

Curricular Coherence Initiative for Student Success Academic Planning and Curriculum Committee

Curricular coherence in an academic program plays a role in student success. Past studies have shown its impact on student retention and progression to graduation, e.g., [Thornby et al. \(2023\)](#), [Green \(2021\)](#) and [Wigdahl and Heileman \(2014\)](#), among others. [Phillips and Poliakoff \(2015\)](#) reported that “curriculum creep” was a factor in lower graduation rates. Incremental changes to a program without an overall view of coherence can lead to disjointed curricula that students neither understand nor can navigate effectively ([Zubov et al., 2021](#)). Without coherence, the overall purpose of a curriculum, level of student satisfaction, and timely progression to graduation, can be lost. This initiative aims to reflect upon curriculum coherence in academic programs at UPEI.

Definitions

- Bottleneck:** Courses that are difficult to reach when every prerequisite must be satisfied prior to enrolling in the course. These courses are particularly important in terms of student progression as they can become barriers to graduation, because failure in the course can lead to an inability to progress in a timely manner.
- Coherence:** Degree to which an academic program is well organized; purposefully designed to facilitate learning; free of academic gaps and unnecessary repetitions; and effectively aligned across courses and subjects.
- Curriculum:** Subjects comprising a program of study, and the totality of a student’s educational experience.
- Curriculum Creep:** Curriculum creep refers to a process where the learning experiences of a curriculum drift away from the specific syllabus of courses, vision, or intentions associated with desired learning outcomes in a program.
- Long Path:** A long chain of prerequisites through a curriculum that represent a sequence of courses that must be taken in order.

APCC Curricular Coherence Review

In collaboration with the Teaching and Learning Centre (TLC), the Academic Planning and Curriculum Committee (APCC) aims to review the curricular coherence of academic programs at UPEI. This review will be aligned with the University’s Strategic Enrolment Management (SEM) Plan, in relation to initiatives involving student retention and progression to graduation.

Curriculum indicators will be investigated, in consultation with the academic unit, and with support and assistance from the Teaching and Learning Centre. In the spirit of continual improvement, the academic unit will be invited to consider areas of possible improvement from a student learning perspective, including how the curriculum meets the desired goals and learning outcomes of the program.

Similarly to its role in QA (quality assurance) reviews, APCC will review the unit's response to the curriculum coherence study. The curriculum indicators will be useful in future QA reviews of academic programs. APCC also recommends that academic units consider the program's learning outcomes. APCC will consider and develop pan-university recommendations, e.g., [University of Guelph](#), or pan-Canadian learning outcomes in a discipline such as [Chemistry](#).

Curriculum Indicators

To improve the student learning experience at UPEI, as part of the University's SEM Plan, APCC and the TLC will examine curricular coherence. A fundamental question will be considered – **how can an academic program create a more coherent undergraduate curriculum for its students?** Although there is no simple straightforward answer, there are some relevant contributing factors, including but not limited to, the following characteristics.

- 1) **Accuracy.** Courses listed in the academic calendar should have a realistic timeframe of delivery. If a listed course has not been offered in at least the past five years (or some other timeframe), it is not accurately representing the current curriculum. Either the curriculum can be modified to offer the course(s), or else the course should be removed from the calendar.
- 2) **Bottlenecks.** Bottleneck courses are those that are difficult to reach, for example, when there are numerous prerequisites and every prerequisite must be satisfied prior to enrolling in the course. These courses are particularly important in terms of student progression as they can become bottlenecks to graduation, because failure in the course can lead to an inability to progress in a timely manner.

A bottleneck course normally has a requirement of two or more prerequisites. An academic unit is encouraged to reconsider whether each prerequisite is necessary. Prerequisite waiver data for courses and outcomes for students with waivers, or who are taking a prerequisite concurrently, can indicate whether or not the prerequisites are necessary and how they impact the broader progression of students through the program.

- 3) **Long Paths.** A long path refers to a long chain of prerequisites through a curriculum. Long paths represent a sequence of courses that must be taken in order. The longest path and number of long paths both affect student progression through a program. Failing one part of a chain often implies falling behind by a semester or year, depending on the availability of courses. When there are more long paths, it is more likely that a student can fall off track, and drop out of a program. Here a long path is defined as a length of four or more.
- 4) **Rigidity.** As the number of required courses increases, a curriculum becomes more rigid, in the sense that students have less flexibility in taking optional courses, and any course failure brings a higher likelihood of a delay in graduation. With fewer options, students have less opportunity to pursue other interests, such as a Minor in another discipline, and therefore lower student satisfaction. In some cases, accreditation requirements impose a certain degree of curriculum rigidity that is necessary. A measure of curriculum rigidity can be estimated by the number of required courses in the program.

- 5) **Redundancy.** In some cases, courses with topics of similar or same content, or general education courses, can be combined, shared, or cross-listed across departments or across faculties. For example, there are many Research Methods courses at UPEI with similar or same content. Opportunities may exist to cross-list and bring students together from different programs to build teamwork and cross-disciplinary skills. Course redesign work to enhance cross-disciplinary collaboration can be supported by an instructional designer in the Teaching and Learning Centre.

- 6) **Directed Studies.** Directed and independent studies courses are useful. However, they may be symptomatic of other issues, such as availability of elective courses, not scheduling enough course sections needed by students to graduate, or not effectively advising students about other available course offerings.

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