduate degree program or graduate certificate program, students must be registered for at least one (1) credit hour of graduate-level coursework during all phases of their graduate education, including the term in which they graduate. This includes periods when students are engaged in research, conducting a doctoral prospectus, working on or defending theses or dissertations, taking comprehensive examinations, working on their dissertation corrections or any other way utilizing university resources, facilities or faculty time.

Registration for every fall semester and spring semester is required. Summer registration is required for students taking examinations, completing culminating experiences, conducting a doctoral prospectus, defending theses or dissertations, or graduating from the degree program.

To maintain continuous enrollment, the credit hour(s) must:

- a. Appear on the student's Interactive Plan of Study, OR
- b. Be research (592, 792), thesis (599), dissertation (799), or continuing registration (595, 695, 795), OR
- c. Be a graduate-level course, OR
- d. Be a deficiency course that is listed on the student's admit letter.

Grades of "W" and/or "X" are not considered valid registration for continuous enrollment purposes. "W" grades are received when students officially withdraw from a course after the drop/add period. "X" grades are received for audit courses. Additionally, students completing work for a course in which they received a grade of "I" must maintain continuous enrollment as defined previously. Graduate students have one (1) year to complete work for an incomplete grade. If the work is not completed and the grade not changed within

one (1) year, the "I" grade becomes permanent. Additional information regarding incomplete grades can be found at <http://asu.edu/aad/manuals/ssm/ssm203-09.html>.

#### **E. Medical/Compassionate 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 undergraduate and graduate students. An approved [Medical/Compassionate Withdrawal](#) is valid for meeting the continuous enrollment policy.

#### **F. Leave of Absence Policies**

Graduate students planning to discontinue registration for a semester or more, must submit a petition via their IPOS to maintain continuous enrollment. **Requests should have enough detail to fully understand the situation and steps you should take so that you can continue in the next semester.** This request must be submitted and approved **before** the anticipated semester of non-registration. Students may request to maintain continuous enrollment without course registration for a maximum of two (2) semesters during their entire program.

Having a Graduate College approved leave of absence will enable students to re-enter their program without re-applying to the University.

**Students who do not register for a fall or spring semester without an approved leave of absence are considered withdrawn from the University, assuming they have decided to discontinue their program.** Students removed for this reason may reapply for admission to resume their degree program. The application will be considered along with all other new applications to the degree program.

A student with a Graduate College approved leave of absence is not required to pay tuition and/or fees. However, the student is not permitted to place any demands on university faculty or use any university resources. These resources include university libraries, laboratories, recreation facilities, and/or faculty time.

#### **G. Maximum Time Limit**

Doctoral students must complete all program requirements within 10 years. The ten-year period starts with the semester and year of admission to the doctoral program. Graduate courses taken before admission that are included in the Plan of Study must have been completed within three (3) years of the semester and year of admission to the program (previously awarded master's degrees used on the Plan of Study are exempt). If coursework completed over 3 years ago is being applied towards a degree program as pre-admission coursework, the maximum time limit may be updated to reflect the start date of the pre-admission coursework.

Any exceptions must be approved by the supervisory Committee and the Office of Graduate College Dean and ordinarily involves repeating the comprehensive examinations. The Office of Graduate College may withdraw students who are unable to complete all degree requirements and graduate within the allowed maximum time limits.

#### **H. Registration Requirements for Research Assistants (RA) and Teaching Assistants (TA)**

Students awarded an assistantship within the Ira A. Fulton School of Engineering are required to be registered for 12 credit hours. Audit credit hours do not count toward the 12 credit hours. Students who obtain an assistantship outside the Ira A. Fulton School of Engineering are required to be enrolled in a minimum of six (6) credit hours. Audit credit does not count towards the six (6) credit hours.

Students with TA/RA .50 FTE appointments (i.e., 20 hours per week), who are appointed within the first eight (8) weeks of a semester during the academic year, receive an award covering tuition for the semester. Students with TA/RA .50 FTE appointments during the summer session(s) receive an award covering tuition.

Students with TA/RA .25–.49 FTE appointments (i.e., 10–19 hours per week), who are appointed within the first eight (8) weeks of a semester during the academic year, receive an award covering 100% of the nonresident portion of tuition and an award covering 50% of the remaining tuition for the semester. Students with TA/RA .25–.49 FTE appointments during the summer session(s) receive an award covering 100% of the nonresident portion of tuition and an award covering 50% of the remaining tuition.

The University provides an award covering the premium for individual health insurance for teaching and research assistants/associates who meet the minimum eligibility requirements during the duration of their appointment (coverage periods are August 16– January 15 and January 16–August 15). These are:

- a. appointment at 50% time (20 hours per week)
- b. hired as a TA or RA no later than the end of the eighth week of semester classes.

There are four (4) ways a student can fulfill the TA English language requirement. Any of the following will fulfill the language requirement:

1. Take and pass the SPEAK test with a score of 55 or higher. Only SPEAK scores from Global Launch are allowed.
2. Take the iBT (Internet-based TOEFL) test and receive a score of 26 or higher on the oral portion of the test.
3. Take the IELTS test and receive a score of 8 or higher on the speaking portion of the test.
4. Complete the ITA Teacher Training Course with a score of 'certified.'

## **I. Policy for Maintaining Academic Satisfactory Progress**

After each completed semester, the school will conduct an audit to determine if the student is maintaining the required minimum satisfactory progress. This audit includes progress on academic (GPAs and deficiencies) and probationary issues. Any student that is not in compliance with the satisfactory academic/ progress requirements is notified that she/he is either:

- a. on academic probation and is given the next nine (9) credit hours or two (2) semesters (fall and spring) to bring their GPA up to the proper level (whichever comes first); or
- b. on continued progress probation and is required to meet the conditions outlined in the continued probation letter.

Failure to properly remediate the GPA or the conditions outlined in the letter within the time frame will result in the school recommending that the student be dismissed from the program.

**Note:** Fully admitted students who take optional summer courses are placed on probation after the summer term if the earned grade(s) causes their GPA to fall below the satisfactory progress GPA minimum.

If applicable, the above-noted audit will review each student's progress toward removing enrollment deficiency courses and/or any other degree requirement milestone(s). Failure to satisfactorily complete all deficiency course(s) and/or required milestones by the stipulated deadline may result in a recommendation for dismissal to the Graduate College.

Each semester, the Data Science, Analytics, and Engineering Program reviews students' files to ensure satisfactory progress toward completion of their degree. All students fall into one of the following four categories. Those in categories 2-4 are placed on probation or withdrawn from the program:

1. Satisfactory progress
2. Academic probation
3. Progress probation
4. Withdrawal from the DSE Program

### **1. Satisfactory Progress**

Student is meeting all program requirements. In addition to the probationary rules, satisfactory progress includes communication each semester with the student's Committee Chair regarding his/her progress. When the formal coursework has been completed, evidence of adequate progress consists of completing one or more major chapters of the dissertation and submitting refereed papers.

## 2. Academic Probation

A student who has been admitted to a graduate degree program in the School of Computing and Augmented Information with either regular or provisional admission status, must **maintain a grade point average (GPA) of 3.00**:

- a. in all work taken for graduate credit (courses numbered 500 or higher),
- b. in the coursework in the student's approved plan of study, and
- c. in all course work taken at ASU (overall GPA) post-baccalaureate.

A student will be placed on academic probation if one or more of the student's semester GPAs listed above fall below 3.00 or if assigned deficiency courses are not completed with a grade of "B" or better. Students will be notified by email when placed on academic probation.

A student will achieve good academic standing by obtaining a semester 3.00 or better in the GPAs listed above by the time the next nine graduate hours are completed. A maximum of two (2) semesters is allowed to complete the nine (9) hours of graduate-level coursework to raise the GPA, whichever comes first. Coursework such as research and thesis registration for Z or Y grades cannot be included in these nine (9) hours. It is strongly recommended that students focus on improving their grades and meeting deficiency requirements.

Students who choose to take graduate coursework and not enroll in deficiency courses will be subject to dismissal.

## 3. Progress Probation

A student under probation who is not making progress towards a degree. The following are notices/letters you will receive if one (1) of these is of concern to your academics:

- Lack of progress toward completing Ph.D. program admission deficiencies, as specified in your admission letter.
- Lack of progress toward completing core courses within the first year for full-time students or two years for part-time students (see Section VI.a).
- Failure to take and pass the Ph.D. Qualifying Examination in compliance with the timeline and requirements stated in Section VI.b.
- Failure to file an iPOS with Committee Chair no later than the semester immediately after passing the Qualifying Examination (see Section VI. d).
- Failure to take and pass the Ph.D. Comprehensive Exam in compliance with the timeline and requirements stated in Section VI.e.
- Failure to maintain regular contact with the Committee Chair and make satisfactory progress toward completion of the dissertation.

#### 4. Withdrawal from the DSE Program

A Ph.D. student may be removed from the program for any of the reasons listed below:

- a. Cumulative, graduate, or iPOS GPA is less than 3.0 for two (2) consecutive semesters. (The student with such a cumulative GPA will be put on probation after the first semester.)
- b. Failure to make up deficiencies within the time allowed, as determined by the admissions committee.
- c. Failure to meet a requirement specified for the Ph.D. degree, including not making satisfactory progress toward the completion of the degree.

A student is recommended for withdrawal from the DSE Program if she or he fails to meet the probationary standards placed upon in the semester mentioned in the probationary letter. The student will receive a letter from the Data Science, Analytics, and Engineering Program explaining the reasons for the withdrawal. The student will have **five (5) calendar days** from the date of the letter to appeal the decision. The DSE Graduate Program Committee (GPC) will review the case and will make the necessary recommendation. The Graduate Program Chair, on behalf of the GPC, will provide a written explanation of the outcome. If the outcome is favorable, the student will have to meet all the outlined requirements at the end of the specified period. The student will be required to sign an agreement acknowledging the recommendations and the consequences if the agreements are not met. If the GPC recommends that the appeal is not granted in favor of the student, the Graduate Program Chair, on behalf of the GPC, will recommend to the Dean's Academic Affairs to withdraw the student from the DSE Program. The student's appeal together with all supporting documents will be forwarded to the Ira A. Fulton Schools Standards Committee, which reviews the student's case and makes the final ruling to Associate Dean and the DSE Program. If the appeal is not granted in favor of the student, the Dean's Academic and Student Affairs will recommend that the Office of Graduate College withdraw the student from the DSE Program. Please refer to the Office of Graduate College on policies and procedures or contact the graduate advisor in the SCAI Advising Center.

#### J. Filing for Graduation

During the final semester, a student must file an application for graduation with the Graduation Office of the Registrar on My ASU. The student's approved final plan of study (iPOS) must be on file with the Graduate College before the student can apply for graduation.

#### K. Academic Integrity

The highest standards of academic integrity are expected of all graduate students, both in the academic coursework and in their related research activities. The failure of any graduate student to meet these standards may result in serious consequences. These consequences include suspension or expulsion from the

University and/or other sanctions as specified in the academic integrity policies of individual schools and the University.

Violations of academic integrity include, but are not limited to cheating, fabrication, tampering, plagiarism, or aiding and/or facilitating such activities. At the graduate level, students are expected to be familiar with these issues and each student must take personal responsibility in their work. Graduate students are expected to follow university guidelines related to the Student Code of Conduct. University policies related to academic integrity and code of conduct are available in the Office of Student Life, or at Academic Integrity | Graduate College (asu.edu)

Unless explicitly allowed by your instructor, the use of generative AI tools to complete any portion of a course assignment or exam will be considered academic dishonesty and a violation of the [ASU Academic Integrity Policy](#). Students confirmed to be engaging in non-allowable use of generative AI will be sanctioned according to the academic integrity policy and FSE sanctioning guidelines.

#### **L. DSE 584 Internship**

DSE 584 Internship Curricular Practical Training (CPT) is an academic experience usually obtained at off-campus work settings. A CPT experience allows the student to apply knowledge and skills gained from various classes. It is intended as a unique, hands-on learning experience to provide students with several valuable skills that they can use upon graduation from their graduate degree programs. It is not available to full-time or part-time workers regularly employed by the company where the internship is proposed.

The CPT is available to both domestic and international students. However, international students must work with the International Students and Scholars Center (ISSC) and submit additional documentation to obtain work authorization. Furthermore, students are strongly encouraged to include a maximum of three (3) one-credit hours of CPT course DSE 584 (1 credit hour) as an integral part of their Program of Study. This will be reflected in their approved iPOS. These credits are not part of the 84 mandatory credits. Addition of the CPT course(s) should be done at the initial submission of the student's iPOS. The Internship course cannot be added to an approved iPOS once all coursework has been completed. Exceptions may be made if the internship is relevant to dissertation research.

The DSE Program will determine the need for a CPT internship in such cases in consultation with the Graduate Academic Advisor. Note that approval of an iPOS with the DSE 584 course confirms that the internship is an integral part of the degree requirements as planned by the student. An additional internship that is not part of the 84 credit hours can be removed from the iPOS. Note: Only internship courses can be removed from the iPOS. Courses that are approved as part of the overall degree program in the iPOS can only be substituted with other approved coursework.

1. **Eligibility**

To be eligible for an internship, a student must not be in academic probation (refer to section VI.f.2 in the handbook).

2. **Who can participate:**

All students (domestic and international) can participate in an out of state or an in-state internship, full time or part-time in the summer semester if ALL their GPA's (graduate, IPOS and CUM GPA are at least a 3.0.

Students with all GPAs between 3.0-3.24 may participate in an in-state internship part time only in the fall and spring semesters. A campus presence is required.

Students with all GPA's 3.25 or higher may participate in an out of state or in-state internship, part time or full time in the fall and spring semesters. A campus presence is required.

**Full-time CPT is 21 hours or more. Part-time CPT is 20 hours or less. For students doing CPT in their last semester, the end date is the last day of finals (Fall/Spring) or last day of class (Summer).**

During the regular fall and spring semesters, international graduate students in F-1 status must register for a minimum of nine (9) credit hours to maintain full-time status. Students must also be enrolled in a minimum of six (6) credit hours of in-person, on-campus coursework at the ASU Tempe campus. A maximum of three (3) credit hours of Hybrid or iCourse is permitted. The DSE 580 Practicum course will not count as satisfying the 'student's "physical presence" at ASU.

Required documents and forms for the internship proposal must be submitted to the SCAI Advising Office at least two (2) weeks before the beginning of the semester in which the internship is planned. Students will not be able to request late-add registration of the DSE 584 Internship credit to their class schedule after each semester's drop/add deadline.

An approved proposal is required before commencing the internship. The request will include a statement from the employer that indicates they understand that the work is to satisfy a degree requirement. A sample letter and other required forms are available on the [SCAI CPT website](#). Students must receive approval from their faculty advisor and the Program Chair before registering for DSE 584. To register for the DSE 584 - Internship, a student must not be on academic probation (refer to section VI.g.2 in the handbook). A final Plan of Study must be filed with the Graduate College showing the Internship course before registering for DSE 584. All application materials for an internship must be completed by the last day of

regular registration for any semester. The student must take classes appearing on the Plan of Study the semester following the internship.

### **3. Renege: (verb) to fail to carry out a promise or commitment**

It is unethical for students to continue to seek or consider other employment opportunities once an offer has been accepted. SCAI expects students to honor an acceptance and withdraw from all employment seeking activities. Students who accept an offer from an organization and later renege/decline the offer will be prohibited from further requesting future CPT pending a meeting with the Assistant Director.

### **4. Final Report**

A **five-page final report is required** at the end of the internship before a grade, and credit is given. The final report must be submitted to the reporting supervisor for comments and then to the faculty advisor for grade assignment. Refer to the [SCAI website](#) for guidelines to prepare the final report.

### **M. DSE 790 Independent Study**

Independent study is available for Ph.D. students. The student must get written approval from the supervising faculty outlining the coverage of the content. The Independent Study form must be approved by the Program Chair, which will be placed in the student's file. Students may take at most 3 credit hours of DSE 790 in any semester and no more than 3 hours may be used on the iPOS.

### **N. Student Chapters of Professional Societies**

Our graduate students are involved in many professional societies. Most branches of Data Science, Analytics, and Engineering have associated professional societies. Participation in professional societies is an excellent road to career and interest group connections and students are encouraged to discuss society membership with their research advisor. Professors will be happy to sign a membership form that will entitle a student to reduced rates. Professional societies particularly relevant for Data Science, Analytics, and Engineering include ACM (Association for Computing Machinery), ASA (American Statistical Association), IEEE (Institute of Electrical and Electronics Engineers), IISE (Institute of Industrial and Systems Engineers) and INFORMS (Institute of Operations Research and the Management Sciences). Several of these societies have student chapters at ASU.

### **O. Instructional Concerns and Course-Related Complaints**

Being part of a large university creates opportunities to learn from a diverse instructor population with different teaching styles and modalities for delivering course content. Courses are offered by a diverse set of faculty, including those who are research-intensive, those whose primary responsibility is teaching, GSA/TA instructional staff and part-time faculty who are working in the field. Based on enrollment or the modality of the offerings, faculty may also be supported by graduate student teaching assistants, GSAs, and graders. This diverse higher education delivery platform may differ significantly from previous experiences, and while it provides an opportunity to

expand the student's ability to learn and develop problem-solving skills, concerns and conflicts with requirements and instructors may occasionally arise. SCAI students with instructional concerns should review and adhere to the following guidelines to attempt to resolve their issues. Please keep in mind that the faculty and advising staff are experienced, dedicated educators that are here to help you achieve your educational goals. At the same time, as an engineering and computer science programs are responsible for ensuring standards are maintained and student outcomes are achieved before graduation. University culture recognizes the value of diversity in multiple dimensions as well as the presumption of expertise and academic freedom of the faculty.

#### **P. Studying Suggestions**

As a graduate student, you are expected to keep up with your coursework.

If any assignment appears unclear to you, please contact your instructor immediately.

A suggestion for hours dedicated to a class as homework are as follows:

- 8-10 hours per week for each 3- credit, 15 week course
- 15-20 hours per week for each 3- credit, 7.5 week course

#### **Q. Addressing Concerns with Your Instructor**

Should any concerns arise in class, please visit your instructor or TA/GSA during their office hours. Instructors and TA/GSAs are also available through email. They are here to help! Remember the student code of conduct when speaking with faculty.

If you are still having problems in the course after communicating with your instructor or TA/GSA, please connect with your academic advisor to understand your options moving forward.

#### **R. Connect with your Graduate Program Chair**

If you are unable to resolve the concern meeting with your academic advisor, you should then contact the Graduate Program Chair for your major (or the department offering the course). The Graduate Program Chair will confer with the instructor and/or TA/GSA to better understand the concern and try to resolve the problem. Please note that before meeting with the Graduate Program Chair, you should have made a reasonable effort to meet with the course instructor (not just the TA) and get the issue resolved. Please provide the Graduate Program Chair with all the relevant details such as the course syllabus, assignment handout, and email exchange with the instructor, etc. This will help the Graduate Program Chair promptly act on your concerns. Please be brief and precise in the description of your concerns. In some cases, the Graduate Program Chair would like to meet with you. When coming for the meeting, please bring along all the relevant documents.

If the instructional concern is not resolved with the Program Chair or the department offering the course, contact the Associate Dean of Academic Affairs Office for the college offering the course for assistance through the grade grievance process

<https://engineering.asu.edu/grade-grievance/>.

**S. Remain Focused**

When faced with instructional concerns, it is important to remain focused on the rest of the course while addressing specific areas that are under review. Be sure to stay connected with your academic advisor if there are any changes in your situation.

**NOTE:**

- A. Misrepresentation of facts or disrespectful behavior when confronting your instructor or teaching assistant is considered an academic integrity violation.
- B. Maintain all documentation.
- C. Act proactively and promptly.

**T. In Summary and Guidelines for Avoiding Problems**

- A. Be sure you have the necessary pre-requisite knowledge before starting a course.
- B. Attend class and online exercises regularly.
- C. Devote time each week to studying to avoid getting behind.
- D. Contact the TA (if assigned) or instructor during office hours at first sign of trouble and come prepared to ask precise questions and to explain your difficulty.
- E. Accept the fact that you grow intellectually and professionally by being challenged and learning to deal with diverse expectations and environments.

**U. Process for Resolving Conflicts in Grading, Course Expectations, etc.**

- A. Contact the TA (if available) or instructor to explain your concern and seek resolution.
- B. If the TA/instructor has attempted to assist you, but you are still having an academic difficulty that is causing personal stress or hindering your academic success, see your Academic Advisor.
- C. If the TA/instructor is not responsive or does not provide a legitimate response/accommodation, then contact your Graduate Program Chair.
- D. If you still feel there is a legal, ethical, or procedural violation that is victimizing you, contact the Office of the Associate Dean of Engineering for Academic Affairs.
- E. Circumventing this process will be considered a violation of professional ethics and protocol.