

Managing Prerequisite Enforcement
July 16, 2015
Davis Division of the Academic Senate (Academic Senate)

The policies and mechanisms for establishing and enforcing prerequisites have been in place for decades on the Davis campus. In practice, the lack of efficient tools to enable prerequisite enforcement has led the campus community to list prerequisites; however without frequent enforcement. Various events brought this deficiency to the surface, including the WASC and engineering accreditation reviews.

Academic rigor motivates prerequisite establishment and enforcement for all undergraduate courses on the campus. Prerequisite enforcement is also an important factor in reducing time-to-degree, and dealing with the challenges of increased enrollment and lack of instructional space. When a student fails to complete a course, due to lack of prerequisite completion, not only is that student's graduation delayed, it may also delay a student who was waitlisted and could not enroll in the class.

Course prerequisites are established by departmental faculty. Prerequisite enforcement requires information exchange between students, Registrar's Office, staff advisors and instructors. The final responsibility for prerequisite enforcement rests with the instructor per Davis Divisional Regulation 527:

“(A) The instructor in charge of a course is responsible for determining that enrolled students have completed the prerequisite course(s) listed in the General Catalog. Students who have completed equivalent work may be admitted to the course at the instructor's discretion.

(B) The instructor in charge of a course may request that the Registrar drop from the course any student who has enrolled without completing the published prerequisites if, in the judgment of the instructor, failure to have completed that work seriously reduces the probability that the student will successfully complete the course. An instructor who intends to exclude a student for this reason must notify the student before taking action. (Am. 4/19/99; effective 9/1/99).”

During the 2012-2013 academic year, the Undergraduate Council examined prerequisite enforcement, which led to a healthy informal, and then formal, review of the tools faculty would need to efficiently enforce prerequisites. In spring quarter 2014, the Academic Senate asked the Registrar to propose an electronic system to communicate recommended preparatory courses to students in lieu of prerequisites, if desired, and facilitate communication between instructors and students. At the time, the Academic Senate concluded that wholesale review of course prerequisites was not needed. The Academic Senate believed it was purely a matter of creating the means for communication between a student and faculty member when the student believes she/he has satisfied the prerequisite. The Registrar provided a proposal in fall quarter 2014 describing a system to automate enforcement of prerequisites by faculty. A review by the Academic Senate made it clear the

enforcement process envisioned would create more work for faculty than initially anticipated, and risked sustaining a culture of infrequent prerequisite enforcement. A subsequent collaboration between the Registrar, Undergraduate Council, Graduate Council and the Academic Senate office made it clear that *before* faculty may efficiently enforce prerequisites, the following must be in place:

- ***Centrally Maintained Articulation and Prerequisites Database:*** Prior to implementation of the prerequisite checking system, databases maintained by the Registrar, must be in place to automatically verify, if the prerequisite has been satisfied, when a student registers for a course. In particular, before the prerequisite checking system is piloted, integrated information systems must be in place to capture prerequisite information for entering students (first year and transfer students) in order to minimize the number of requests for instructor review and approval of prerequisites. *Action:* The Registrar's Office has agreed and resources have been allocated to create databases as a foundational component for the prerequisite enforcement system. By mid-spring 2017, the Registrar's Office will have in place articulation and prerequisite databases to record: advanced placement and international baccalaureate exam results, California Community College articulation agreement completion, other transfer credit equivalencies (collection of common transfer credit equivalency decisions [i.e. other UC, CSU, private colleges or international institutions]) and student placement exam results. Additionally, the Registrar will work with the colleges to record manual articulation input based on a discussion between a student and instructor or following transcript review during which articulation is resolved in advance of registration. In the future, and based on feedback received during the testing phase, database capability will be extended to increase automated checking of prerequisites.
- ***Comprehensive Prerequisite Review:*** An Academic Senate workgroup and a limited number of student focus group discussions made it clear that prerequisite checking system success will require the campus to perform a wholesale review and assessment of prerequisites. Students commented that too many times courses did not list prerequisites, yet students could not be successful in the course without prerequisite learning. Also, the students felt that some prerequisites had nothing to do with learning the material for the next course. Lack of accurate prerequisite information will lead to a substantial increase in faculty workload to enforce prerequisites and also poses the risk that again prerequisites will not be enforced. *Action:* Before the start of fall quarter 2015, the Academic Senate will write to all faculty and department chairs requesting initiation of an internal review of prerequisites for all courses targeting completion in winter quarter 2016.
- ***Enabling Efficient Prerequisite Review:*** Over the last three years the Academic Senate and Office of the University Registrar collaborated on the implementation of an updated Integrated Course Management System (ICMS) during fall quarter 2015. ICMS will facilitate both the process of submitting new courses for approval and streamlining the mechanics of the review process itself. A system was purchased last fall based on the

specifications created in consultation with the Registrar, Academic Senate, college staff and college courses committees. When the **only** action requested is **establishment or change of prerequisites**, the updated ICMS will be programmed to bypass Committee on Courses of Instruction (COCI) review. This is needed in order to streamline the review and approval process of prerequisites at the college level and most importantly, prevent overwhelming COCI with unnecessary work.

Action: The Academic Senate has asked that colleges and departments to hold off on submitting establishment or revision of prerequisites until the updated ICMS is in place fall quarter 2015.

With ICMS in place, as well as accurate prerequisite information and a centrally maintained articulation database, a two quarter pilot phase will be initiated. Pilot One is planned for fall quarter 2016 (i.e. student registration starts in spring quarter 2016). Pilot One will test the first stage implementation of the articulation database. It is expected that it will require substantial intervention by the individual instructors, however less than what is currently required to enforce prerequisites. Engineering will participate in Pilot One along with at least one other college/division. Selection of Pilot One participants will be made sometime in winter quarter 2016 based on a college/division request, completion of the comprehensive prerequisite review and agreement amongst the faculty to manage the workload associated with pilot participation. Pilot Two is planned during winter quarter 2017 (i.e. registration starts fall quarter 2016) and will use the second stage implementation of the articulation database. This stage of implementation should further decrease the intervention needed by the individual instructors. Full implementation of the prerequisite checking system is planned in fall quarter 2017 (i.e., registration starts spring quarter 2017).

| Task | Sum 15 | Fall 15 | Win 16 | Spr16 | Sum 16 | Fall 16 | Win 17 | Spr 17 | Fall 17 |
|-------------------------------|--------|---------|--------|-------|--------|---------|--------|--------|---------|
| ICMS Implementation | ■ | ■ | | | | | | | |
| Campus Prerequisite Review | | ■ | ■ | ■ | | | | | |
| Articulation Database Phase 1 | ■ | ■ | ■ | | | | | | |
| Articulation Database Phase 2 | | | | ■ | ■ | ■ | ■ | ■ | |
| Pilot One | | | | | ■ | ■ | ■ | | |
| Pilot Two | | | | | | | ■ | ■ | |
| Launch | | | | | | | | ■ | ■ |

Project timeline for the development and implementation of a system to facilitate prerequisite management without overburdening students or faculty.