

## S2023 CS Catalog Changes with Rationale

1. Add MA-009, Calculus I, to the core course requirements for the CS major. This will increase the total number of credits for both the BA and the BS major by 4.

*Rationale:*

- a. MA 009 concepts are needed for CS 116 Artificial Intelligence, CS 120 Space, Time, and Perfect Algorithms, and CS 150-1 Computational Biology.
- b. MA 009 is commonly required for CS majors at peer and aspirational institutions.
- c. Taking MA 009 enforces mathematical maturity and develops the thinking needed for higher-level programming.
- d. The total number of credits for the BA (48) and BS (60) are still in many cases lower than other STEM majors at Westmont (e.g. Physics BA 54, Physics BS 67-68, Biology BA 48, Biology BS 64, and Chemistry BA 46-66, Chemistry BS 55-71) and comparable CS majors at other institutions.
- e. Adding MA-009 as a major requirement was a suggestion on our 6-year review.

2. Add CS 116 Artificial Intelligence to the core course requirements for the CS major.

*Rationale:*

- a. Artificial Intelligence is an increasingly central topic within the discipline; all CS majors should have a basic understanding of the topic.

3. Remove CS 105 Programming Languages from the core course requirements for the CS major.

*Rationale:*

- a. The course is no longer central within the discipline.
- b. Students receive significant experience in various programming languages already in the other courses in the curriculum.

4. Move CS 120 Space, Time, and Perfect Algorithms out of the required courses for the CS minor (do not change the total number of credits required for a minor).

*Rationale:*

- a. There are other courses that students could take to fulfil their minor requirement which the department feels are just as valuable as CS 120.
- b. We are adding MA 009 as a prerequisite for CS 120 and we do not want to require MA 009 for CS minors.