

The Computer Science Degree Planner (CSDP) system gives students the ability to completely plan out their MSU Denver computer science major and mathematics minor from beginning to end, course-by-course. It also allows computer science advisors at MSU Denver to assist students in their planning and to view useful statistical reports.

Before the CSDP system is described any further, it is first necessary to understand some objects in the domain.

Courses

Courses are defined as educational experiences that may take place online or in a physical classroom and have a predefined curriculum taught by authorized instructors. Courses start and terminate on predetermined dates, and may take place on a set schedule of days every week in a classroom, or a variable schedule outside of a classroom, in the case of an online course. Courses may or may not require textbooks for the student to purchase for curricular learning purposes. Courses are categorized by subject and differentiated from other courses in the same subject by name and number. Courses also have CRNs (unique numbers), section numbers (which differentiate multiple instances of the same course in the same semester), and a fixed number of credit hours that they fulfill when completed.

When a student finishes a course, they receive a letter grade. This grade may be F, D, C, B, A, or F-, F, F+, D-, D, D+, C-, C, C+, B-, B, B+, A-, A, A+, depending on the grading system being used. The grading system is decided upon by the instructor at the beginning of the course. Letter grades affect a student's overall grade point average (GPA).

Courses can hold 0 to a fixed limit of n students. This limit, n , is determined by the school administration before the semester starts. Once a course has n students in it, no more may join. In some cases, if there is high demand for a course, another *section* of it may be offered that has more spaces for students.

Semesters

A semester is a period of time starting and ending on predetermined dates during which courses may take place. A semester is simply a unit of time in which courses can be scheduled; students may not take courses outside of a semester. There are five possible semesters: spring, fall, summer, maymester, and winterim. These vary in length, with spring and fall being the longest and maymester and winterim being the shortest.

Year

A year is a standard unit of time defined by humans many standard units of time ago. It is equivalent to 365 days and may contain all five of the possible semesters. Semesters take place in years, just as courses take place in semesters.

Student

A student is a human being who has officially registered as a “student” at an educational facility -- in our case, MSU Denver. Students’ only role at MSU Denver is to learn course material as taught by instructors.

Advisor

An advisor is a human being who works for an educational facility -- in our case, MSU Denver -- and gives recommendations to students regarding which courses to take and when. Instructors are always advisors, but advisors aren’t always instructors.

Instructor

An instructor is a person who works for an educational facility -- in our case MSU Denver -- and teaches students course content. Instructors are also advisors.

Degree

A degree is a collection of courses that represent an educational curriculum for a given subject -- in the case of our product, computer science. A computer science degree has a number of upper-division computer science elective courses, a set of required computer science courses, some required general studies courses such as Public Speaking, and a set of mathematics and science courses. A computer science degree requires one *major* -- computer science -- and one *minor* -- mathematics.

Major