CEAS-14-CS-072

REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS		
DEPARTMENT: CS PROPOSED EFFECTIVE SEMESTER: Spring 2015 COLLEGE: CEAS PROPOSED IMPROVEMENTS		
Academic Program	Substantive Course Changes	Misc. Course Changes
☐ New degree*	☐ New course	☐ Title
☐ New major*	☑ Pre or Co-requisites	Description (attach current & proposed)
☐ New curriculum*	Deletion (required by others	Deletion (not required by others)
	Course #, different level	Course #, same level
New certificate	Credit hours	☐ Variable credit
New minor	Enrollment restriction	Credit/no credit
☐ Revised major ☐ Revised minor	Course-level restriction	☐ Cross-listing
Admission requirements	☐ Prefix ☒ Title and description (attach current & proposed)	on ☐ COGE reapproval ☐ Other (explain**)
Graduation requirements	General education (select one	
☐ Deletion ☐ Transfer	Not Applicable	''
Other (explain**)	☐ Other (explain**)	
** Other: A minimum grade of C in the prerequisite courses		
Title of degree, curriculum, major, minor, concentration, or certificate:		
Existing course prefix and #: CS5810 Proposed course prefix and #: Credit hours:		
Existing course title: Compiler Design and Implementation		
Proposed course title:		
Proposed course prerequisite(s) If there are multiple prerequisites, connect with "and" or "or". To remove prerequisites, enter "none." Proposed course co-requisite(s) If there are multiple corequisites, they are always joined by "and." Proposed course prerequisite(s) that can also be taken concurrently: Is there a minimum grade for the prerequisites or corequisites? A minimum grade of C in the prerequisite courses Major/minor or classification restrictions: List the Banner 4 character codes and whether they should be included or excluded. For 5000 level prerequisites & corequisites: Do these apply to: (circle one) undergraduates graduates both Specifications for University Schedule of Classes: a. Course title (maximum of 30 spaces): Compiler Design and Implementation b. Multi-topic course: No Yes c. Repeatable for credit: No Yes d. Mandatory credit/no credit: No Yes e. Type of class and contact hours per week (check type and indicate hours as appropriate) 1. Lecture 3. Lecture/lab/discussion 5. Independent study 2. Lab or discussion 4. Seminar or studio CIP Code (Registrar's use only):		
Chair/Director		Date 2 67/15
Chair, College Curriculum Committee Date		Date
Dean	Date: Graduate Dean:	Date
Curriculum Manager: Return to	dean ☐ Date Forward to:	Date
Chair, COGE/ PEB / FS President Date		Date
FOR PROPOSALS REQUIRING	GSC/USC REVIEW:	-
* Approve Disapprove	Chair, GSC/USC	Date
* Approve Disapprove	Provost	Date

1. Explain briefly and clearly the proposed improvement.

This proposed improvement is to revise the catalog description to the following: "The design and implementation of programming language translation. Topics include: lexical analysis, parsing, intermediate representations and code generation. A major project is required."

A minimum grade of C in the prerequisite courses

Rationale. Give your reason(s) for the proposed improvement. (If your proposal includes prerequisites, justify those, too.)

The current description, "Introduction to major aspects of compiler design. These include lexical analysis, parsing, and translation. Each student will implement a small compiler using modern compiler writing tools", has the following problems:

- The focus of the course is not the explanation of the compiler itself, but rather the fundamental techniques that enable translation of programs.
- Translation is not an appropriate topic as it represents the overall focus of the course. Instead, the main topics should include intermediate representations and code generation.
- Instructors should have freedom to assign different projects. A fixed project on small compiler implementation is not flexible and facilitates plagiarism of previous years' assignment.
- 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.

None.

4. Effect on your department's programs. Show how the proposed change fits with other departmental offerings.

The prospective students will have a better understanding of what they expect to learn from the course.

5. 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.

No change.

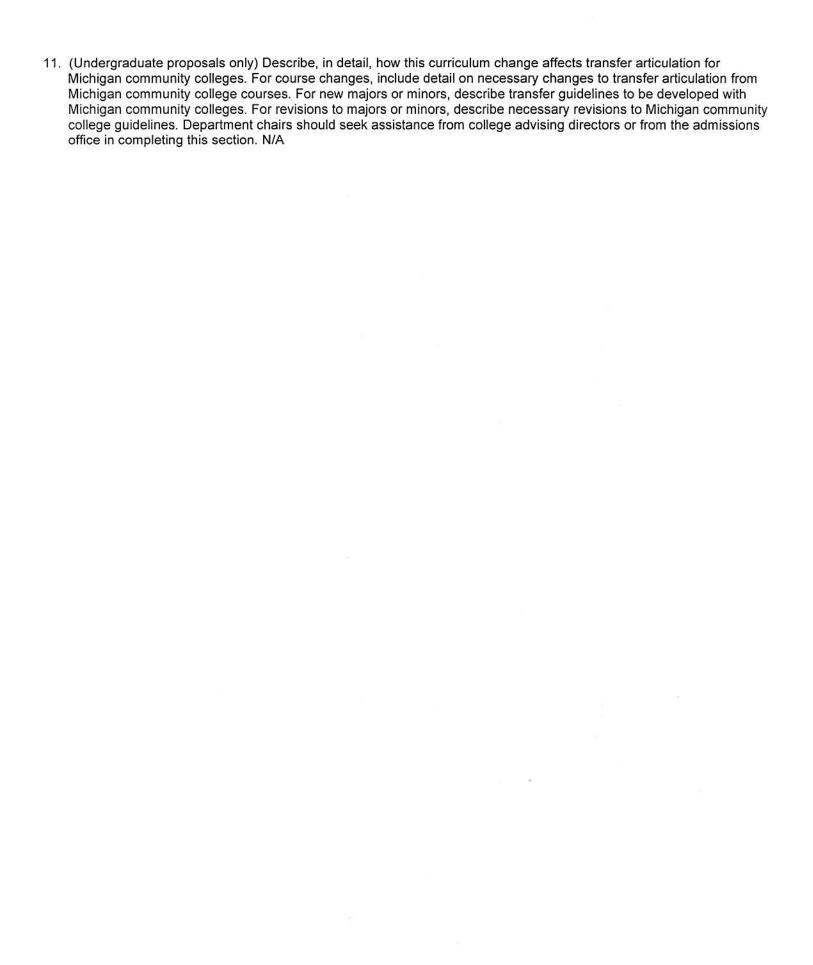
6. Student or external market demand. What is your anticipated student audience? What evidence of student or market demand or need exists? What is the estimated enrollment? What other factors make your proposal beneficial to students?

No change.

7. 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.)

None.

- 8. General education criteria. For a general education course, indicate how this course will meet the criteria for the area or proficiency. (See the General Education Policy for descriptions of each area and proficiency and the criteria. Attach additional pages as necessary. Attach a syllabus if (a) proposing a new course, (b) requesting certification for baccalaureate-level writing, or (c) requesting reapproval of an existing course.) N/A
- 9. List the 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. N/A
- 10. Describe how this curriculum change is a response to assessment outcomes that are part of a departmental or college assessment plan or informal assessment activities. N/A



CS 5810 - Compiler Design and Implementation

Introduction to major aspects of compiler design. These include lexical analysis, parsing, and translation. Each student will implement a small compiler using modern compiler writing tools.

Prerequisites/Corequisites: Prerequisite: CS 4800 or CS4850 or CS 5800.

Credits: 3 hrs.

Proposed Catalog Description

CS 5810 - Compiler Design and Implementation

The design and implementation of programming language translation. Topics include: lexical analysis, parsing, intermediate representations and code generation. A major project is required.

Prerequisites/Corequisites: Prerequisite: CS 4800 or CS4850 or CS 5800.

Credits: 3 hrs.