Undergraduate Certificate Policy
Applies to the Undergraduate Certificates in the Department of Computer Science. Joint certificates may have additional policies.

The certificate program requires

1. A declaration of intent to be in the certificate program.
2. Required and elective courses to take.
3. A request for the certificate to be awarded.

Notes:

- Each certificate has some prerequisite background. This can be satisfied by having a related background or taking the designated courses. Most departmental majors will have the necessary background.
- The Computer Programming certificate cannot be awarded to departmental majors unless at least one course in the certificate is different from the major core requirements.
- Courses for the certificates can be taken for Satisfactory grade.

Declaring/Application into the Certificate Program

1. A student must declare intent for the certificate program and be accepted before the actual certificate award can be made.
2. A student applying for the certificate program must be a current UMSL undergraduate student (degree or non-degree seeking) with GPA at least 2.5 unless the certificate states otherwise. The request to enter the certificate program must be made with a CAS advisor.
3. A non-student must apply for admission to UMSL, possibly as a non-degree student, and be admitted before declaring the intent.

Courses in the Certificate Program

- Required (core) courses for the certificate are automatically approved for the certificate. Listed electives are automatically approved. Course substitutions and older courses must be approved by the Certificate Coordinator, as listed for each certificate.
- At least one course counted for the certificate program must be taken in or after the semester in which the student declares the certificate intent.
- Courses used for the certificate cannot be older than 3 years when the certificate is awarded.
- The same course can be used to satisfy degree programs and any number of certificates.
- A student without a computer science background/experience should contact the listed Certificate Coordinator for the specific certificate of interest to discuss the feasibility of taking the courses in the certificate. A student must have the following courses or equivalent, take them as prerequisites, or possess related background or experience:
Artificial Intelligence
At least basic calculus, introduction probability/statistics, and discrete structures such as Math 1100 or 1800, 1320, 3010
Data structures and computer algorithms such as Cmp Sci 2250

Computer Programming
At least college algebra with min B- such as Math 1030

Cybersecurity (Computer Science version)
At least basic calculus and introduction probability/statistics such as Math 1100 or 1800, 1320
Data structures and familiarity with command line processing in OS such as Linux, with scripting and tools, such as Cmp Sci 2250, 2750

Data Science
At least basic calculus and introduction probability/statistics such as Math 1100 or 1800, 1320
Introductory programming such as Cmp Sci 1250
Note that having computer algorithms, such as Cmp Sci 3130, makes the sequences easier to take and it opens more electives.

Internet and Web
Java programming, familiarity with data structures, such as Cmp Sci 2250, 2261

Mobile Apps and Computing
Familiarity with data structures, Java, and basic cybersecurity or networking concepts, such as Cmp Sci 2250, 2261, 3702 or 4730

Additional areas/courses may be needed depending on specifically chosen electives.

Certificate Award
1. The certificates are awarded using the same mechanisms as degrees. A student who has already declared and been admitted to the certificate program must contact the Certificate Coordinator no later than the semester during which the last course for the certificate is completed. The student applies for graduation through MyView. The certificate cannot be requested while no longer an undergraduate student.
2. Certificates are governed by the same rules as undergraduate degrees – at the time of the award the GPA of courses in the certificate, and the overall GPA must be at least 2.0 – unless the certificate states higher.
3. When awarded, a student will have the certificate added to the transcript. The student may also request a separate certificate document from the department by contacting the Certificate Coordinator.
Graduate Students

1. Graduate students cannot be awarded these certificates.

Advising Notes

- Every time a Certificate Coordinator rules a course that normally would not count in the certificate is to count (older courses, substitutes, non-listed electives), the decision for the course has to be submitted to the department chairperson. Once approved, exceptions or substitutions are then submitted to the degree audit office through the A&S advisor and associate dean.

- Any changes in the requirements must be approved by the Certificate Coordinator.