Title, description, and Prerequisite change for CIS 2610

1. Existing course prefix and number:
CIS 2610

2. Proposed course title:
Advanced Programming for Business

3. Existing course prerequisites:
Prerequisites and Restrictions: CIS 1020 Minimum Grade of D OR CIS 102 Minimum Grade of D OR BIS 102 Minimum Grade of D OR CIS 1100 Minimum Grade of D OR CIS 110 Minimum Grade of D OR BIS 110 Minimum Grade of D OR CS 1000 Minimum Grade of D OR CS 1050 Minimum Grade of D OR CS 105 Minimum Grade of D OR FCS 2250 Minimum Grade of D OR FCS 225 Minimum Grade of D OR MUS 3860 Minimum Grade of D OR MUS 386 Minimum Grade of D

4. Proposed course prerequisites:
CIS 2600

5. Existing course corequisites:
No Corequisites exist for CIS 2610 in term 202140.

6. Proposed course corequisites:
none

7. Proposed course prerequisites that may be taken concurrently (before or at the same time):
none

8. Minimum grade for prerequisites (default grades are D for Undergrad and C for Grad):
D

9. Do prerequisites and corequisites for 5000-level courses apply to undergraduates, graduates, or both?
Not Applicable

10. Existing Banner course title:
Bus Mobile Programming

11. Proposed course title to be entered in Banner:
Advanced Programming for Bus

A. Please choose Yes or No to indicate if this class is a Teacher Education class:
No

B. Please choose the applicable class level:
Undergraduate

C. Please respond Yes if this is a current general education course and/or a course being submitted for the new WMU Essential Studies program. Please respond No if it is neither.
No

D. Explain briefly and clearly the proposed improvement.
Title, description, and prerequisite change for CIS 2610.

E. Rationale. Give your reason(s) for the proposed improvement. (If your proposal includes prerequisites, justify those, too.).
The proposed title and description change will reflect the subject matter and the course content appropriately. The prerequisite change is necessary because CIS 2610 will require students to take CIS 2600 before enrolling for CIS 2610.

F. List the student learning outcomes for the proposed course or the revised or proposed major, minor, or concentration. These are the outcomes that the department will use for future assessments of the course or program.
Not applicable.

G. Describe how this curriculum change is a response to student learning assessment outcomes that are part of a departmental or college assessment plan or informal assessment activities.
The proposed change is not a response to student learning assessment outcome.

H. Effect on other colleges, departments or programs. If consultation with others is required, attach evidence of consultation and support. If objections have been raised, document the resolution. Demonstrate that the program you propose is not a duplication of an existing one.
There is no effect on other colleges, departments or programs. The proposed change is for an existing course only.

I. Effect on your department's programs. Show how the proposed change fits with other departmental offerings.
The proposed change is in line with the change in the CIS major. CIS 2610 will provide advanced programming skills in Java after students complete CIS 2600 which is the introductory programming course in Java. CIS 2600 and CIS 2610 will be part of required core for the changed CIS major.

J. Effects on enrolled students: are program conflicts avoided? Will your proposal make it easier or harder for students to meet graduation requirements? Can students complete the program in a reasonable time? Show that you have considered scheduling needs and demands on students' time. If a required course will be offered during summer only, provide a rationale.

The effect on enrolled students will be minimum, if any. Students under current CIS major has the option to choose one of three CIS programming courses as part of CIS core; CIS 2600 or CIS 2610 or CIS 2800. Overwhelming majority of students take either CIS 2600 or CIS 2800. Therefore, CIS 2610 has not been offered recently. Current students will still be able to choose CIS 2600 or CIS 2800.

K. Student or external market demand. What is your anticipated student audience? What evidence of student or market demand or need exists? What is the estimated enrollment? What other factors make your proposal beneficial to students?

Not applicable. The proposed change is for an existing course only.

L. Effects on resources. Explain how your proposal would affect department and University resources, including faculty, equipment, space, technology, and library holdings. Tell how you will staff additions to the program. If more advising will be needed, how will you provide for it? How often will course(s) be offered? What will be the initial one-time costs and the ongoing base-funding costs for the proposed program? (Attach additional pages, as necessary.)

There is no effect on department resources. The proposed change is for an existing course only.

M. With the change from General Education to WMU Essential Studies, this question is no longer used.
For courses requesting approval as a WMU Essential Studies course, a syllabus identifying the student learning outcomes and an action plan for assessing the student learning outcomes must be attached in the Banner Workflow system.

Not Applicable

N. (Undergraduate proposals only) Describe, in detail, how this curriculum change affects transfer articulation for Michigan community colleges. For course changes, include detail on necessary changes to transfer articulation from Michigan community college courses. For new majors or minors, describe transfer guidelines to be developed with Michigan community colleges. For revisions to majors or minors, describe necessary revisions to Michigan community college guidelines. Department chairs should seek assistance from college advising directors or from the admissions office in completing this section.

The proposed change has no effect on transfer articulation for Michigan community college courses.

O. Current catalog copy:

This course introduces the fundamental concepts and implementation of modern visual programming language in a mobile business environment. Major topics include general mobile

programming tools for business mobile applications; fundamentals of business programming such as data types, expressions, and operators, etc.; and basic programming structures of business mobile applications

P. Proposed catalog copy:
This course introduces advanced programming techniques for business. Main topics include but not limited to data structures, application programming interface (API), manipulation of data (e.g., databases, JSON, XML, and other data formats), web services (e.g., REST, SOAP, etc.), advanced GUI, design patterns and other related topics. Students also learn advanced knowledge and skills needed to implement applications expected for computing architectures and standards in the business environment.