



DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

Student Handbook

Summer 2024

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1. For All Students in The Department

1.1. Introduction

This handbook describes the expectations for all students in the Department of Mathematics and Computer Science, the requirements to earn a degree, and all associated policies and procedures.

No part of this handbook replaces policies and procedures that are established at the university-level or in the College of Arts and Sciences.

Any questions or comments regarding the contents of this handbook may be addressed to

Chair of the Department of Mathematics and Computer Science

mathcs@adelphi.edu

1.2. Faculty Advisers

All students are assigned a faculty adviser. The adviser is a resource who can help you with course planning and navigating academic services. If you don't have a department professor as your academic adviser, contact the department chair to be assigned an adviser. To find out who your adviser is, please log in to eCampus and then go to the CLASS system. You can find your adviser by choosing My Adviser from the navigation menu.

Please come prepared with questions and concerns so that you can make the most of your time!

1.3. Open Planning and Registration

Open Planning refers to the process of working on your course schedule for the following semester, and typically begins about a month before registration for courses. The exact dates on which open planning and registration for upcoming terms begins is posted to Adelphi's academic calendar, which is available at <https://www.adelphi.edu/academics/academic-calendar/>.

Each semester, during the open planning period, your adviser will typically invite you to a one-on-one meeting to discuss your progress in the program. If your adviser does not contact you by the start of the open planning period, you can reach out to them. While these meetings are optional, they are highly recommended. However, if you do not attend your advising meeting, it is your responsibility to select a schedule of courses that helps you progress towards your degree, and you still need to submit your course selections to your adviser for approval.

Prior to your advising meeting, you should review your progress towards your degree via Degree Audit, which is accessed through eCampus. This application will show you the courses you have taken and your remaining requirements, grouped by general education distribution

and learning goal requirements, major requirements, and electives. Also prior to your advising meeting, if you are considering taking a course to fulfill a particular distribution or learning goal requirement, you should review the list of courses meeting those requirements offered during the next semester, and take note of the classes that may interest you. Lists of these courses may be generated via CLASS or Course Search, both of which can be accessed through eCampus.

Adelphi's registration process consists of several steps.

1. Meet with your adviser to select courses
2. Add courses to your plan (via CLASS)
3. Submit your plan to your adviser for approval
4. Adviser approves your plan
5. You register for classes (also via CLASS)

If you change your planned or registered courses after your adviser approves your initial plan, you should contact your professor to let them know of the change.

Until you are registered for a class, your seat will not be held.

In other words, planning for a course is not sufficient to be guaranteed a seat in the class, even if the adviser approves your plan. You must finalize your registration after you receive that approval; the CLASS system will specify the earliest date and time when you may submit your registration.

Registration times are typically assigned according to seniority; the more credits a student has completed, the earlier they will be permitted to register. It is in your best interest to submit your registration at your given time, as each class has a limited number of seats available.

It is possible that classes may fill up, in which case you will need to choose an alternative course, contact your adviser if you need assistance with this process.

Your seat is only guaranteed when your course schedule specifically states that you are registered for a class.

1.4. Prerequisites

Some courses have prerequisites listed with them. For example, as shown in Figure 1 below, 0144-225 Statistics and Data Analytics expects students who register for the course to have completed either 0145-150 or 0145-171. Prerequisites are shown in CLASS, in Course Search, and in the bulletin.

0144-225-002	<u>GC</u>	Statistics and Data Analytics In-Person Class (T) Prerequisite(s): 0145-150~or~0145-171	3.00
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Figure 1: Prerequisite in CLASS

When a course has listed prerequisites, it is expected that students have mastered the materials covered in them before they enroll in the class.

Advisers are able to override a prerequisite, and allow students to register without meeting the prerequisite requirement. However, when a prerequisite is waived, the expectation that students have mastered the materials covered in them remains in effect.

1.5. Faculty Office Hours

Office hours are times during which you may meet and talk with a professor about specific course material, general academic topics, or other items of interest. All faculty members have office hours. You do not need to make an appointment during these hours. Faculty members will let you know where to find them during these fixed times.

Full-time faculty members will have approximately four hours of office hours each week. Those hours will take place on three separate days. Part-time faculty members will have one office hour for each course they teach. If you are generally unavailable during all of your professor's office hours, it is highly recommended that you contact them at the beginning of the semester to discuss potential alternative times or alternative methods of communication should the need arise later on in the semester.

Details regarding office hours can be found in course syllabi. Full-time faculty office hour schedules are also listed on the department display screen (by room 413 in the Science Building), and professors frequently post their office hours on signs by their office doors.

1.6. References and Letters of Recommendation

You may request references or letters of recommendation from professors when applying to internships, jobs, or other special programs. For professors to be able to write you a high-quality recommendation, it is important to do more than just earn a high grade in a course: you should also actively participate during class and engage with your classmates and the professor.

In general, it is advisable to give professors as much advance notice as possible to give them time to write the best possible letter. Professors may or may not be able to respond to last-minute requests.

1.7. Course Syllabi

The course syllabus is a contract between the instructor and you. Course syllabi will specify all expectations that the faculty member has of the students, and it will outline what students may expect of the faculty member. At minimum, the syllabus will include contact information for the instructor(s), office hours, grading policy, required readings, course rules, and a breakdown of topics for the weeks of the term.

You are entitled to receive a copy of the syllabus (on paper or electronically) at the start of each term. If changes are made to the syllabus during the semester, they cannot negatively affect you.

If your course is missing a syllabus, if the syllabus is missing any of the basic information listed above, or if it is changed at your detriment, please contact the department chair.

1.8. Independent Studies

Students are occasionally interested in studying a subject that is not routinely offered at Adelphi University. If this is the case, they may ask a professor to supervise an Independent Study course. Independent Study courses may be 1-3 credits, and students receive final grades just as they do for a standard course. When conducting an Independent Study, a faculty member will collect a set of readings and assign a set of activities to a student. In addition, the faculty member will make themselves available for questions at set times during the semester.

In an Independent Study format, students do not necessarily meet with the faculty member each week, and there is no expectation of being fully taught the materials (hence: Independent).

Faculty members are not obligated to offer Independent Study courses, but most are amenable to support student learning in areas of their interest. If you have a particular area of interest, you may reach out to your adviser or to the department chair to identify faculty who might be interested and available to supervise a course.

If you find a faculty member who agrees to supervise your independent study, they will provide you with the appropriate paperwork.

Undergraduate students may take any number of independent study courses, but only for a maximum total of twelve credits throughout their studies.

1.9. Student Research

You may be interested in working on research or a project under the guidance of a faculty member. Many faculty members may have projects suitable for undergraduate or graduate students; these may be purely student-driven and supervised by a professor, or a collaboration between one or more students and a professor. If you are interested in such an experience, you may reach out to professors directly, or reach out to your adviser or to the department chair to

identify potential faculty members to work with. In some cases, professors may offer research opportunities as a Research course, similar to an Independent Study course.

1.10. Honors Theses

Honors College Theses do not take the departmental capstone courses. Instead, they will register for HON 490 Honors Thesis in Fall and again in Spring. Both thesis courses must be taken for 0 credits. In addition to the thesis courses, students must register for a 2-credit research course in the Fall and for a 2-credit research course in the Spring. The research courses are created on-demand. Contact your thesis supervisor for additional information.

1.11. Tutorials

A tutorial is a course that does not have enough enrollment to run as a regular class. Instead, a small group of students will meet with a faculty member, who will teach the materials to them. Generally, tutorials meet for about 45-60 minutes per week in the faculty member's office. The exact format of a tutorial is somewhere in between a full class and an independent study, and will vary with subject and instructor.

Instructors are not required to offer tutorial classes.

1.12. Canceled Courses

If a course has low enrollment (less than 12 students for a 100-200 level class, less than 8 students for a 300-500-level class and less than 5 students for a 600+-level class), it will be canceled by the Provost's Office. If that happens to you, contact your adviser as soon as possible to make alternative arrangements.

1.13. Maximum Enrollment (Course Caps) and Overenrolling

All classes have a maximum enrollment limit (course cap). These limits are in place to ensure that all students experience the best learning possible. In addition, these limits are imposed by New York Fire Code to ensure the safety and well-being of people utilizing the spaces.

In principle, no students will be permitted to register for a class once the maximum enrollment has been reached.

In specific circumstances, and only if safety and the educational experience is not jeopardized, the chair may decide to overenroll a course by one or two students. The decision will be made by the chair, in consultation with the instructor, and cannot be appealed.

1.14. Moodle

Adelphi University uses the Moodle course management system. Most courses will provide week-by-week information via Moodle, assign homework assignments, and collect responses. If your course uses Moodle, you are expected to always be fully aware of the information posted

there. Information placed on Moodle is considered sufficient notice. Moodle is accessible via eCampus, or directly by visiting <https://moodle.adelphi.edu>.

1.15. General Expectations for All Students

1.15.1. Attendance

Students are expected to attend all classes. For in-person courses, that means that you must be present in the classroom where the class is taught before the scheduled start time of the course. Late arrivals are generally not acceptable. For online classes, attendance means that you must actively sign into the course management system (Moodle), review expectations for the week, and complete all readings.

1.15.2. Participation

Students are expected to be active participants in a course. That means that during class times, you are an active listener, you ask questions or answer inquiries by the instructor, participate in classroom discussion, etc.

1.15.3. Assigned Work

All assigned work is expected to be completed to the best of a student's ability, and before the deadline posted by the instructor. Unless specifically indicated, all work is expected to be completed on an individual basis. Collaboration is permitted if it does not violate class rules.

Please refer to Section 1.16 Academic Integrity for more information.

1.15.4. Exams

For in-person courses running on a typical 15-week schedule, the last week of the semester is final exam week. Not all classes will administer final exams; instructors sometimes choose alternative ways to test student's knowledge and understanding of the materials covered during the class time. The final week of classes is a mandatory week. You must attend and actively participate.

All exams are individual exams. Unless explicitly posted by the instructor, all exams are closed-book exams, and do not allow the use of notes, textbooks, computers, or calculators.

Courses running on a 10-week schedule or on an 8-week schedule will make separate arrangements for assessment.

Please refer to Section 1.16 Academic Integrity for more information.

1.15.5. E-Mail Communication with Faculty And Administration

Faculty and administration will frequently reach out to you via email. We will only communicate with you using your official Adelphi student email address. Inquiries from other addresses will go unanswered.

Any email sent to your Adelphi email address is sufficient notice. You must make sure that you actively monitor the information coming to that address on a daily basis. When faculty

members reach out to you with specific requests or questions, please respond to them at your earliest opportunity. A 24-to-48 hour turnaround time is typically expected.

In general, do not assume that professors will answer e-mail after business hours (9:00am – 5:00pm, Monday through Friday). For urgent issues, you may contact the department chair.

You do not have to acknowledge announcements and information emails. Of course, if you have questions regarding such messages, feel free to follow up!

1.16. Academic Integrity

Adelphi University's Code of Academic Integrity (Code) states that "The University is an academic community devoted to the pursuit of knowledge. Fundamental to this pursuit is academic integrity. In joining the Adelphi community, I accept the University's Statement of Academic Integrity and pledge to uphold the principles of honesty and civility embodied in it. I will conduct myself in accordance with ideals of truth and honesty and I will forthrightly oppose actions which would violate these ideals."

In essence, it states that it is unacceptable to make up data, hand in work of others as if it were your own, or lie, or cheat. When working on writing assignments, the rules are clear: **if you let others (people or AI services) write for you and claim it as your own, or if you reproduce or reference work of others without proper attribution, you are committing plagiarism.**

Plagiarism is dishonest, and as such, violates the Code.

Example

You were close to missing a deadline, so you used ChatGPT (or another AI bot) to help you get started. You used the response you received as a platform to build on, but you reviewed all constructs, you know what they do, and you rewrote some of the code. This may or may not be an academic integrity violation, depending on the professor's stance on use of AI in assignments. If this is not clearly explained in the syllabus, speak with your professor before using AI generated content or assistance in your work.

Before writing a particular algorithm or working through a proof, you read up about it on Wikipedia, and found a full-code or a pseudo-code implementation there. No professor is going to penalize you for doing your own research. However, make sure to attribute the page, and make it clear what you used from there, and, more importantly, what your own work was.

When in doubt, talk to your professor before handing in your assignment!

1.16.1. Detection

Most of the professors with whom you will take classes have been doing this kind of work for a long time, and they know what to expect from student's submissions. Sudden deviations in

performance of quality of work, or solutions that are clearly based on publicly available sources stand out and are obvious to professors. You may take our word for that!

Since everyone is working on the same assignments, some level of similarity between your solutions is expected. However, when there is too much commonality between multiple people, that may be a red flag.

If we suspect dishonesty, we will call you out on it. We might talk to you one-on-one, or maybe ask you to explain certain sections of your code and have you tell us what it does, how you came to it, or why it works. We might also ask you to redo some of the work in a controlled environment to see how well you can reproduce what you can really do.

In most cases, that answers any question. If we do call you out on suspected dishonesty, and you did indeed bend the rules a bit, your best bet is to own up and accept the consequences.

1.16.2. Academic Integrity in Computer Science

Cornell University has an excellent write-up on academic integrity in computer science. You can read [the full text](#), but here is a quote:

One of the key things to understand about programming, and computer science in general, is that is a writing-heavy discipline. When you create a computer program, you are writing a document, just like you write documents in an English class (or any class that involves a lot of essays). Therefore, many of the same rules that apply to writing essays also apply to computer programs, particularly regarding plagiarism.

Plagiarism is essentially a form of fraud. Every time you hand in a program in this course, you are representing it as the work of the stated authors [...] subject to any exceptions that are clearly stated in the submission itself. To avoid committing plagiarism, simply be sure always to accurately credit your sources. To do otherwise is to commit fraud by claiming credit for the ideas and efforts of others.

It really is that simple. If you have accurately acknowledged your sources, you are not committing plagiarism. You might not be doing what we asked you to do (if we asked you to work in separate groups), but you are being honest and are therefore not in violation of academic integrity. When you hand in an assignment without remarking on others' contributions, you are claiming credit for everything in it as your own creation. To turn in code that someone else invented and claim it as your own is fraudulent.

Code Sharing

Of course you can put your code on GitHub, on BitBucket, or on any other version control and document collaboration site. Making code available to others is not a violation of academic integrity. As a matter of fact, keeping track of all the code you ever wrote makes for a great e-portfolio. It shows growth over time and will greatly help you re-use your own code. By the time you are ready to graduate, you'll be surprised to see how much code you wrote, and how good you have become since your first year.

However, using code written by others without attribution is a violation. Note that if you share your code without assigning a clear license, others may also end up using it without asking you first.

Academic integrity is only one part of the equation. If an assignment clearly says that you are not to collaborate or use external websites, you might still be violating class rules.

Examples

Let's consider a few scenarios:

You Googled the problem and ended up at StackOverflow. You used the code there to improve your own work. Not a problem! As long as you attribute the post(s) on StackOverflow that you used. Put a link in the program's comments and say what you did.

You worked with a classmate on the assignment. Again, not necessarily always a problem. Make sure you attribute your friend in your code. Your professor will make the determination if this was substantial enough to be a violation of class rules. For example, suppose that you are implementing a binary search and you mixed up the conditions. You did the work yourself, but a friend helped with troubleshooting. Just drop a comment in your code that states that you received help to debug this condition. Most likely, there is no issue at all.

You found the solution to your problem on StackOverflow and handed it in after changing the names of a few variables and/or methods. Now we have an issue. You did not do your own work, and you did not attribute the sources. That's an academic integrity violation, and it may have serious consequences.

1.16.3. Academic Integrity Violations

If a faculty member determines that academic integrity has been violated, they assign an initial sanction. Generally, that means that the student will receive zero points for an assignment or for an exam. In some cases, it means that you outright fail the exam. The instructor's decision cannot be appealed (but, see section 1.18 Appealing a Grade).

After the instructor has assigned a sanction, they notify the student of their violation.

Undergraduate academic integrity violations are reported to Adelphi's Academic Integrity Officer, who will follow up with the student who has been accused, and who will assign consequences. Particularly grievous (or repeated) violations will be addressed according to the University Code of Conduct.

For graduate students, the process is managed by the chair, who will receive the faculty member's report. The chair also notifies the student that they have been accused of an academic integrity violation. In the notice, the accused student is provided with an opportunity to respond (in writing) to the accusation.

The chair will then consider the student’s response (if provided) and the faculty member’s report, before issuing a finding. The finding is either that the accusation has been substantiated, or that it has been found not to be.

Graduate students may appeal the finding to the Dean of the College of Arts and Sciences. If the finding is upheld, or if the student does not appeal it, the chair will issue a sanction. The sanction is final and may not be appealed.

1.17. Grading and GPA (Grade Point Average) Calculation

Each professor has their own grading standards. The standards for a specific course will always be included in the syllabus. If information is missing, talk to your professor or consult with the chair.

All final grades for classes will be letter grades (A+, A, A-, etc.) Each grade is worth a set number of grade points, as shown below in the table below.

Grade	A+	A	A-	B+	B	B-	C+	C	C-	F
Points	4.0	4.0	3.7	3.3	3.0	2.7	2.3	2.0	1.7	0

To calculate your GPA, multiply the credits awarded for completion of the course by the grade points you earned and add all these scores up. Then divide that total by the total number of credits awarded to get your GPA.

Example:

A student completed four 3-credit courses and earned 2 As, an A- and a B+. An A is worth 4.0 points, so $4.0 \times 3 = 12$. An A- is worth 3.7 points, so $3.7 \times 3 = 11.1$. Lastly, a B+ is worth 3.3 points, so $3.3 \times 3 = 9.9$. Adding them up yields a total of 45 points. Divide that by 4 courses \times 3 credits/course = 12 credits, and you get a GPA of 3.75.

1.18. Appealing a Grade

The instructor of the course on which you are graded is the only person who determines your grade.

If you disagree with the grade you received, you may reach out to the instructor and ask for clarification. If the instructor agrees with your reasoning, they may request your grade to be updated. If they disagree with your reasoning, your grade will remain unchanged.

There are no other faculty members or administrators who can override a grade, or who can compel a faculty member to do so.

1.19. Retaking a Class

It is possible to retake a class. If it is a class that you attempted previously and failed, you can just register for it. However, in this case, refer to section 3.2 Academic Probation on page 6.

If you wish to re-take a class to earn a higher grade, you must obtain chair's approval to do so.

In both cases, it is important to know that all attempts at taking a course will be listed on your transcript. Once a grade has been awarded, it will be part of the permanent record.

You will only receive credit for a course once. In other words, re-taking a class does not get you closer to the total number of credits required for graduation (120 credits for undergraduate students, 30 credits for graduate students).

In the calculation of your grade point average, only the most recent attempt at completing a class will be factored into your grade.

In other words, a student who completed four courses and who earned an A, a B+ and a C have earned nine credits and will have a GPA of $(4.0 \times 3 + 3.3 \times 3 + 2.0 \times 3) / 9 = 3.1$. If that student retakes the course for which they earned a C and now earns an A-, the new GPA will be $(4.0 \times 3 + 3.3 \times 3 + 3.7 \times 3) / 9 = 3.67$. However, the student will still only have earned nine credits.

International students: always consult with International Services before re-taking a course!

1.20. Incomplete Grades

Instructors may occasionally assign an Incomplete grade at the end of a semester. An Incomplete grade means that the student has been given some extra time to complete course work before a final grade is determined.

Incomplete grades may only be given in exceptional circumstances, and only if there is a reasonable expectation that the student can complete the course satisfactorily in a relatively short period of time.

The determination to issue an Incomplete grade is at the discretion of the instructor. The instructor's decision is final and cannot be appealed.

If an instructor awards an Incomplete grade, they will also set specific terms to turn the Incomplete into an actual letter grade. Generally, it means that a student gets some extra time (weeks, not months) to finish work.

Incomplete grades may only be issued to students who are in good academic standing. In other words, students who are on probation will not be eligible to receive an Incomplete grade.

Students may have no more than one calendar year after the end of the semester in which the grade was given to resolve an Incomplete. Unresolved Incompletes convert to a grade of F after this time.

A student will not graduate when they have unresolved complete grades on their transcript. All Incompletes must be resolved prior to graduation.

1.21. Participating in Research

Students can participate in research projects run by faculty members. In some cases, that participation can be for-credit, and in other cases, it may be on a voluntary basis. Extensive research projects may be considered as thesis projects and may satisfy capstone requirements.

If research leads to publications in peer-reviewed journals or at conferences, some form of cost sharing between the presenter and the university may be available. However, the exact conditions change from year-to-year, and funds are not guaranteed to be available.

Graduate students are welcome to apply to individual faculty members to inquire about research opportunities.

1.22. Internships

All students are eligible to take internships. International students must consult with the Office of International Services to determine if they are eligible under their visa requirements.

To determine if you are eligible for a for-credit internship, please consult the following criteria:

1. The internship must have a fixed duration that aligns with an academic term, or fully falls within an academic term. Summer internships may start at the start of Summer 1 and should conclude before the start of the Fall semester.
2. The internship must have clearly stated learning goals which align with the major.
3. All internships must have an internship supervisor at the hosting organization. The supervisor must be known to the Department.
4. Students on internships must submit progress updates via Moodle every other week.
5. Students on internships must submit a written report via Moodle at the conclusion of their internship.
6. Students on internships must register for the credits associated with the internship (and pay the tuition).
7. Internships can count as an elective course in the major, but they will not be able to replace a core class.

Furthermore, the internship must be pre-approved by the Chair of the department. Approval will be given if the Chair determines that criteria listed above are met sufficiently.

The [Career Center](#) can support students with finding internship placement opportunities.

The final grade will be determined as follows:

- 30% Internship supervisor assessment of work
- 30% Status updates

- 40% Faculty adviser assessment of work (based on report and poster)

You can earn at most three credits in internships during your degree program.

Generally, a full-summer (10-12 weeks) full-time internship (35-40 hr/wk) will be considered a 3-credit initiative.

To start the process, please complete the [Mathematics and Computer Science For-Credit Internship Intake Form](#) and email it to mathcs@adelphi.edu from your Adelphi email account.

1.23. Applying for Graduation (Graduation Clearance)

In the term during which you expect to complete your program of study, you must request graduation clearance through the CLASS system. CLASS is available through eCampus. In CLASS, please access My Graduation, and then follow instructions.

Upon receipt of your graduation clearance request, the chair will review your case and make one of the following determinations:

- Accept for graduation
- Accept for graduation pending grades (this is the most common)
- Deny graduation during this term

1.24. Commencement

Graduation clearance is the process by which we determine if you are ready to receive your degree. Commencement is the formal ceremony in which you walk across stage in cap and gown. It is a separate registration, and participation is optional. There is only one Commencement date per year, and it is generally towards the end of May.

You are allowed to participate in the May commencement ceremony in the academic year during which you graduate. That means that if you expect to graduate in the Summer, you will participate in the Commencement ceremony in May of the same year. If you graduate in December, you are eligible to walk in the following May.

1.25. Graduating Student Awards

The Department of Mathematics and Computer Science may, at its discretion, award graduation prizes. These honorific prizes do not include a financial component.

- Each year, zero or more students may be awarded the *John Kreitner Award for Excellence in Mathematics*. Recipients will be outstanding undergraduate students majoring in Mathematics.
- Each year, zero or more students may be awarded the *Mary Louise Buchanan Award*. Recipients will be outstanding undergraduate students majoring in Computer Science.

To receive a prize, students must be nominated by faculty members, and all full-time faculty members in the departments must unanimously agree to award them.

In addition to the named awards, departmental honors may be bestowed on graduating students. The criteria for departmental honors are determined each year by the full-time faculty members in the department.

1.26. Dropping and Withdrawing Courses

Until the start of the semester, you may remove a course from your schedule. After the first day of classes, during the first two weeks of the semester, you may also Drop a course. If you drop a course, it will not show on your transcript and you will not receive a grade. The date of the last day you may drop a course is posted to Adelphi's [Academic Calendar](#) web page, and changes from term to term.

After the last day to drop a course, it is still possible for you to choose to not continue a course. This is known as a Withdraw. The deadline to withdraw is close to the end of the term, and is also posted to the Academic Calendar. Classes from which you withdraw will not affect your grade point average, but they will be listed on your academic transcript. There are some situations under which you are not able to withdraw. Consult with your adviser for more information.

To withdraw from a course, use the [Schedule Form](#). Provided that you submit the form before the date of the last day to withdraw, no special approvals are needed. Just complete the form and bring it to the One-Stop Student Services Center.

Note that withdrawing from a course has the potential to affect financial aid, particularly if the remaining number of credits you are taking is less than 12 (the number of credits required for full-time status). For more information, consult with the One-Stop Student Services Center before you withdraw.

International students: before dropping or withdrawing, always consult with International Services to ensure that you are within the limits of your visa!

1.26.1. Medical Withdrawal

Students who have been faced with serious medical issues (physical health or mental health), and who are able to provide documentation by a licensed healthcare provider, may be eligible to retroactively withdraw from classes. In such a situation, the withdrawal is absolute and will not reflect on the transcript.

Each situation is different. For more information, consult with the [Office for Academic Services and Retention](#) and with the Dean of the College of Arts and Sciences.

1.27. Catalog Years

Each program of study is specific to the year in which you first start taking graduate classes. If the program of study changes before you graduate, you are still considered under the program as it was in effect when you started.

Students may request to transition to a newer catalog year. Discuss your request with the chair of the department, and they'll provide you with the appropriate paperwork.

1.28. Petitions

It is possible to request deviations from (almost) all policies. Typical examples include late adds, drops, or withdrawals. However, almost all academic policies can be appealed. Such an appeal is called a petition.

Petitions can only be made in writing, and begin with the Dean of the College of Arts and Sciences. For more information, see <https://www.adelphi.edu/academic-resources/academic-petitions/>.

1.29. Religious Observances

Adelphi University welcomes diversity in its community, and respects various religious observances. This policy sets forth guidance for members of the University to take such religious observances into consideration regarding course examination and assignment schedules.

Adelphi University requires that students who anticipate being absent, due to their religious observance, will notify their professors at the start of the semester. This will allow the faculty to take these observances into consideration in light of their course exam and assignment schedules.

In situations where a religious observance cannot be determined at the start of the semester, the student must notify their instructor as soon as feasible. Note that excused absence does not imply a waiver of the activities planned for that day!

2. For Undergraduate Students

2.1. Programs of Study

To graduate with an undergraduate degree, students must complete all General Education requirements, all major requirements, earn at least 120 credits, and maintain a grade point average of 2.0.

2.2. General Education

All undergraduate students must complete Adelphi's PATH requirements. More information can be found at <https://www.adelphi.edu/path/>. Use the following worksheet to keep track of your progress to graduation.

All programs provide some of the general education requirements as required courses. The remainder are freely chosen from classes bearing the appropriate designation. Your adviser can assist you with identifying the classes that most interest you.

Some courses are able to carry multiple designations. If that is the case, you can apply the same course to multiple requirements.

PATH requirements:

Requirement	Course Planned or Taken	Comments
First year experience	First Year Experience	Must be taken in first year
English writing	ENG 107 Art and Craft of Writing	Must be taken in first year
Art (class 1)		
Art (class 2)		
Humanities (class 1)		
Humanities (class 2)		
Mathematics, Computing and Logic (one class)		
Natural Sciences (one class)		
Social Sciences (class 1)		
Social Sciences (class 2)		
Quantitative Reasoning (class 1)		
Quantitative Reasoning (class 2)		
Global Learning / Civic Engagement (class 1)		
Global Learning / Civic Engagement (class 2)		
Information Literacy (one class)		
Communications Oral (one class)		
Communications Written (one class)		

2.3. Language Requirement

Only students working to earn a BA degree will need to complete a language requirement. In our department, that is only the BA in Mathematics. For more information, see <https://www.adelphi.edu/path/language-requirement/>

2.4. GPA Requirement

You must earn a grade point average of 2.0 or above to graduate. If your GPA is below that, you will not receive a diploma and you will have to retake courses to bring up your GPA. This cannot be appealed.

2.5. Classes With Grades Below C-

Most programs in the Department of Mathematics and Computer Science require that students may not have more than one grade of C- or below in major classes. If you do have two or more classes below a C-, you will have to retake those courses.

2.6. Honors College Students and Levermore Global Scholars

Honors College students and Levermore Global Scholars have slightly different requirements. If you are a member of any of these programs, consult with that program's representative and let your adviser know when you are course planning.

Both programs provide alternative PATH requirements, and may impose additional requirements.

2.7. Major Requirements

To graduate, you must complete all major requirements for your program of study. [DegreeAudit](#) and the [Bulletin](#) will provide all details. Consult your adviser when in doubt. The Bulletin is generally authoritative. Unless changed (see section 1.27 Catalog Years), the bulletin that was in effect when you declared your program of study applies to you.

2.8. Tracks

Students in the BS in Computer Science must declare at least one specialization track by the end of their first year, and must complete all specialization track requirements. See section 2.9.1 BS in Computer Science for more details.

2.9. Undergraduate Majors

The Department of Mathematics and Computer Science offers the following undergraduate majors:

- BA in Mathematics
- BS in Mathematics
- BS in Computer Science
- BS in Information Systems
- BS in Statistics

2.9.1. BS in Computer Science

Structure Of The Program

The BS in Computer Science consist of 44 core credits and of a variable number of credits determined by the specialization track(s) chosen by the student. The core classes include:

- (4 credits) MTH 141 Calculus I
- (3 credits) CSC 156 Discrete Structures
- (4 credits) CSC 171 Intro to Programming (currently offered in Python. Students must complete lecture and lab to receive credit)
- (4 credits) CSC 175 Intermediate Programming (currently offered in Java. Students must complete lecture and lab to receive credit)
- (1 credits) CSC 190 Computer Science Orientation Seminar
- (3 credits) PHI 232 Computer & Information Ethics
- (3 credits) CSC 263 Database Management Systems
- (3 credits) CSC 273 Data Structures (currently offered in Java)
- (3 credits) CSC 301 C and C++ programming
- (3 credits) CSC 344 Algorithms and Complexity
- (3 credits) CSC 450 Computer Networks
- (3 credits) CSC 453 Operating Systems
- (1 credits) CSC 481 Senior Seminar I (must be taken in senior year)
- (3 credits) CSC 482 Senior Seminar II (must be taken in senior year)
- (3 credits) CSC elective

Specialization Tracks

All students majoring in the BS in Computer Science must declare at least one elective track. The following tracks are available (listed alphabetically).

Applied Sciences Track

Students who follow the applied sciences track will gain the knowledge necessary to pursue areas in the applied sciences, such as applied mathematics and computer engineering.

- (4 credits) CHE 111 General Chemistry I
- (4 credits) PHY 113 Physics For Science Majors I
- (4 credits) PHY 114 Physics for Science Majors II
- (4 credits) MTH 142 Calculus II
- (4 credits) PHY 211 Mathematical Methods in Physics I
- (4 credits) MTH 243 Calculus III
- (3 credits) MTH 244 Introduction to Ordinary Differential Equations
- (3 credits) CSC 370 Computer Architecture and Organization

Cybersecurity Track

Students who follow the cybersecurity track will learn the practice of defending information from unauthorized access, use, disclosure, disruption, modification, perusal, inspection, recording, or destruction.

- (3 credits) MTH 114 Statistics for Natural Sciences
- (3 credits) MTH 225 Statistics and Data Analytics
- (3 credits) CSC 280 Introduction to Cybersecurity
- (3 credits) CSC 282 Network and Cloud Security
- (3 credits) CSC 335 Introduction to Machine Learning
- (3 credits) CSC 381 Applied Cryptography
- (3 credits) CSC 382 Application Security

Foundations of Computer Science Track

Foundations of Computer Science is a track that prepares students who are interested in theoretical computer science, and who might pursue graduate studies in a doctoral program after they complete their undergraduate work.

- (4 credits) MTH 142 Calculus II
- (4 credits) MTH 253 Linear Algebra
- (3 credits) CSC 272 Principles Of Programming Languages
- (3 credits) CSC 370 Computer Architecture and Organization
- (3 credits) MTH 201 Bridge to Higher Mathematics

Choose one of the following three options:

- (3 credits) MTH 351 Number Theory
- (3 credits) MTH 355 Symbolic Logic
- (3 credits) MTH 384 Computational Mathematics

Graphics Programming Track

Students who follow the computer graphics programming track will learn how to design and build computer applications such as Extended Reality experiences and computer games. Students learn to design and implement 2D and 3D graphics manipulation methods and techniques.

- (4 credits) MTH 142 Calculus II
- (3 credits) CSC 237 Game Programming
- (4 credits) MTH 250 Multivariable Mathematics
- (3 credits) CSC 333 Computer Graphics and Image Processing

Choose one of the following two options:

- (3 credits) CSC 233 Graphical User Interface Programming
- (3 credits) CSC 360 Human-Computer Interaction

Choose one of the following two options:

- (3 credits) CSC 337 3D Game Programming
- (3 credits) CSC 418 Extended Reality Engineering

Software Engineering Track

Students who follow the software engineering track will research, design, develop, and test operating systems-level software.

- (4 credits) MTH 142 Calculus II
- (3 credits) MTH 225 Statistics and Data Analytics
- (3 credits) CSC 272 Principles Of Programming Languages
- (3 credits) CSC 370 Computer Architecture and Organization
- (3 credits) CSC 440 Software Engineering

Choose one of the following two options:

- (3 credits) CSC 233 Graphical User Interface Programming
- (3 credits) CSC 360 Human-Computer Interaction

Choose one of the following two options:

- (3 credits) CSC 338 Mobile Application Programming
- (3 credits) CSC 350 Web Application Programming

2.9.2. BS in Information Systems

The Information Systems program prepares students to excel at analyzing, (re)designing, and managing information systems and information-based business processes. The IS student will be able to support organizations in data-driven decision-making. The interdisciplinary nature of this

program applies theory and practice established by computer scientists to solve enterprise problems using business administration practices.

The BS in Information Systems is a 53 credit program that is offered jointly with the Willumstad School of Business. Of the 53 credits, nine are elective course and the remainder are required.

Choose one:

- (3 credits) CSC 101 Explorations in Computer Applications and Technology
- (3 credits) CSC 170 Intro to Comps and Their Applications

All of:

- (3 credits) MTH 110 Precalculus for Business
- (4 credits) CSC 171 Intro to Computer Programming (currently offered in Python; students must complete lecture and lab to receive credit)
- (4 credits) CSC 175 Intermediate Programming (currently offered in Java. Students must complete lecture and lab to receive credit)
- (1 credits) CSC 190 Computer Science Orientation Seminar
- (3 credits) MTH 225 Statistics and Data Analytics
- (3 credits) BUS 250 Business Law I
- (3 credits) MGT 262 The Art, Science and Practice of Management
- (3 credits) CSC 263 Database Management Systems
- (3 credits) MKT 280 Marketing
- (3 credits) DSC 471 Systems Analysis and Design
- (1 credits) CSC 481 Senior Seminar I (must be taken in senior year)
- (3 credits) CSC 482 Senior Seminar II (must be taken in senior year)
- (3 credits) COM 551 Cyber Law & Ethics

2.9.3. BA in Mathematics

The B.A. in mathematics is designed to give students a broad understanding of mathematics and a strong liberal arts foundation. This degree is designed for students who wish to have a comprehensive foundation in mathematics or students wishing to pursue a career in mathematics education.

One of:

- (3 credits) MTH 103 Math For Elementary School Teachers Credits: 3.00
- (3 credits) MTH 220 Mathematics for Secondary School Teachers Credits: 3.00

All of:

- (1 credits) MTH 190 Mathematics Orientation Seminar
- (4 credits) MTH 141 Calculus I
- (4 credits) MTH 142 Calculus II

- (3 credits) MTH 201 Bridge to Higher Mathematics
- (4 credits) MTH 250 Multivariable Mathematics
- (3 credits) MTH 321 Geometry I
- (3 credits) MTH 361 Introduction To Probability Theory
- (3 credits) MTH 362 Mathematical Statistics
- (3 credits) MTH 431 Analysis
- (3 credits) MTH 457 Abstract Algebra
- (1 credits) MTH 471 Mathematics Senior Seminar I
- (3 credits) MTH 472 Mathematics Senior Seminar II
- (3 credits) CSC 161 Computer Applications in Mathematics

2.9.4. BS in Mathematics

All of:

- (1 credits) MTH 190 Mathematics Orientation Seminar
- (4 credits) MTH 141 Calculus I
- (4 credits) MTH 142 Calculus II
- (4 credits) CSC 171 Intro to Comp Programming (Lecture and Lab)
- (3 credits) MTH 201 Bridge to Higher Mathematics
- (4 credits) MTH 253 Linear Algebra
- (4 credits) MTH 243 Calculus III
- (3 credits) MTH 431 Analysis
- (3 credits) MTH 457 Abstract Algebra
- (1 credits) MTH 471 Mathematics Senior Seminar I
- (3 credits) MTH 472 Mathematics Senior Seminar II

One of:

- (3 credits) MTH 432 Analysis II
- (3 credits) MTH 458 Abstract Algebra II
- (3 credits) MTH 362 Mathematical Statistics

And:

- 12 credits in mathematics electives

2.9.5. BS in Statistics

Statistics is the art and science of making sense of data. The study of statistics provides students with an understanding of probability, mathematical statistics, data analysis, data science, and the analysis of big data.

Choose one:

- (1 credits) MTH 190 Mathematics Orientation Seminar
- (1 credits) CSC 190 Computer Science Orientation Seminar

Choose one:

- (4 credits) MTH 250 Multivariable Mathematics
- (4 credits) MTH 253 Linear Algebra

All of:

- (4 credits) MTH 141 Calculus I
- (4 credits) MTH 142 Calculus II
- (4 credits) CSC 171 Intro to Comp Programming (Lecture and Lab)
- (4 credits) CSC 175 Intermediate Computer Programming (Lecture and Lab)
- (3 credits) CSC 263 Database Management System
- (3 credits) MTH 361 Introduction To Probability Theory
- (3 credits) MTH 362 Mathematical Statistics
- (3 credits) MTH 363 Mathematical Modeling and Data Analysis
- (3 credits) MTH 225 Statistics and Data Analytics
- (3 credits) MTH 226 Data Visualization
- (3 credits) MTH 364 Introduction to Regression Analysis and Big Data Analytics
- (3 credits) MTH 401 Experimental Design
- (1 credits) MTH 471 Mathematics Senior Seminar I
- (3 credits) MTH 472 Mathematics Senior Seminar II
- (2 credits) MTH 475 Statistics and Data Analytics Internship I
- (2 credits) MTH 476 Statistics and Data Analytics Internship II
- (3 credits) PHI 232 Computer & Information Ethics

2.10. Minors

The Department of Mathematics and Computer Science offers the following undergraduate minors. Minors are not required but may be added to any other major.

2.10.1. Computer Science Minor

All of:

- (1 credits) CSC 190 Computer Science Orientation Seminar
- (4 credits) CSC 171 Intro to Programming
- (4 credits) CSC 175 Intermediate Programming
- (3 credits) CSC 156 Discrete Structures
- (3 credits) CSC 301 C and C++ Programming

And:

- At least two additional 3-credit courses numbered 174 or higher in Computer Science.

2.10.2. Cybersecurity Minor

The Minor in Cybersecurity provides students with an opportunity to explore different factors that influence cybersecurity. Students will learn how computer systems work, how information systems are designed, how organizations prepare for potential disruptions in service, and how the law affects and influences cybersecurity.

Due to a significant overlap with the materials that are studied in the major track, students who have declared the Information Security Track of the Computer Science major are not eligible to enroll in this minor.

2.10.3. Mathematics Minor

All of:

- (1 credits) MTH 190 Mathematics Orientation Seminar
- (4 credits) MTH 141 Calculus I
- (4 credits) MTH 142 Calculus II
- (3 credits) MTH 201 Bridge to Higher Mathematics

One of:

- (4 credits) MTH 250 Multivariable Mathematics
- (4 credits) MTH 253 Linear Algebra

2.10.4. Scientific Computing Minor

This minor, housed in the Department of Mathematics and Computer Science, provides undergraduate students, primarily those who major in sciences such as biology, chemistry, physics, and computer science, with a solid background in computational techniques and data analysis skills to further prepare them to pursue an advanced degree in their major discipline. The minor is also appealing to computer science students who are looking towards a career in scientific computing.

All of:

- (4 credits) CSC 123 Survey of Scientific Computing
- (3 credits) MTH 225 Statistics and Data Analytics

One of:

- (3 credits) MTH 145 Calculus for Scientific Computing
- (4 credits) MTH 142 Calculus II

One of:

- (4 credits) CSC 175 Intermediate Computer Programming
- (4 credits) PHY 225 Applied Problem Solving in MATLAB

And:

- 6 or more credits of sufficiently advanced courses with computational content within the student's major, which may include special topics courses and/or independent studies, subject to approval of the department chair of the student's major.

2.10.5. Statistics and Data Analytics Minor

The Department of Mathematics and Computer Science offers a minor in Statistics and Data Analytics. This minor provides both the theoretical and applied foundation for students interested in a career in either Statistics and/or Data Analytics.

- (4 credits) CSC 171 Intro to Programming
- (4 credits) CSC 175 Intermediate Computer Programming
- (3 credits) MTH 225 Statistics and Data Analytics
- (3 credits) CSC 263 Database Management Systems
- (3 credits) MTH 363 Mathematical Modeling and Data Analysis
- (2 credits) MTH 475 Statistics and Data Analytics Internship I
- (2 credits) MTH 475 Statistics and Data Analytics Internship II

2.10.6. Video Game Design Minor

The minor in Video Game Design introduces students to the components of game design from the perspectives of Art, Film, and Computer Science. The program culminates in a course in which students collaborate in creative teams to develop and produce an original video game.

One of:

- (3 credits) ART 105 Introduction to Digital Art
- (3 credits) ART 241 Introduction to Digital Imaging

All of:

- (3 credits) CSC 137 Intro to Video Game Programming
- (3 credits) ART 295 Visual Narrative I
- (3 credits) COM 309 Writing the Short Screenplay
- (3 credits) COM 345 Animation
- (3 credits) CSC 387 Video Game Development Workshop
- (3 credits) One elective

2.11. 4+1 Pathways

A 4+1 pathway is not a separate degree; rather it is an accelerated pathway through an undergraduate degree and a graduate degree.

Although each pathway is slightly different, they operate on the same premises:

- 1) Students take 9-12 credits of graduate courses while they are still undergraduate students. As long as the classes are passed with a B-grade or higher, they will apply to the undergraduate degree and the graduate degree.
- 2) To be eligible for the 4+1 pathway, you must maintain a GPA of at least 3.25. This is assessed when you join the pathway, and upon graduation.
- 3) You may apply to the accelerated pathway once you have earned at least 30 undergraduate credits
- 4) Joining a 4+1 pathway creates no obligations. If you decide to not continue your final graduate year after earning your undergraduate degree, you will still graduate and receive your Bachelor's.

Contact the department chair to apply to a 4+1 pathway.

2.11.1. BS in Computer Science to MS in Computer Science

Students in the BS in Computer Science are eligible to apply for joining the 4+1 pathway that leads to the MS in Computer Science. Typical course substitutions that take place are:

- CSC 440 will be replaced with CSC 530
- CSC 453 will be replaced with CSC 553
- CSC 280 may be replaced with CSC 650
- CSC 380 may be replaced with CSC 665
- MTH 601 may be taken as an undergraduate elective
- CSC 565 may be taken as an undergraduate elective

Exact arrangements will be made on case-by-case basis. All substitutions must be approved by the chair.

2.11.2. BS in Information Systems to MS in Computer Science

Students in the BS in Information Systems are eligible to apply for joining the 4+1 pathway that leads to the MS in Computer Science if they have completed the Computer Science minor.

Typical course substitutions that take place are:

- DSC 471 will be replaced with CSC 530
- CSC 650 may be taken as an undergraduate elective
- CSC 665 may be taken as an undergraduate elective
- MTH 601 may be taken as an undergraduate elective

Exact arrangements will be made on case-by-case basis. All substitutions must be approved by the department chair.

2.11.3. BS in Information Systems to MS in Supply Chain Management

Students in the BS in Information Systems are eligible to apply for joining the 4+1 pathway that leads to the MS in Supply Chain Management. For more information, contact the program director of that program.

2.12. Working as a Teaching Assistant

The Department of Mathematics and Computer Science hires students into paid positions to work as lab assistants, tutors, and/or graders. These students are referred to as teaching assistants.

To qualify as a teaching assistant, you must maintain a strong transcript and apply each semester. Towards the end of the semester, or near the start of the upcoming term, an announcement will be sent by email. That announcement will contain specific instructions, and describes the positions that are available.

Note that applying is not a guarantee that you will be placed in a position!

TA positions pay minimum wage. At the time of writing, that is \$16 per hour.

2.13. Change of Major

Students may change their major using the [Change of Major Form](#). The form must be signed by the Chair of the Department that offers the program that you wish the change to. In some situations, the student's current adviser must also sign the form.

2.14. Double Major

It is possible to add a second major to a program of study using the [Change of Major Form](#). The form must be signed by the Chair of the Department that offers the program that you wish to add. The student's current adviser must also sign the form.

When adding a second major, the student will still only receive one degree when graduating. The degree on the diploma is the one associated with the primary major. Both majors, including all classes taken, will be listed on the transcript.

2.15. Adding or Removing a Minor (or Track)

It is possible to add or remove minors (or a Track for the BS in Computer Science) using the [Change of Major Form](#). The form must be signed by the Chair of the Department that offers the program that you wish to add. The student's current adviser must also sign the form. It is not mandatory that student declare a minor.

The student will still only receive one degree when graduating. The degree on the diploma is the one associated with the major. The major and all minors, including all classes taken, will be listed on the transcript.

2.16. Probation

Students who do not make sufficient academic progress will be placed on Probation. A probationary status is meant to support students in their academic career and to prevent them from failing out of the program.

If an undergraduate student's GPA drops below 2.5, they will be placed on Initial Probation. While under probation, a student may not take more than 13 credits per semester. In addition, some forms of financial aid may be affected, as are eligibility to participate in student activities such as student government, intercollegiate athletics, fraternities, sororities and other student organizations.

Students placed on academic probation must remedy their academic deficiencies within the next regular semester. If the deficiency is not resolved in one semester, a student will be placed on final probation. In addition to the previous restrictions, a student will need to actively work with their adviser to determine their future in the program. A student who does not significantly improve while on final probation will be dismissed from the university.

2.17. Joint Degree Programs and Preprofessional Programs

Adelphi has partnerships with several other institutions to establish joint degree programs and preprofessional programs. More information can be found at <https://www.adelphi.edu/program/undergraduate/joint-degrees/>.

For computer science students: the Applied Sciences track in the BS in Computer Science was specifically designed for the joint degree programs with Columbia University Engineering. See https://catalog.adelphi.edu/preview_program.php?catoid=31&poid=15243&returnto=1736 for more details.

2.18. Studying At Another Institution

Once you are an Adelphi student, you are expected to complete all remaining courses at Adelphi. Under certain circumstances, you may choose to take some courses elsewhere, and then transfer the credits to us.

To do so, you must [obtain written permission](#) ahead of time. This permission cannot be given retroactively.

FIRST: find the course you wish to take and obtain a signature from the chair of the corresponding department at Adelphi. This ensures that the course you take at the other institution meets our requirements, and that credits will transfer over if you score well enough.

SECOND: obtain approval from your adviser and from the chair of Math & CS. Permission will be granted if one or more of the following situations apply:

- 1) You need extra credit to graduate on time or move to the next class.
- 2) You need a pre-requisite for major classes to keep pace for graduation.
- 3) You demonstrate better academic success with 12-13 credits per semester than with 15-17.
- 4) You want to take a class that is not offered at Adelphi University.

THIRD: the Dean's Office and the Office of Academic Services and Retention must approve your request too. They will ensure that:

- 1) You cannot take any courses at a 2-year college if you have 64 credits or more at the start of the term in which you want to take credits elsewhere.
- 2) Your final 30 credits must be taken at Adelphi.
- 3) Learning Goals cannot be met by transfer credits.

Once you have all approvals, keep in mind that:

- 1) The number of credits awarded by the Visiting School will be the number of credits Adelphi will award.
- 2) Grades transferred in are not included in Adelphi's GPA. That means that you cannot retake a class elsewhere and then use it to boost your Adelphi GPA.
- 3) To receive credit at Adelphi, you must receive a grade of C- or better.

After completion of the study away process, you must transfer the credits back to Adelphi's Registrar.

2.19. AP (Advanced Placement) Credit

Adelphi accepts Advanced Placement Credits taken by a student while in high school. Minimum scores and course equivalencies vary by AP topic. A recent list can be consulted at the [Advanced Placement Credit page](#) on our web site. To receive AP credit, a student must direct the College Board to send the test score report to Adelphi.

2.20. Pre-College Credit

Adelphi accepts college credits from other institutions taken by a student while in high school. To receive credit for college classes taken through high school, a student must direct the college that awarded the credits to transfer them to Adelphi.

2.21. Calculus 1 Placement Assessment

All students who wish to take MTH 141 Calculus 1 must complete MTH 140 Precalculus. MTH 110 is not a sufficient prerequisite. The only exceptions to this rule are:

1. To be placed in MTH 141 the student must have at least an ACT Math score of 26, or an SAT Math score of 640, and these scores must be known to Adelphi, *or*
2. A student who has scored 2 or 3 on AP Calculus AB may be placed in MTH 141, *or*
3. A student who has scored a 4 or 5 on AP Precalculus may be placed in MTH 141, *or*
4. A student must pass a placement assessment administered by the Department.

High school precalculus/calculus courses that do not offer AP credit are insufficient for placement into Calculus 1.

3. For Graduate Students

3.1. Graduate Learning vs. Undergraduate Learning

Graduate learning is distinctly different than undergraduate learning. In an undergraduate program of study, your instructor will teach you all the main materials. They will provide you with practice problems, provide solutions and answers, and generally cover all the materials you need to learn in class. Most instruction is based on existing textbooks. Examinations and tests often focus on practical skills.

In contrast, graduate learning is guided learning. Your professor will discuss the main elements of the topic you are studying but will not go into depth in covering all of them. Instead, they will pick a few key concepts, and base a full lesson on them. Students are expected to be active participants in the learning experience. You must come to class prepared, having reviewed the readings prior to class. You should be ready to engage in discussion about the learned materials and ask questions if elements from the readings are unclear. Practice problems will be provided but are generally not discussed in detail during class times. Instruction is often based on multiple textbooks, peer-review publications in academic journals, and on industry publications. Examinations and tests focus on understanding, and less on skill.

As a graduate student, you must expect to spend approximately 2.5 hours each week on instructional time and an additional 7.5 hours per week on self-study, review, and work on assignments. These times are averages and approximations; the exact time commitment will vary from week to week and from course to course.

The Department of Mathematics and Computer Science offers one graduate degree programs. The MS in Computer Science is described in more detail in section 0 MS in Computer Science.
MS in Computer Science

The Graduate Program in Computer Science at the Adelphi University Department of Mathematics and Computers Science prepares students for careers in software engineering and in cybersecurity. The program may be completed full-time or part-time.

All graduate students in the Computer Science program will complete a program of study that consists of the following courses.

3.1.1. Foundational Computer Science Courses

- (4.0 credits) CSC 500 Computer Programming Bootcamp (blended)
- (4.0 credits) CSC 510 Algorithms and Data Structures Bootcamp (blended)
- (3.0 credits) CSC 520 Data Engineering Bootcamp (blended)

Based on a student's demonstrated readiness, foundational courses may be waived by the Chair of the Department or by the Program Director.

3.1.2. Core Computer Science Courses

All graduate students must complete each of the following courses.

- (3.0 credits) CSC 565 Database Management Systems (online or in-person)
- (3.0 credits) CSC 553 Operating Systems (online or in-person)
- (3.0 credits) CSC 644 Advanced Algorithms (online or in-person)
- (3.0 credits) CSC 645 Compiler Construction (online or in-person)

3.1.3. Elective Computer Science Courses

Students must complete at least 15 credits in the following courses. Elective credits may be chosen as a specialization track, or with chair's approval.

Software Engineering Track Electives

- (3.0 credits) CSC 530 Software Engineering (in-person only)
- (3.0 credits) MTH 601 Data Science (in-person only)
- (3.0 credits) CSC 678 Software Testing (in-person only)
- (3.0 credits) CSC 680 Topics in Computer Science (in-person only)
- (3.0 credits) CSC 575 Accessibility Seminar (in-person only)

Cybersecurity Track Electives

- (3.0 credits) COM 551 Cyber Law & Ethics (online only)
- (3.0 credits) CSC 620 Digital Forensics (online only)
- (3.0 credits) CSC 650 Cybersecurity Concepts (online only)
- (3.0 credits) CSC 665 Cybersecurity Techniques (online only)
- (3.0 credits) CSC 674 Cyber Threat Analysis (online only)

Free Electives

- (3.0 credits) CSC 633 Augmented and Virtual Reality
- (3.0 credits) CSC xxx Gamification

3.1.4. Capstone Courses

Students must choose one of the following:

- (3.0 credits) CSC 690 Capstone in Computer Science
- (4.0 credits) CSC 799 Graduate Thesis in Computer Science

3.1.5. Computer Science Sample Semester Sequences

A typical progression of a full-time student focusing on Software Engineering would look like:

Course	Fall 1	Spring 1	Fall 2	Spring 2
CSC 530	X			
CSC 565	X			
CSC 553	X			
CSC 645		X		
CSC 678		X		
CSC 575		X		
CSC 680			X	
MTH 601			X	
CSC 690				X
CSC 644				X

A typical progression of a full-time student focusing on Cybersecurity would look like:

Course	Fall 1	Spring 1	Fall 2	Spring 2
CSC 565	X			
CSC 553	X			
CSC 650	X			
CSC 665		X		
CSC 645		X		
COM 551		X		
CSC 620			X	
CSC 674			X	
CSC 644				X
CSC 690				X

3.1.6. Requirements for Admission to Graduate Study

4+1 Intake

Students joining the MS in Computer Science via a 4+1 pathway will take twelve credits of graduate instruction while they are still an undergraduate student. All courses completed with a grade of at least a B will be included on their undergraduate transcript and on their graduate transcript.

Once accepted into the 4+1 pathway, students will automatically matriculate into the graduate program upon completion of their undergraduate program of study. If students wish to opt out of completion of their graduate program, they must contact the chair of the department in their final undergraduate semester.

Students With a Qualified Undergraduate Degree

Students with an undergraduate degree in Computer Science from a U.S.-accredited four-year college, and who have achieved a grade point average of 3.0 / 4.0 will be accepted into the M.S. in Computer Science when they apply.

Students graduating from a program with which Adelphi University has signed an articulation agreement are eligible based on the terms of that agreement.

Adelphi University has several articulation agreements in place for students who earned degrees from non-US institutions and wish to join the MS in Computer Science. The requirements for admission are generally the same for international students as they are for domestic students. However, due to visa regulations, international students must expect to complete at least 32 credits, and possibly more, before they can graduate.

For fully qualified students, the requirement to pass the three foundational courses may be waived. The final decision to do so will be made at the discretion of the chair or the program director.

Students Without a Qualified Undergraduate Degree

Students who earned an undergraduate degree from a US-accredited four-year college, and who achieved a grade point average of 3.5 / 4.0, but who did not major in Computer Science will be considered for admission.

Students who earned an undergraduate computer science degree from a non-US-accredited institution and who demonstrate a similarly strong grade point average, will also be considered for admission.

Students who earned an undergraduate degree other than computer science, from a non-US-accredited institution, and who demonstrated a grade point average of 3.5 / 4.0 will be considered for admission.

All graduate students in the Computer Science program are expected to be fully proficient in computer programming and must have demonstrated mastery in several programming languages (Python and Java). A foundational knowledge of data structures and algorithms is also expected. Mastery may be demonstrated by college transcripts or by professional experience.

Those who do not have this knowledge may be conditionally admitted. As a condition for continuation in the program, these students must complete one or more of the foundational bootcamp courses prior to taking core classes, electives, or a capstone course.

The determination to admit, and if so, which bootcamps must be completed will be made by the chair or the program director at the time of application.

3.1.7. Requirements for Completion of the MS in Computer Science

The requirements for receiving a graduate degree in Computer Science from Adelphi University are:

1. Completion of at least 30 credits in graduate courses
2. Completion of 15 credits in Core classes
3. Completion of 15 credits in Elective classes
4. Completion of a Capstone
5. A minimum grade point average of 3.0 on graduation

3.1.8. Modalities for the MS in Computer Science

The MS in Computer Science is offered in three main modalities:

100% in-person. In-person students are expected to attend in-person classes for all courses that are offered in-person. In-person students may occasionally be permitted to take classes that are offered either online or in-person, but that is an exceptional situation. The student's adviser or the chair of the department will make that determination. In-person students are allowed to register for online courses if they are only offered online.

International students: always consult with International Services before they register for online courses!

100% online. Online students will take all their courses online and may not register for in-person classes. Online students may occasionally be permitted to take classes that are offered in-person only, but that is an exceptional situation. The student's adviser or the chair of the department will make that determination.

Hybrid online/in-person. This modality is only accessible for cohorted students who join the program via the UHub initiative. Further information may be obtained via the chair of the department.

3.1.9. Thesis vs. Capstone

All students must complete a capstone activity. The goal of the capstone activity is to demonstrate mastery of the entire spectrum of subjects, rather than in an individual course. The capstone requirement can be satisfied by taking CSC 690 Graduate Capstone in Computer Science in your final term (or earlier, if your adviser approves), or by completing a thesis.

A thesis is a written report based on your research. The thesis process typically takes a full year to complete and relies on active collaboration with faculty on research. Thesis projects are not guaranteed to be available.

If you prefer to write a thesis instead of completion of a capstone project, start that process as early as you can.

3.2. Academic Probation

Students may be placed on academic probation by the chair of the department. A student who is on probation is deemed to not be in good academic standing. Probationary status will be posted to CLASS but will not be included on an official transcript.

Students are placed on probation when they achieve insufficient academic outcomes, such as failing a course, or receiving multiple grades below a B in a single term, or either obtain a GPA of less than 3.0, or at risk of doing so. Probationary status for insufficient outcomes will be removed if student performance improves in subsequent terms.

Permanent probation is a special type of probation. Once assigned, it will not be revoked. Students are placed on permanent probation after their first violation of academic integrity rules.

While on probation, some actions become ineligible to you.

1. You may not withdraw from a course or receive an Incomplete grade while you are on probation.
2. You may not work as a graduate assistant in the College of Arts and Sciences while you are on probation.
3. You may not take more than nine credits per semester if you are an in-person student, or no more than six credits per term if you are an online student.
4. You must meet with your adviser at least twice per semester to discuss academic progress. After meeting with your adviser, you must notify the chair of the department that you did so and include a brief report of what was discussed.

3.3. Dismissal

Dismissal from the program of study is not a decision that is made lightly. However, it is a possible consequence in the following situations:

1. Students who receive additional probation while they are already on probationary status will be considered for dismissal.
2. Students who commit particularly egregious violations of academic integrity will be considered for dismissal.
3. Students who violate Adelphi's Code of Conduct may be considered for dismissal.

The chair of the department has the authority to dismiss students.

If a decision to dismiss is considered, the student is informed that such deliberations are taking place. They will be informed of the reason for consideration and will be given a chance to respond. After a decision is made by the chair of the department, a student may appeal that decision to the Dean of the College of Arts and Sciences.

3.4. Tuition and Scholarships

The tuition for graduate students is determined by the number of credits for which they register each term. The exact rate changes from year-to-year. Exact rates can be found at <https://www.adelphi.edu/aid/tuition-costs/graduate/>.

All scholarships and financial aid will be automatically offered to students when they receive their admission decision. There are no departmental scholarship funds available to offset the cost of tuition.

3.5. Graduate Assistantships

Occasionally, the Department of Mathematics and Computer Science will have paid opportunities for graduate students to work as graduate assistants. Graduate assistants support computer labs or may play a role in specific projects running in the department.

Graduate assistants are hired by the Chair of the department and appointments are for one semester at a time. Graduate assistantships are not guaranteed and may not always be available.

When graduate assistantships are available, all matriculated graduate students are welcome to apply.

3.6. Transferring Credits

A student who has earned graduate credits at another institution prior to joining Adelphi may petition to have these credits transferred to Adelphi University. Up to six credits may be transferred to your Adelphi transcript. Once a student has begun taking graduate courses at Adelphi, no further transfer credits will be accepted. The final 24 credits of the degree program must be earned at Adelphi University.

To submit your transfer credits for evaluation, please contact the chair of the department. We will accept transfer credits only for courses that are equivalent to the ones offered through our programs.

3.7. Continuous Matriculation

Students who wish to take a temporary leave of absence for non-medical reasons must register for Continuous Matriculation. A student who fails to take courses for one or more semesters is deemed to be inactive and will have to be readmitted to the program prior to their return.

4. For International Students

This section is informational only. Always consult with the Office of International Services (<https://www.adelphi.edu/is/>) regarding rules and regulations specific to your situation!

4.1. Attending Classes

Immigration regulations require an international student to physically attend class. A student who does not attend classes is considered to have unofficially withdrawn for status purposes. Failure to attend classes, or frequently arriving late or leaving early will jeopardize your status and may lead to revocation of your F-1 status. Consult with the Office of International Services for specific details.

4.2. Full Course of Study Requirement

You must maintain a full course of study each semester, which includes 9 credits for graduate and 12 credits for undergraduate students. Under certain circumstances, such as in your final graduation term, you may be authorized for a reduced course load (4.5 or 6 credits) to complete your program of study. Consult with the Office of International Services for specific details.

4.3. Dropping or Withdrawing from a Course

Dropping or withdrawing from a course which affects the number of credits you maintain may be a violation of status.

4.4. Online Courses

Degree seeking students are limited to one on-line class each semester. Non-degree students are not eligible for online courses.

4.5. Dismissal

An academic dismissal will result in the termination of your F-1 status. Consult with the Office of International Services for specific details.

4.6. Leave of Absence

Any break in studies, other than approved medical, is considered a break in status, resulting in the loss of your visa. Consult with the Office of International Services for specific details.

4.7. Employment and Internships

Employment eligibility is limited to on-campus, with some exceptions for required academic internships (CPT) or pre-completion OPT. An international student must not engage in any type of employment without prior authorization from International Services or USCIS. Consult with International Services for specific details.

4.8. CPT (Curricular Practical Training)

CPT is one type of practical training available to eligible F-1 students for a required internship or practicum that is an integral part of an established curriculum from a sponsoring employer through a written agreement with the student's school. CPT cannot be authorized for a student to obtain real-world experience or to build your resume. Consult with International Services for specific details.

4.9. OPT (Optional Practical Training)

OPT is one type of temporary work permission directly related to an F-1 student's major area of study. Eligible students can apply to receive up to 12 months of OPT employment authorization before completing their academic studies (pre-completion) and/or after completing their academic studies (post-completion). Consult the Office of International Services for specific details.

4.10. Travel

Travel is permitted during an official school break as per the university academic calendar, for students maintaining valid status, after securing appropriate travel documents. Students are not eligible to travel during the academic term. Consult with International Services for specific details.

4.11. Progression

Program progression means that you have successfully completed all academic requirements for your Adelphi University International (AUI) Accelerator program and are ready to begin a new educational level at Adelphi. This process is determined at the completion of the current term by the AUI Academic Director following a review of your final grades.

4.12. AUI (Adelphi University International)

A collaboration between Adelphi and Shorelight, AUI provides exclusive admissions services, academic and language support for students in eligible programs, prior to progression into Adelphi. AUI students are either pre-matriculation (MAP (Master's Accelerated Program) and Advanced MAP) or matriculated students (Direct). MAP and Advanced MAP students are NOT YET Adelphi students, but they may take one or two major courses per semester in anticipation of joining us. After completion of the MAP program(s), students become regular matriculated students and their engagement with AUI ends. As a consequence, MAP and Advanced MAP students are ineligible to work as graduate assistants.

5. Extracurricular Activities

5.1. ACM and ACM-W student chapters

Adelphi's CS department has active chapters of ACM and ACM-W. The Adelphi University ACM Student Chapter's mission is to cultivate interest and create a collaborative social environment for students interested in topics pertaining to the Computer Science, Information Systems, and the technology field.

For more information, see <https://myaulife.adelphi.edu/organization/acm>.

5.2. Upsilon Pi Epsilon Honors Society

The mission of UPE is to recognize academic excellence at both the undergraduate and graduate levels in the Computing and Information Disciplines. UPE is a member of the Association of College Honor Societies (ACHS) and has chapters in more than 300 colleges and universities in North America and overseas.

6. Available Resources

As a graduate student, you have extensive resources at your disposal. Unless specifically indicated, these resources are included in your tuition.

6.1. Student OneStop

Adelphi's Student Services Center provides students with a one-stop experience for enrollment, academic records, financial aid, billing, and account information. More information is available at <https://www.adelphi.edu/one-stop/>.

6.2. Adelphi Care Team

The Adelphi Care Team provides support, care, and guidance for students who could use some help dealing with everyday challenges associated with school or life, especially if you are unsure who to ask for assistance. More information is available at <https://www.adelphi.edu/care/>.

6.3. Career and Professional Development

The Office of Career and Professional Development supports students with career readiness and work-based opportunities. More information is available at <https://www.adelphi.edu/career-center/>.

6.4. Center for Academic Support and Enrichment

The Center for Academic Support and Enrichment (CASE) is dedicated to nurturing students' academic success at its core. The Center provides tutoring services and provides students with support in areas such as time management, studying, note-taking, research, critical thinking and academic writing. More information is available at <https://www.adelphi.edu/case/>.

6.5. Student Counseling Center

The Student Counseling Center provides comprehensive mental health, preventative and educational services to any student enrolled at Adelphi. Staffed by a psychiatrist, licensed clinical psychologists, social workers, graduate-level social work interns, and doctoral-level clinical psychology interns, the center can provide you with the services and support to help you define and accomplish your personal, academic, and professional goals. More information is available at <https://www.adelphi.edu/sccl/>.

6.6. Title IX coordinator

Discrimination, harassment, sexual misconduct and retaliation of any type will not be tolerated at Adelphi University. Upon notice, the University will act to end the discrimination, harassment or retaliation, prevent its recurrence, and remedy its effects on the victim and our community. To learn more about your rights, please visit <https://www.adelphi.edu/title-ix/>

6.7. Community Concerns and Resolution

Adelphi University is committed to providing an environment where everyone feels welcome, included and respected. We'll address your concern, keep you informed about the status of your report, let you know next steps, and guide you to people and resources that can help. For more information, please visit <https://www.adelphi.edu/concerns-resolution/>.

6.8. Public Safety and Transportation

The Office of Public Safety and Transportation ensures that everyone feels safe, secure and welcome here at Adelphi. The Panther Express provides shuttle bus transportation to nearby train stations, supermarkets, shopping and more. The Office also issues ID cards that allow access to specialized areas, and issues parking permits that allow for free parking on campus. For more information, visit <https://www.adelphi.edu/safety-transportation/>.

6.9. IT Help Desk

Adelphi's IT department serves the computing and multimedia needs of Adelphi University's students, faculty and staff by providing tech support and workshops. Knowledgeable experts are available through phone, email or chat. We also provide discounts for purchases of hardware or software. Please visit <https://www.adelphi.edu/it/> for more information.

7. Full-time Departmental Faculty and Administration

- Dr. Kees Leune, Chair and Associate Professor
- Dr. Lee Stemkoski, Associate Chair and Professor
- Mrs. Victoria Desiderio, Administrative Assistant

- Dr. Robert Bradley, Professor
- Dr. Tuval Foguel, Professor
- Dr. Robert Siegfried, Professor
- Dr. David Chays, Associate Professor
- Dr. Alireza Ebrahimi, Visiting Associate Professor
- Dr. Josh Hiller, Associate Professor
- Dr. Xiaoxing Liu, Associate Professor
- Dr. Sixia Chen, Assistant Professor
- Sung Kim, J.D., Assistant Professor
- Dr. Sukun Li, Assistant Professor
- Mónica Morales-Hernández, M.S., Assistant Teaching Professor
- Kristin Pepper, M.B.A., Assistant Teaching Professor
- Dr. Alem Turasie, Assistant Professor
- Dr. Anil Venkatesh, Assistant Professor
- Isabella Vitale, M.S., Visiting Assistant Professor
- Dr. Nara Yoon, Assistant Professor

A complete listing of all faculty associated with the Department of Mathematics and Computer Science program is available at <https://www.adelphi.edu/program/graduate/computer-science/faculty-staff/>.

8. Revision history

Summer 2024:

- Added Commencement section
- Added Honors thesis section
- Added Graduating student awards section
- Clarified Permission to Study Away
- Removed Applied Mathematics and Data Science (including 4+1)
- Consolidated Internship sections