CEAS-14-CS-080

# REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS

**DEPARTMENT:** CS **PROPOSED EFFECTIVE SEMESTER:** Spring 2015 **COLLEGE:** CEAS

**PROPOSED IMPROVEMENTS**

*Academic Program*
- ☐ New degree*
- ☐ New major*
- ☐ New curriculum*
- ☐ New concentration*
- ☐ New certificate
- ☐ New minor
- ☐ Revised major
- ☐ Revised minor
- ☐ Admission requirements
- ☐ Graduation requirements
- ☐ Deletion ☐ Transfer
- ☐ Other (explain**)

*Substantive Course Changes*
- ☐ New course
- ☒ Pre or Co-requisites
- ☐ Deletion (required by others)
- ☐ Course #, different level
- ☐ Credit hours
- ☐ Enrollment restriction
- ☐ Course-level restriction
- ☐ Prefix ☐ Title and description (attach current & proposed)
- ☐ General education (select one) Not Applicable
- ☐ Other (explain**)

*Misc. Course Changes*
- ☐ Title
- ☐ Description (attach current & proposed)
- ☐ Deletion (not required by others)
- ☐ Course #, same level
- ☐ Variable credit
- ☐ Credit/no credit
- ☐ Cross-listing
- ☐ COGE reapproval
- ☒ Other (explain**)

** **Other:** A minimum grade of B in the prerequisite courses

**Title of degree, curriculum, major, minor, concentration, or certificate:**

**Existing course prefix and #:** CS6580 **Proposed course prefix and #:** **Credit hours:**

**Existing course title:** Pervasive Computing
**Proposed course title:**

**Existing course prerequisite & co-requisite(s):** CS 5550 or equivalent, with a grade of "B" or better
**Proposed course prerequisite(s) :** CS 5541 or CS 5550 or (an equivalent course accepted by the instructor)
**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 B 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):** Pervasive Computing
**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
2. ☐ Lab or discussion
3. ☐ Lecture/lab/discussion
4. ☐ Seminar or ☐ studio
5. ☐ *Independent* study
6. ☐ Supervision or practicum

**CIP Code (Registrar's use only)**:

Chair/Director _____ Date 2/27/15

Chair, College Curriculum Committee _____ Date _____

Dean _____ Date: _____ Graduate Dean: _____ Date _____

Curriculum Manager: Return to dean ☐ Date _____ Forward to: _____ Date _____

Chair, COGE/ PEB / FS President _____ Date _____

**FOR PROPOSALS REQUIRING GSC/USC REVIEW:**

| | | |
|---|---|---|
| * ☐ Approve ☐ Disapprove | Chair, GSC/USC | Date |
| * ☐ Approve ☐ Disapprove | Provost | Date |

Revised May 2007. All previous forms are obsolete and should not be used.

1. Explain briefly and clearly the proposed improvement.

   This proposed improvement is to change the prerequisite of CS6580 (Pervasive Computing) from "CS 5550 or equivalent, with a grade of "B" or better" to "CS 5541 or CS 5550 or (an equivalent course accepted by the instructor)."

   A minimum grade of B in the prerequisite courses.

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

   The current prerequisites are unclear about which courses can be considered equivalent to CS5550 (Computer Networks and Distributed Systems), and this change is to clarify the issue. Also, during the recent update of graduate programs, three courses were added and designated as core courses: CS5310 (Algorithms), CS5410 (Computer Systems), and CS5800 (Theory of Computation). Among the three, CS5541 provides adequate background for the study of CS6580. Therefore, we propose to explicitly list CS5541 as a prerequisite.

3. 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.

   None.

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.

   None.

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

11. (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. N/A

Current catalog description

**CS 6580 - Pervasive Computing**

An in-depth study of emerging issues in pervasive environments focusing on components that build pervasive computing systems: smart devices, smart environments, and smart services and interactions with users. Topics include smart devices and services; context-aware and intelligent systems; autonomous systems and artificial life; ubiquitous communication; and ubiquitous system challenges and outlook. This is a research oriented course with theoretical and practical research projects involving opportunistic resource utilization networks; smart office and home spaces, and sensornets. Project topics will be suggested by the instructor, or proposed by students and accepted by the instructor.

**Prerequisites/Corequisites:** Prerequisite: CS 5550 or equivalent, with a grade of "B" or better.

**Credits:** 3 hours

**Notes:** Open to Graduate students only.

Proposed catalog description

**CS 6580 - Pervasive Computing**

An in-depth study of emerging issues in pervasive environments focusing on components that build pervasive computing systems: smart devices, smart environments, and smart services and interactions with users. Topics include smart devices and services; context-aware and intelligent systems; autonomous systems and artificial life; ubiquitous communication; and ubiquitous system challenges and outlook. This is a research oriented course with theoretical and practical research projects involving opportunistic resource utilization networks; smart office and home spaces, and sensornets. Project topics will be suggested by the instructor, or proposed by students and accepted by the instructor.

**Prerequisites/Corequisites:** Prerequisite: CS 5541 or CS 5550 or (an equivalent course accepted by the instructor)

**Credits:** 3 hours

**Notes:** Open to Graduate students only.