



Graduate student handbook
**Aviation Management and
Human Factors, MSTech**

 2022-2023

 The Polytechnic School

 poly.engineering.asu.edu/aviation

MSTech Technology (Aviation Management & Human Factors)
2022-2023 Handbook

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MSTech Technology

(Aviation Management and Human Factors)

Program Overview

Master of Science in Technology with a concentration in Aviation Management and Human Factors program focuses on preparing graduates for a career in the aviation industry and can serve as the foundation for further advanced study.

Graduates of this program are provided with professional skills and exposed to strategic management theories and practice for use in leadership positions within the aviation industry. Management and leadership positions at airlines and airports of all sizes require skills in labor management and policy, economics and analysis, national aerospace structure, and aviation law, as well as an awareness of unmanned systems and flight operations. Those interested in the Human Systems and Safety area will find exceptional use of educational discussions on human performance and the human limitations and capabilities of working within a complex system.

Admissions

Admission to the Master of Science in Technology (Aviation Management and Human Factors) program requires the completion of all general admission requirements and procedures set forth by the Office of Graduate Admission Services. For general information on applications, deadlines, international requirements, application requirements, and other information, please see **Graduate Admission Services**. Prior to submitting an application to Graduate Admission, applicants should review the information provided in this handbook regarding the degree program, including specific application requirements and deadlines.

Submission of an Application

For admission information and procedures, review the **How and When to Apply For Graduate Admission** website. Applications for all graduate degree programs and non-degree status must be submitted via the **application website**.

Current students with an approved *Request to Maintain Continuous Enrollment* petition on file with the Graduate College prior to their semester of nonregistration and are continuing the same degree program for the semester immediately following the approved request are not required to submit a new application for admission.

Application Deadlines

The dates noted are priority deadlines for submitting a complete application. Applications received after this date may still be considered but are not guaranteed to be evaluated for the semester of application.

Fall semester (August)

April 1

Spring semester (January)

November 1

Admission and Eligibility

Applicants must meet the following admission requirements:

- Minimum of a bachelor's degree and adequate technical preparation in a selected technology at the undergraduate level from a regionally accredited college or university. Past work and professional experience are also evaluated and taken into consideration. Undergraduate course work generally includes calculus and statistics.
- Minimum of 3.00 cumulative GPA (scale is 4.00=A) in the last 60 semester hours or 90 quarter hours of a student's first bachelor's degree program
- Minimum of 3.00 cumulative GPA (scale is 4.00=A) in graduate work, if applicable
- Applicants with grades below the minimum level may be considered for provisional admission if there is strong evidence suggesting the potential of outstanding performance in the Polytechnic School graduate program. In certain cases, demonstrated aptitude through professional experience or additional post baccalaureate education may also be considered.

A complete MSTech Technology (Aviation Management and Human Factors) program application includes the following items:

- An online **Graduate Admission** application, including attachments of the following documents:
 - A professional resume
 - A statement of purpose
- Transcripts from each college and/or university attended
 - Unofficial transcripts can be uploaded directly to the online application. Official transcripts will be required if admitted.
- Three (3) letters of recommendation
- International applicants must also meet the **English proficiency requirements**, as defined by Graduate Admission Services. Please be sure to review the **TOEFL, IELTS, Duolingo, or PTE score requirements**, as international applications will not be processed without valid proof of English proficiency.

Academic units submit recommendations regarding admission decisions to Graduate Admission Services; only the Dean of Graduate Admission can make formal offers of admission. Applicants are able to monitor the status of their application through **My ASU**. If admitted, the formal letter of admission can be downloaded from My ASU. If denied admission, letters are sent via email to the address on record.

If the applicant does not meet the minimum GPA requirements, the application may still be considered. In certain cases, demonstrated aptitude through professional experience or additional post baccalaureate education will be considered.

In rare cases, provisional or probationary admission may be granted to the MSTech Aviation Management and Human Factors program. Students in this category may be assigned deficiency

courses, additional GPA requirements, or both. The conditions of probationary admission are discussed in more detail in the section on Grades and Academic Performance requirements later in this document.

Deficiency or Provisional Admission

Upon admission, a student may be assigned one or more deficiency courses to complete in addition to the 33 credit hour requirement for the MSTech Aviation Management and Human Factors program. Deficiency courses may vary, but could include:

AMT 489 Airline Administration

Students should refer to their admit letter to verify any assigned deficiencies. Deficiencies must be completed by the end of the first year with a grade of B or better, unless otherwise noted, but it is highly encouraged that deficiencies are taken within the first semester. Students must request an override for the course. A student's inability to complete an assigned deficiency may result in immediate dismissal from their graduate program.

Students admitted with provisional admission must successfully complete their first year with a 3.0 GPA or better. A student's inability to meet this requirement may result in immediate dismissal from their graduate program.

Financial Aid

Several resources are available to help students understand how to finance a graduate degree. We recommend visiting Funding Opportunities via Graduate College, and Paying for College via Financial Aid and Scholarship Services. For an estimated cost of enrollment, visit: Standard Cost of Attendance.

If assistantships are available, they are managed within the program's department. Interested students should contact the MSTech Technology (Aviation Management and Human Factors) faculty for any opportunities. Note that assistantships within the MSTech Aviation Management and Human Factors program are not common.

Program Requirements

The MSTech Technology (Aviation Management and Human Factors) requires a minimum of 33 credit hours. These credit hours must include the following:

Required Core Courses (9 credit hours)**

AMT 533 Aviation Systems & Psychology (3)

HSE 530 Intermediate Statistics for Human Systems Engineering (3)

OMT 520 Strategic Mgmt of Technology (3) - **OR** - OMT 570 Advanced Project Management (3)

Focus Area Courses (15 credit hours from the following areas)**

Aviation Management

AMT 522 Aviation Law

AMT 525 Airport Plan & Design
 AMT 526 Aviation Labor Relations
 AMT 527 Airline Management Strategies

Human Factors

AMT 541 Aerospace Physiology
 AMT 546 Crew Resource Management
 AMT 565 Safety in Complex Systems
 AMT 570 Unmanned Aerial Systems
 HSE 521 Methods and Tools in Human Systems Engineering
 HSE 542 Foundations of Human Systems Engineering

Elective Courses (3-9 credit hours)

Chosen in conjunction with the student's advisor or committee

Culminating Experience (0-6 credits)

Select one (1) culminating experience:

- Portfolio (0 credits)
- AMT 593 Applied Project (3 credits)
- AMT 599 Thesis (6 credits)

Culminating Experience Overview

Portfolio

This is the default option for all students enrolled in the MSTech Aviation Management and Human Factors program. To complete the MSTech Aviation Management and Human Factors degree under these requirements, a student must complete a total of 33 credit hours of approved coursework and, in the semester the student intends to graduate, submit a portfolio to the Graduate Program Chair within the submission window noted below.

The portfolio must elucidate the quality of the education that the student has received through the course of study. The purpose of the portfolio is to demonstrate a high level of mastery of the principles and practice of aviation management and human factors through a compilation of work that the student has completed through the course of their graduate study. While the specific details will vary, all portfolios must describe three notable projects or academic accomplishments that have been completed through the course of graduate study that illustrate the evolution and advancement of technical expertise and mastery of the field of engineering achieved by the student. The portfolio is a professional document that is written in APA or IEEE style (minimum of 10 pages) and will be reviewed and evaluated for both technical content and the quality of writing and presentation. The required dates for submission of the portfolio are given in the table below:

Graduation Semester	Submission window	Resubmission (if required)
Spring	March 1 to 30	Before April 30

Summer	June 1 to 30	Before August 7
Fall	October 1 to 30	Before December 7

Detailed requirements and the evaluation rubric that will be used to grade the portfolio are given in the appendix of this document.

Applied Project

The applied project (3 credit hours) is carried out under the supervision of a member of the program's graduate faculty. That faculty member serves as the chair on the student's committee. Students are not assigned a faculty advisor. Students must take initiative to contact a faculty member working in their area of interest. Students desiring to conduct an applied project must first obtain the approval of a faculty member to work with them on the project. This is recommended to be done before the end of the second semester (by +1 year for accelerated students). Enrollment in the applied project is in the last semester of the graduate program. Applied projects are not required to be connected with industry. Applied Projects are not eligible for CPT.

At completion of the applied project, a written document is required. In all cases, the student must prepare and present the applied project to the faculty advisor and discuss the implementation and results of their project. This presentation will be open to all graduate students.

Credit is earned when the faculty advisor approves the written report and oral presentation and a grade of B or better is awarded. For students carrying out an applied project, the faculty chair is the faculty advisor for the project. The applied project committee consists only of the faculty chair.

Thesis

Thesis is a research commitment, recommended for those wanting to pursue a PhD or a career focused in research. Work involves a new research area or extension of previous research, taking a new approach to a topic. The thesis topic can be initiated by either the student or the faculty advisor. Students must adhere to Graduate College (GC) policies, formatting requirements, and deadlines. Final document is published through ProQuest through the GC processes.

Students are not assigned a faculty advisor. Student must take initiative to contact a faculty member working in their area of interest. This should be done as soon as possible, but no later than the second semester of study. For 4+1 students, the faculty advisor should be identified by the end of the last semester of the bachelor's degree completion. Enrollment in 599 must be in the last two semesters of the program.

Thesis grading is pass/fail. Students may receive 'Pass with minor or major revisions' post-defense, but ultimate grade will be pass/fail. Students must have pass/fail form submitted to Graduate College within 10 days of defense, and as soon as any required revisions are accepted by committee.

Graduate College deadlines should be adhered to closely. The committee must consist of three faculty (one chair, two members or two co-chairs, one member) approved by the Graduate Program Chair and Graduate College and consist of no less than 50% of faculty from the department. The

thesis defense will be open to all graduate students and faculty.

Polytechnic School Overview

About the Polytechnic School

The Polytechnic School is making a new higher education experience, one that focuses on learning through making things and solving real-world challenges through collaboration. At the Polytechnic School, we believe how you learn and teach is as important as what you learn and teach. We are committed and contributing to ASU's vision of the New American University – an institution that is committed to excellence, access, and impact.

The Polytechnic School is located in Mesa, which is the state's third-largest city and part of the Greater Phoenix area. The 600-acre ASU Polytechnic campus is built in a beautiful desert arboretum and is home to more than 6,000 students studying in undergraduate and graduate majors. The Polytechnic School is home to some of the most innovative engineering and technology programs in the country and some of the most advanced learning laboratories available to students on any university campus.

The programs thrive under the guidance of more than 100 outstanding faculty members with deep expertise in many of the most important challenges that society faces.

Visit the Polytechnic School website at poly.engineering.asu.edu. For more in-depth information about the programs offered through the Polytechnic School as well as the application process and other pertinent information, you are encouraged to explore the [overview of the graduate programs](#).

Graduate Programs

The Polytechnic School's graduate students learn in an environment that blends management, applied sciences, and engineering and technology fields to create applications, systems, and solutions that meet real-world needs. We engage in research that matters. As part of the Polytechnic School masters programs, applied projects, theses, and research are degree components and complement students' theoretical and practical understanding. The Polytechnic School doctoral programs include separate degree components, all of which are outlined in each program's handbook.

Masters Degrees

- Aviation Management and Human Factors, MSTech in Technology Engineering, MS
- Environmental and Resource Management, MS
- Environmental and Resource Management (Water Management), MS
- Graphic Information Technology, MS
- Human Systems Engineering, MS
- Human Systems Engineering (Aviation Human Factors), MS
- Human Systems Engineering (Health Systems), MS

Human Systems Engineering (Intelligent Systems), MS
Human Systems Engineering (User Experience Research), MS
Information Technology, MS
Management of Technology, MSTech in Technology
Robotics and Autonomous Systems (Systems Engineering), MS
User Experience, MS

Doctoral Degrees

Engineering Education Systems and Design, Ph.D.
Human Systems Engineering, Ph.D.

Programs No Longer Admitting Students

Environmental Technology Management, MSTech in Technology
Graphic Information Technology, MSTech in Technology

Purpose of this Handbook

The purpose of this handbook is to provide guidance and information related to admission, degree requirements, and general policies and procedures for graduate students in the Polytechnic School. Students must adhere to policies of both the Polytechnic School and the Graduate College. Policies and this handbook are subject to change at any time; students will be notified.

Student Responsibility

Graduate students are responsible for familiarizing themselves with all university and graduate policies and procedures as well as applicable deadlines. Each student should also communicate directly with their academic unit to be clear on its expectations for degree completion. Graduate students are responsible for frequently checking their [My ASU](#) account and [asu.edu email](#) for the most up-to-date information regarding their status, holds, items to attend to, and other important information.

Diversity and Inclusion Initiative at the Ira A. Fulton Schools of Engineering

In January 2019, the Ira A. Fulton Schools of Engineering launched a new initiative focusing on diversity and inclusion — core values to the Fulton Schools and ASU, as exemplified in the [university charter](#). This initiative is called DII@FSE.

Our DII@FSE task force has articulated a vision to follow strategies and practices that support environments where individuals feel included, valued and respected and where different kinds of people can succeed.

The DII@FSE has submitted a proposal to the [American Society for Engineering Education's \(ASEE\) Diversity Recognition Program](#). That proposal was awarded bronze status (the highest entry status a university can be awarded). Next steps for the initiative will be working together to realize the plan's goals.

Goals

1. Create and maintain a student body and workforce across the Fulton Schools that is diverse in multiple dimensions and inclusive for all.
2. Empower faculty, staff, students and academic associates at the Fulton Schools to embrace the core values and practice of diversity, equity and inclusion.
3. Be a global leader in diversity, equity and inclusion in engineering.

Facilities and Labs

The core facilities, laboratories, and centers in the Polytechnic School provide the ideal environments for teaching, research, and discovery. State-of-the-art equipment and technologies help students increase their knowledge and experience and provide support for the use-inspired research conducted by the school's faculty and students. Learn more by visiting: [Labs and Facilities](#).

Faculty

Faculty members have significant expertise in many of the most important challenges that society faces. Many members of the faculty bring considerable industry experience to bear on their teaching and research. To learn more about the faculty, you may refer to the [Polytechnic School Directory](#).

Graduate Advising

Graduate student advising is located on the Polytechnic campus in [Sutton Hall](#) on the second floor. For more information about the Polytechnic School graduate programs or the policies in this handbook, contact the graduate advising office at polygrad@asu.edu or 480-727-4723.

Accelerated Bachelor's + Master's Degree Program (4+1)

The Polytechnic School offers accelerated BS/MS and BSE/MS programs for students currently enrolled in an approved undergraduate program. This allows students to graduate with both degrees within five years of full-time coursework.

If you are interested to see if your program is part of the accelerated (4+1) program offerings, visit [4+1 Degree Programs](#) and contact the Polytechnic School Graduate Advising office at polygrad@asu.edu to discuss your 4+1 options. Please note that in addition to credit hour requirements, applicants must also have a cumulative ASU GPA of 3.20* or higher at the time of application to be considered. Admission into the accelerated programs is not guaranteed and an application is required to be considered.

4+1 Probation Policy

Students in the Polytechnic School accelerated bachelor/masters programs are required to have/maintain a minimum 3.2 cumulative undergraduate ASU GPA on a 4.0 scale, at the time of the

4+1 agreement, upon graduate admission, and through the completion of the undergraduate degree requirements. In addition, students in the accelerated bachelor/masters programs are also required to maintain a 3.0 GPA for all coursework on the graduate plan of study (including shared 400-level courses) and all 500-level coursework.

Shared coursework is defined as the courses being applied toward the bachelors degree and also being utilized for credit in the masters program. Shared courses are identified on the 4+1 Agreement that must be completed prior to starting the 4+1 program.

Students in the accelerated program who, upon their undergraduate graduation date, do not maintain a minimum 3.2 cumulative undergraduate ASU GPA on a 4.0 scale are allowed to continue into the graduate portion of the accelerated program, but cannot share the credits from their undergraduate degree. Students in this situation must still complete the full requirements of their respective graduate degree.

Students in the accelerated program who do not maintain a 3.0 minimum GPA in their shared coursework will be placed on graduate probation upon entering the masters degree program. Students in this situation will be notified of their probation status and the steps needed to lift the probation.

Students who do not satisfy either GPA requirement are placed on graduate academic probation upon entering the masters program and cannot share the credits from their undergraduate degree. Students in this situation must still complete the full requirements of their respective graduate degree and will be notified of their probation status and the steps needed to lift the probation.

Academic Standards and Policy

Grades

To be eligible for graduation and the completion of a graduate degree, a student must achieve a cumulative grade point average (GPA) of 3.0 or better in three different grade point average calculations. The three different grade point averages that are considered by Graduate College and the Polytechnic School are as follows: **(1)** the grade point average in all courses numbered 500 or higher that appear on the transcript, except those that were listed as deficiencies in the original letter of admission, **(2)** the grade point average in all coursework that appears on the approved program of study, and **(3)** the grade point average in all coursework taken at ASU post baccalaureate.

Transfer credits are not calculated on the Plan of Study (iPOS) GPA or the Graduate GPA. Courses with grades of “D” (1.00) and “E” (0.00) cannot appear on the iPOS but will be included when calculating the Graduate GPA. Courses with an “I” grade cannot appear on the iPOS.

A student who is not progressing satisfactorily toward a degree will be withdrawn from the program by the Dean of the Graduate College upon recommendation by the Fulton Schools of Engineering Dean’s office. The policy of the Polytechnic School for academic probation and dismissal of graduate students is outlined below.

Satisfactory progress is defined by the quality of the student’s work, that it does not have any

academic and progress probationary issues, and that the student is meeting all requirements and/or milestones applicable to their program. Specifically for Doctoral students, this also includes the successful completion of the qualifying and comprehensive exams, as determined by their program. In addition to the probationary rules, satisfactory progress includes appropriate communication each semester with the student's Committee Chair regarding their progress, if applicable.

Students in the accelerated degree programs (4+1) will have separate requirements to meet while completing their undergraduate degree. See accelerated bachelor's + master's degree program (4+1) section above for more information. Once students are in the graduate portion of the program (and have completed their undergraduate degree), they must meet the graduate academic expectations outlined in this section.

Academic Performance Standards

To meet the Polytechnic School academic performance requirements, all students admitted to a graduate degree program in the Polytechnic School must adhere to all of the following:

All students admitted to a graduate degree program in the Polytechnic School, either on a regular or provisional admission status, must maintain a 3.0 or higher grade point average (GPA) in:

1. All work taken for graduate credit (courses numbered 500 or higher),
2. Coursework in the student's approved plan of study (iPOS), **and**
3. All course work taken at ASU (overall GPA) post baccalaureate.

Earn a "C" or better in all iPOS (plan of study) courses. Grades of "W" and "I" are not acceptable on the iPOS and may be considered lack of satisfactory progress if more than one occurrence during the students' graduate program of study. Programs may invoke a higher standard, e.g., no courses with a C may be included on the iPOS.

Meet the terms of the ASU Graduate College satisfactory progress policies as outlined at: **ASU Graduate Policies and Procedures**.

Evaluation of Academic Performance Requirements

After each semester, the academic unit reviews students' files for satisfactory progress towards completion of the degree. All students are placed under one of the three categories:

- **Satisfactory Progress** means that the student does not have any academic and progress probationary issues. In addition to the probationary rules, satisfactory progress includes appropriate communication each semester with the student's Committee Chair regarding their progress, if applicable.
- **Academic Probation** pertains to grades that fall below those required by Program and University policies, including graduation requirements. The following are notices/letters the student will receive if one of these pertains to their academics:

Grade Point Average

- > GPA below 3.0 in approved iPOS courses
- > Overall post baccalaureate GPA below 3.0
- > Overall graduate (500 level or above) GPA below 3.0

Students placed on academic probation will have nine (9) credits or one year, whichever comes first, to meet GPA requirements as outlined above. Students placed on academic probation for Satisfactory Academic Progress will be provided a deadline within their probationary notice in which the requirements are to be met.

- A student will be recommended for ***Withdrawal*** from the program if they fail to meet the probationary standards outlined in their probationary letter. The student will receive a letter from the Polytechnic School explaining the reasons for recommendation for withdrawal. The student will have five (5) business days from the date of the letter to appeal the decision. The department's Graduate Affairs Committee (GAC) will review the appeal and will make the necessary recommendation. The GAC Chair, on behalf of the GAC, will provide a written explanation of the outcome of the appeal.
 - 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 of the GAC and the consequences if the agreements are not met.
 - If the GAC recommends that the appeal is not granted in favor of the student, the GAC Chair, on behalf of the GAC, will recommend to the Fulton Schools of Engineering (FSE) Dean's Office to withdraw the student from the graduate program. The student's appeal will then be reviewed by the FSE Academic Standards Committee, which reviews the student's case and makes the final recommendation on behalf of the FSE Dean's Office and the department. If the appeal is not granted in favor of the student, the Fulton Schools of Engineering Dean's Office will recommend to the Graduate College to withdraw the student from the graduate program. Please refer to the Graduate College catalog for policies and procedures or contact the graduate advisor in the Polytechnic School with further questions.
- A student will be recommended for ***Withdrawal*** from the program if they fail to meet the provisional admission requires outlined within their admission letter. The student will receive a notice from the Polytechnic School explaining the reasons for recommendation for withdrawal. The withdrawal notice will be submitted to the ASU Graduate College for processing. Provisional admits are unable to appeal if they fail to meet requirements outlined within the standards of their admission.
- A student will be recommended for ***Withdrawal*** from the program if they fail to meet the deficiency admission requires outlined within their admission letter. The student will receive a letter from the School of Manufacturing Systems and Networks explaining the reasons for recommendation for withdrawal. The withdrawal notice will be submitted to the ASU Graduate College for processing. Students not meeting the admission requirements of their

deficiency as outlined in their admission letter are granted the ability to appeal and follow the process noted above. If appeal is unsuccessful, the withdrawal notice will be submitted to the ASU Graduate College for processing.

- **Deficiency Course(s)**
 - Lack of progress toward completion of required deficiencies as listed on the admission letter
 - Received a “D” or “E” in a required deficiency course or in a course at the 400 level or above
 - Deficiency GPA below 3.0

Plan of Study (iPOS)

The Plan of Study (iPOS) functions as a contract between the student, the academic unit, and the Graduate College. The iPOS contains certain degree requirements such as core and elective coursework as well as a culminating experience, which must be included in the iPOS before it can be approved. Students should submit an iPOS after registering for their second semester in the program. Students **must** submit an iPOS before the beginning of their second semester of their degree program. A student is not eligible to schedule the comprehensive examination without an approved iPOS. Students may not register for applied project (593), thesis (599), internship (584), or dissertation credit (799) until their iPOS is submitted and approved.

A student can access the iPOS by visiting [My ASU](#) > My Programs > iPOS > Graduate Interactive Plan of Study (iPOS). Please reference our [iPOS Overview](#) for in-depth information on what must be included on the iPOS.

Time Limit for Degree Completion

All work toward a master’s degree must be completed within six consecutive years. Doctoral students must complete all program requirements within a ten-year period. The time period begins with the semester and year of admission to the program. Graduate courses taken prior to admission that are included on the Plan of Study must have been completed within three years of the semester and year of admission to the program. See the [ASU Graduate Policies and Procedures](#) for more information.

Continuous Enrollment Policy

Once admitted to a graduate degree program, students must be registered for a minimum of one credit hour of graduate-level coursework (not audit) during each fall and spring semester of their graduate education. 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 in that semester. This credit must appear on the Plan of Study **or** must be an appropriate graduate-level course (e.g. 595, Continuing Registration). Courses with grades of “W” and “X” are not considered valid registration for continuous enrollment purposes.

Students who have completed all necessary coursework but still need to complete their culminating experience can request an override for 595 Continuing Registration for 1 credit hour to maintain active status in their program. First term requests are sent to the student's committee chair to approve and verify that the student is making adequate progress. If a second term request is necessary, along with the override request the student must submit a timeline of remaining requirements to verify how they plan to complete the program in that semester. Below is an example timeline:

Completion of on Introduction, Literature Review, Methodology - August 31

Distribution of survey - September 1 - 30

Analysis of data and write up of Data Analysis and Conclusion chapters- October 1-31

Defense of thesis – November

Leave of Absence Policy

Students planning to discontinue enrollment for a semester or more must request approval for a leave of absence through the Plan of Study (iPOS) petition titled *Request to Maintain Continuous Enrollment*. The Graduate College allows for a leave of absence for a maximum of two semesters during a student's entire program. A petition for a leave of absence may be submitted through a student's interactive plan of study and must be approved by the Graduate College. This request must be submitted and approved **before** the start of the semester of the anticipated absence.

An approved leave of absence will enable students to re-enter their program without reapplying to the university and the graduate program. Students who do not enroll for a fall or spring semester and do not have an approved Request to Maintain Continuous Enrollment are considered withdrawn from the university under the assumption that they have decided to discontinue their program. A student 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 Request to Maintain Continuous Enrollment 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. See the **ASU Graduate Policies and Procedures** for more information.

Graduate College Policies and Procedures

All graduate students are expected to read, understand and meet the terms of the ASU Graduate College Policies and Procedures handbook as outlined at: **ASU Graduate Policies and Procedures**.

Policy on Maximum Course Load

Registration in nine (9) credits is considered a full-time load for graduate students at ASU, and graduate students in the Ira A. Fulton Schools of Engineering are restricted to a maximum of 12 credits per semester. Overrides to register for more than 12 credits require the approval of the student's committee chair and Graduate Program Chair and will be granted only in exceptional

cases. Requests to register for more than 15 credits will not be supported.

Internships

Polytechnic School graduate students can request to take internship as a 584 course option for academic credit if an approved and eligible internship is obtained. Internship is not a requirement for graduate programs within The Polytechnic School, but can be added as a planned option to the graduate plan of study. International students can apply for curricular practical training (CPT) if eligible to do so. No more than 3 credits of internship coursework can be used. The 3 credits can be divided between a maximum of two semesters for two different internship opportunities. For more information on internships, policies, and the application process, please visit:

<https://poly.engineering.asu.edu/advising/internships/>.

Applying for Graduation

Graduate students should become familiar with the process of applying for graduation to ensure the **graduation application** is submitted by the deadline of the graduating semester. The University has specific deadlines each semester for submitting the Graduation application. To view the specific deadlines for future terms, log into MyASU and click on the Graduation tab. Please also be sure to review the Graduate College **graduation deadlines and procedures** as well. All students must have an approved and up-to-date iPOS on file in order to apply for graduation.

Culminating Experience Definitions – Master’s Degrees

Below is an overview of the culminating experience options offered within the Polytechnic School’s graduate programs. Culminating experience options vary by program.

Portfolio

The portfolio is a highlight of three major accomplishments from the master's program, and may include projects, papers, exams. Portfolio submission includes resume, reflection of graduate program accomplishments with the supporting assignments/ projects included. Reviewed by program chair for consistency in grading. There are specific submission timeframes (Spring - March/ Summer - June/ Fall - October) noted in the program section for eligible programs.

A cover page needs to be included describing what courses the projects were carried out in, and why they were selected for inclusion in the Portfolio by the student. The Committee Chair and/or the Graduate Program Chair will be solely responsible for judging the quality of the portfolio and determining if it is satisfactory to serve as the required culminating event for the degree.

Written Comprehensive Exam

The written comprehensive exam is coordinated by the Graduate Program Chair and leads the administration of the comprehensive exam to the students in their final semester. Support is available from advising if on-campus comprehensive exam is required. The exam takes place in the last six weeks of the semester. Grading is pass/fail. If a student fails, the student may petition to take the comprehensive exam one more time in a future term.

Capstone

The capstone is the only culminating experience option that has a class time/date associated with it. Within the course, students will follow the syllabus and requirements outlined by the professor.

Applied Project

The applied project is carried out under the supervision of a faculty member, typically a member of the program's graduate faculty. Students are not assigned a faculty advisor. Students must take initiative to contact a faculty member working in their area of interest. Students desiring to conduct an applied project must first obtain the approval of a faculty member to work with them on the project. This is recommended to be done before the end of the second semester (by +1 year for accelerated students). Enrolment in the applied project is in the last semester of the graduate program. An exception to this is for MS Human Systems Engineering as six credits/two semesters of enrollment are required. Applied projects are not required to be connected with industry. Applied Projects are not eligible for CPT.

At completion of the applied project, a written document is required. Document is less involved than a thesis and is not expected to be published. More generalizable in comparison to thesis, flexibility in final format. In all cases, the student must prepare and present the applied project to the faculty advisor and discuss the implementation and results of their project. This presentation will be open to all graduate students.

Credit is earned when the faculty advisor approves the written report and oral presentation and a grade of B or better is awarded. For students carrying out an applied project, the faculty chair is the faculty advisor for the project. The applied project committee consists only of the faculty chair. A grade of 'Y' is not considered satisfactory completion of the course by ASU Graduate College.

Thesis

Thesis is a large research commitment, recommended for those wanting to pursue a PhD or a career focused in research. Work involves a new research area or extension of previous research, taking a new approach to a topic. The thesis topic can be initiated by either the student or the faculty advisor. Students must adhere to Graduate College (GC) policies, formatting requirements, and deadlines. Final document is published through ProQuest through the GC processes.

Students are not assigned a faculty advisor. Student must take initiative to contact a faculty member working in their area of interest. This should be done as soon as possible, but no later than the second semester of study. For 4+1 students, the faculty advisor should be identified by the end of the last semester of the bachelor's degree completion. Enrollment in 599 must be in the last two semesters of the program.

Thesis grading is pass/fail. Students may receive 'Pass with minor or major revisions' post-defense, but ultimate grade will be pass/fail. Students must have pass/fail form submitted to Graduate College within 10 days of defense, and as soon as any required revisions are accepted by committee. **GC deadlines** should be adhered to closely. The committee must consist of three faculty (one chair, two members or two co-chairs, one member) approved by the Graduate Program Chair and Graduate

College and must consist of no less than 50% of faculty from the department, including the chair or one co-chair. The thesis defense will be open to all graduate students and faculty.

General ASU Information

Academic Calendar

Students are responsible for meeting all deadlines set within the ASU Academic Calendar. The calendar can be found at students.asu.edu/academic-calendar.

Student 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.

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.

All students are expected to adhere to the [ABOR Student Code of Conduct](#).

Prohibition Against Discrimination, Harassment, and Retaliation

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

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

Academic Integrity

The highest standards of [academic integrity](#) and compliance with the university's Student Code of Conduct are expected of all graduate students in academic coursework and research activities. The failure of any graduate student to uphold these standards may result in serious consequences, including suspension or expulsion from the university and/or other sanctions as specified in the academic integrity policies of the Polytechnic School as well as the University.

Violations of academic integrity include, but are not limited to: cheating, fabrication of data, tampering, plagiarism, or aiding and/or facilitating such activities. At the graduate level, it is expected that students are familiar with these issues and take personal responsibility in their work. It is the student's responsibility to become familiar with the academic integrity policies of the university and Graduate College.

Department and University Resources

- Academics and Professional Development
 - [Academic Integrity Policy](#)
 - [ASU libraries](#)
 - Career Centers (both [ASU](#) and [Fulton Schools of Engineering](#))
 - [Graduate and Professional Student Association](#)
 - [FSE student resources](#)
 - [Professional development](#)
 - [Writing Center](#)

- Student Support Services
 - [Counseling](#)
 - [Student Accessibility and Inclusive Learning](#)
 - [Graduate Wellness Resources](#)
 - [10 Best Practices in Graduate Student Wellbeing](#)
 - [Health](#)
 - [Housing](#)
 - [International Student Services](#)
 - [FSE International Student Resources](#)
 - [Veterans](#)

- Business and Finance Services
 - [ASU ID cards](#)
 - [ASU bookstore](#)
 - [Parking and Transit](#)
 - [Student accounts](#)

Contact Information

For more information about the Polytechnic School graduate programs or the policies in this handbook, contact the graduate advising office at polygrad@asu.edu or 480-727-4723.

Appendix A

Instructions for the Master of Science in Technology with a concentration in Aviation Management and Human Factors Portfolio

Instructions for the Master of Science in Technology with a concentration in Aviation Management and Human Factors Portfolio

Purpose of the Portfolio

The purpose of the portfolio is to demonstrate a high level of mastery of the principles and practice of aviation management and human factors through a compilation of work that you have completed throughout the course of your graduate study. While the specific details will depend on your specialization, all portfolios must describe three (3) notable projects or academic accomplishments that you have completed during your time in the graduate program that illustrate the evolution and advancement of your technical expertise and mastery of the field of aviation management and human factors.

Portfolio Format

The portfolio is a professional document that is written in APA or IEEE style, and will be reviewed and evaluated for both the technical content and the quality of writing and presentation. The format of the portfolio must be as follows:

1. **Cover page**
2. **Resume** – An up-to-date resume reflecting your accomplishments to date.
3. **Overview** – A brief description of the three notable accomplishments that you achieved during your graduate experience that will be highlighted in the portfolio along with why they have been chosen. This section is typically three or four paragraphs.
4. **Accomplishments** – Document each of your three chosen topics as follows:
 - a. Title of Topic.
 - b. An explanation of the accomplishments that the topic is illustrating.
 - c. A reflection on why you consider this to be significant.
 - d. Evidence of accomplishment. In this section, include materials such as project reports, results of exams and homework, or other related materials.
 - e. A summary that demonstrates your mastery of the subject by referring to the evidence presented in section 4d. (The summary is typically a few paragraphs in length.)

**If a specific class had multiple noteworthy projects, two of these projects can be used, but at least two classes must be represented in the portfolio.*
5. **Reflections** – A short reflection on your graduate experiences and how the accomplishments you have chosen to highlight in your portfolio illustrate the level of achievement that you attained as you progressed through the program. This section is typically about one page.

Submission Instructions

The portfolio must be submitted electronically to the graduate program chair as a single PDF document along with a copy of the *Record of Evaluation of the MSTech Aviation Management and Human Factors Graduate Portfolio* that includes your name, ASU ID number, submission date and the attempt number.

Deadlines for Submission

Graduation Semester	Submission window	Resubmission (if required)
Spring	March 1 to 30	Before April 30
Summer	June 1 to 30	Before July 20
Fall	October 1 to 30	Before December 7

Evaluation

The evaluation rubric for the portfolio is given on the *Record of Evaluation of the MSTech Aviation Management and Human Factors Graduate Portfolio* form, which is shown on the next page of this document. The portfolio is complete only when *all* sections reflected on this rubric are deemed satisfactory. The graduate program chair or their representative is responsible for evaluation of the portfolio and will notify you of the result within two weeks of submission of the document.

There are four possible outcomes of the evaluation:

1. The portfolio is accepted as submitted.
2. The portfolio is returned to you for minor corrections as specified by the graduate program chair or their representative, followed by resubmission.
3. The portfolio is returned to you for major changes. In this case, the graduate program chair or their representative will meet with you and specific instructions will be communicated regarding the steps that will necessary for the portfolio to be accepted.
4. The portfolio is returned without critical evaluation because of errors in spelling, grammar, or format.

Completion

Completion of the graduate portfolio is formally recognized when the graduate program chair acknowledges the achievement by signing the *Record of Evaluation of the MSTech Aviation Management and Human Factors Graduate Portfolio* form and the signed form is transmitted to the graduate advising office at the Polytechnic campus. Upon receipt of the signed form, the graduate advising office will update your records to indicate completion of the culminating experience and eligibility for graduation. If you do not complete the graduate portfolio by the end of the semester in which you complete all other requirements for the degree, your degree will not be posted until the program chair signs the form.

Process for Appeal

In the event that you disagree with the evaluation of your portfolio, you may request a second evaluation by faculty that were not previously involved in the process. To initiate the appeal process, a formal request for a second review must be submitted via email to the graduate advising office to be reviewed by the Graduate Affairs Committee along with a copy of the same portfolio that was submitted earlier to the graduate program chair. If the Graduate Affairs Committee recommend that it be accepted, the graduate program chair will accept that recommendation. If the Graduate Affairs

Committee does not recommend that the portfolio be accepted, you must modify the portfolio and resubmit it based on the earlier communication from the graduate program chair.

Record of Evaluation of MSTech Aviation Management and Human Factors Graduate Portfolio

The Polytechnic School



Student Name _____ ID number _____

Semester/Year _____ Attempt Number _____ Submission Date _____

Topic	Satisfactory	Unsatisfactory
Spelling, Grammar and Presentation		
Format		
Required Elements:		
Cover Page		
Resume		
Overview		
Project 1		
Project 2		
Project 3		
Reflections		

If applicable, explanation of unsatisfactory marks:

RESULT <input type="checkbox"/> PASS <input type="checkbox"/> FAIL	EVALUATOR NAME AND SIGNATURE	DATE
RESULT <input type="checkbox"/> PASS <input type="checkbox"/> FAIL	PROGRAM CHAIR NAME AND SIGNATURE Prof. Marc O'Brien	DATE