Eastern Illinois University
New/Revised Course Proposal Format
(Approved by CAA on 4/3/14 and CGS on 4/15/14, Effective Fall 2014)

CGS Agenda Item: 19-26
Effective Fall 2019

Banner/Catalog Information (Coversheet)

1. **_X__New Course or _____Revision of Existing Course**
2. **Course prefix and number:** __CIT 4843 _____
3. **Short title:** _ Human Computer Interaction _____
4. **Long title:** _Human Computer Interaction _____
5. **Hours per week:** _2__ Class _2__ Lab _3_ Credit
6. **Terms:** _X__ Fall ___ Spring __ Summer _X_ On demand
7. **Initial term**: _X__ Fall ___ Spring ___ Summer Year: _2019___
8. **Catalog course description:** This course introduces students to the basic concepts of interface design and human computer interaction. Students will learn design principles, development procedures, evaluation methods, and interface building tools.
9. **Course attributes:**

   General education component: __ N/A _____

   ___ Cultural diversity ___ Honors ___ Writing centered ___ Writing intensive ___Writing active
10. **Instructional delivery**
    Type of Course:

    ___ Lecture ___ Lab _X__ Lecture/lab combined ___ Independent study/research

    ___ Internship ___ Performance ___ Practicum/clinical ___ Other, specify: _____

    Mode(s) of Delivery:

    _X__ Face to Face _X__ Online ___ Study Abroad

    _X_ Hybrid, specify approximate amount of on-line and face-to-face instruction___~ 51% Face-to-face and 49% online_____
11. Course(s) to be deleted from the catalog once this course is approved. ___NONE_____
12. **Equivalent course(s):** _NONE_____

    a. Are students allowed to take equivalent course(s) for credit? ___ Yes _X__ No
13. **Prerequisite(s): _CSM 3870 or TEC 5373** or permission of instructor

    a. Can prerequisite be taken concurrently? ___ Yes _X__ No

    b. Minimum grade required for the prerequisite course(s)? _C__

    c. Use Banner coding to enforce prerequisite course(s)? _X_ Yes ___ No

d. Who may waive prerequisite(s)?

___ No one _X__ Chair _X__ Instructor __ Advisor ___ Other (specify)

14. Co-requisite(s): ___NONE_____

15. Enrollment restrictions

a. Degrees, colleges, majors, levels, classes which <u>may</u> take the course:

Students with completion of at least 60 hours or "Junior Standing" of major in CIT, DGT, or EGT, or
minor in CIT, DGT, EGT, or
graduate students of TEC OR
permission of instructor

b. Degrees, colleges, majors, levels, classes which may <u>not</u> take the course: __ ALL OTHERS _____

16. Repeat status: _X__ May not be repeated ___ May be repeated once with credit

17. Enter the limit, if any, on hours which may be applied to a major or minor: ___

18. Grading methods: _X__ Standard ___ CR/NC __ Audit ___ ABC/NC

19. Special grading provisions:

___ Grade for course will <u>not</u> count in a student's grade point average.

___ Grade for course will <u>not</u> count in hours toward graduation.

___ Grade for course will be removed from GPA if student already has credit for or is registered in: _____

___ Credit hours for course will be removed from student's hours toward graduation if student already has credit for or is registered in: _____

20. Additional costs to students:
Supplemental Materials or Software_____

Course Fee _X__No ___Yes, Explain if yes_____

21. Community college transfer:

___ A community college course may be judged equivalent.

_X__ A community college may <u>not</u> be judged equivalent.

Note: Upper division credit (3000+) will <u>not</u> be granted for a community college course, even if the content is judged to be equivalent.

Rationale, Justifications, and Assurances (Part I)

1. _X__Course is required for the major(s) of _Computer and Information Technology __
   ___Course is required for the minor(s) of _____
   ___Course is required for the certificate program(s) of _____
   ___ Course is used as an elective
2. **Rationale for proposal** :
   This is part of an effort to redesign Computer and Information Technology program such that it reflects the nature of the program. The content of this course has been identified as a part of the core content for this undergraduate program and meets accreditation requirements from the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).
3. **Justifications for (answer N/A if not applicable)**
   Similarity to other courses: N/A
   Prerequisites: Material in this course is built on the knowledge of CSM 3870, or TEC 5373, and uses their concepts and knowledge as a foundation for this new course CIT 4843.
   Co-requisites: N/A
   Enrollment restrictions:
   Students of major in CIT, DGT, or EGT, or minor in CIT, DGT, EGT, or graduate students of TEC need the content knowledge of this course to be successful in their respective fields.
   Writing active, intensive, centered: N/A
4. **General education assurances (answer N/A if not applicable)**
   General education component: N/A
   Curriculum: N/A
   Instruction: N/A
   Assessment: N/A
5. **Online/Hybrid delivery justification & assurances (answer N/A if not applicable)**
   Online or hybrid delivery justification:
   The content and structure for this course relies upon independent research, in-depth group discussion, and video based lecture. As compared to many lab courses already offered in technology area, this course requires online delivery of lecture and discussion and face-to-face lab activities for applied projects. For content delivered online, the course employs online video presentations, structured web discussions focused on reading assignments, and linked to articles submitted to the instructor. Students are required to draw on research and review of articles to discuss and develop fundamental procedural knowledge of application. Discussions invite students to explore in more detail the required knowledge and procedures to analyze and design systems. Discussions and examinations will be administered and submitted via the online course management tool. With the current technology, many software design companies have made their software tools more readily accessible for students. The Internet connection speed for many users has increased thereby allowing

for higher quality rich media instruction to be delivered. Finally, the course management tools that the university now uses allows there to be a richer interaction between students and faculty. To accommodate this situation, many of the given activities may be completed in a hybrid format.

Instruction:

This course employs instructor led online presentations, student reading assignments, student applied design assignments, peer critique and troubleshooting, student presentations, and examinations. After reviewing the instructor led presentations and completing the student reading assignments, students will be required to draw on what they have read and then to apply it to a context of analyzing and designing software systems. While working on these projects, students may engage in the activity of troubleshooting or critique while posting their work in an online discussion board for both classmates and the instructor to provide feedback and guidance. Presentations will provide learners a forum to share the results of their work and receive further feedback. Reading assignments, applied projects, and examinations will be administered, collected, and/or submitted via the online course management tool. Presentations may also be delivered in the course tool or face-to-face. All faculty who will deliver this course online are/will be OCDi (or appropriate equivalent) trained.

Integrity:

Work submitted online, such as discussions and examinations, will be substantiated via learners providing citation in APA format and submitting related articles to quantify work. Further, the length, frequency, quality, and integrity of discussion posts can be monitored via the online course management tool. Examinations will require the same of learners and additionally will use software tools, such as "TURNITIN", to check work for the integrity and authenticity of submitted assignments. The examinations will be time restricted and of sufficient length to prohibit consultation of unauthorized sources. Work submitted face-to-face in applied lab projects will be checked for authenticity via the individualized nature of project completion. Requirements for projects will require learners to engage in activities that require creation of original content for either themselves or local entity.

Interaction:

For online content, the course employs email, web-based discussions, exploration of off-site Internet resources, web-based presentations, web chat rooms and lab based applied project work. The instructor will communicate with students through the online discussion board and web-based discussions. Email may also be a tool used for the instructor to communicate with an individual student or to post course announcements. The learners for this course may also communicate with one another for these tools. During digital office hours, the instructor will remain available for discussion during certain times and communicate using a chat room tool in the learning management system. For face-to-face interaction, the instructor may communicate synchronously with the learners

during open lab activities and during office hours. The learners are also free to communicate with other learners during lab activities.

Model Syllabus (Part II)

Please include the following information:

1. Course number and title
CIT 4843 – Human Computer Interaction

2. Catalog description
This course introduces students to the basic concepts of interface design and human computer interaction. Students will learn design principles, development procedures, evaluation methods, and interface building tools.

3. Learning objectives.

Upon completion of this course, students will be able to:

a. Demonstrate working knowledge of principles, methods, and tools in human computer interaction (CT 1-3, SL1-6, WR 1-6, QR 3, Grad 1-3)
b. Describe the essential aspects of designing and evaluating interfaces (CT 1-3, SL1-6, WR 1-6, QR 3,4, Grad 1,2, 4)
c. Identify and demonstrate understanding of the fundamental concepts of user experience (UX) and user interface (UI) (CT 1-3, SL1-6, WR 1-6, Grad 1,2)
d. Utilize basic techniques for data gathering and analysis used in interface and interaction design (CT 1-5, SL1-6, WR 1-6, QR 1-5, Grad 1,2,3)
e. Apply appropriate techniques to design and develop systems that are beneficial to industry or other communities (paper/project) (CT 1-6, SL1-6, WR 1-7, QR 3,4, RC 2, Grad 1-4)

Graduate Learning Goals

Objective	Depth of content knowledge	Critical thinking and problem solving	Oral and/or written communication	Advance scholarship through research and creative activity
(a)	X	X	X	
(b)	X	X		X
(c)	X	X		
(d)	X	X	X	
(e)	X	X	X	X

Undergraduate Learning Goals

Objective	Speaking and Listening	Critical Thinking	Writing and Critical Reading	Quantitative Reasoning	Responsible Citizenship
(a)	X	X	X	X	
(b)	X	X	X	X	
(c)	X	X	X		
(d)	X	X	X	X	
(e)	X	X	X	X	X

4. Course materials.
This will include lecture notes, online resources (such as online tutorials, research papers), etc as well as the following book:

MacKenzie, I. S. (2013). Human-Computer Interaction: An Empirical Research Perspective, 1st Edition. Waltham, MA: Morgan Kaufmann. ISBN: 978-0124058651

Preece, J., Sharp, H., & Rogers, Y. (2015). Interaction Design: Beyond Human-Computer Interaction 4th Edition. West Sussex, UK: John Wiley & Sons Ltd. ISBN: 978-1119020752

5. Weekly outline of content.

The following is a tentative outline of the course; it might change, based on time constraints:

Face-to-Face / Online Modality:

Week	Topics	Activities
Week 1	Introduction to Human Computer Interaction (HCI) and Interface Design	Lab 1
Week 2	Human Factors (Sensors, Perception)	
Week 3	Human Factors (Cognition, and Memory)	Lab 2
Week 4	Principles of User Experience (UX)	
Week 5	Principles of User Interface (UI)	Lab 3
Week 6	Design Principles and Usability	
Week 7	Evaluation of Interfaces (theories)	Lab 4
Week 8	Evaluation of Interfaces (methods, and tools)	Midterm
Week 9	Data Gathering	
Week 10	Data Analysis	Lab 5
Week 11	Design, and Prototyping	
Week 12	Construction	Lab 6
Week 13	Evaluation Studies (Experimental Design, Usability Testing)	Lab 7
Week 14	Design in Practice (System Development)	Lab 8
Week 15	Design in Practice (Evaluation)	Lab 9
Week 16	Final Exam	

Hybrid Modality:

Week	Topics	Activities
Week 1	Introduction to Human Computer Interaction (HCI) and Interface Design	Lab 1
Week 2	Human Factors (Sensors, Perception)	
Week 3	Human Factors (Cognition, and Memory)	Lab 2
Week 4 Face to Face Meetings 8 am to 5 pm	Question/Answers/Review Sessions of Weeks 1 to 3 Principles of User Experience (UX)	
Week 5	Principles of User Interface (UI)	Lab 3
Week 6	Design Principles and Usability	
Week 7	Evaluation of Interfaces (theories)	Lab 4
Week 8 Face to Face Meetings 8 am to 5 pm	Question/Answers/Review Sessions of Weeks 5 to 7 Evaluation of Interfaces (methods, and tools)	Midterm
Week 9	Data Gathering	
Week 10	Data Analysis	Lab 5
Week 11	Design, and Prototyping	
Week 12	Construction	Lab 6
Week 13	Evaluation Studies (Experimental Design, Usability Testing)	Lab 7
Week 14	Question/Answers/Review Sessions of Weeks 9 to 13	Lab 8

Face to Face Meetings 8 am to 5 pm	Design in Practice (System Development)	
Week 15	Design in Practice (Evaluation)	Lab 9
Week 16	Final Exam	

6. Assignments and evaluation, including weights for final course grade.

	Undergraduate	Graduate
Lab Assignments	40 %	35 %
Class Participation	10 %	5 %
Exams	40 %	40 %
Class Projects	10 %	10 %
Research Paper	N/A	10 %
Total	100 %	100 %

7. Grading scale.
A = 90% or above, B = 80 – 89%, C = 70 – 79%, D = 60 – 69%, F = Below 60%

8. Correlation of learning objectives to assignments and evaluation.

Objective	Assignments UG: 40% G: 35%	Class Participation UG:10% G: 5%	Projects UG: 10% G: 10%	Midterm UG: 20% G: 20%	Final UG: 20% G: 20%	Research Paper UG: N/A G: 10%
a. Understand principles, methods, and tools in human computer interaction (CT 1-3, SL1-6, WR 1-6, QR 3, Grad 1-3)	X	X	X	X		X
b. Describe the essential aspects of designing and evaluating interfaces (CT 1-3, SL1-6, WR 1-6, QR 3,4, Grad 1,2, 4)	X	X	X	X		X
c. Understand fundamental concepts of user experience (UX) and user interface (UI) (CT 1-3, SL1-6, WR 1-6, Grad 1,2)	X	X	X	X	X	X
d. Utilize basic techniques for data gathering and analysis used in interface and interaction design (CT 1-5, SL1-6, WR 1-6, QR 1-5, Grad 1-3)	X		X		X	X
e. Apply appropriate techniques to design and			X		X	X

develop systems that are beneficial to industry or other communities (paper/project) (CT 1-6, SL1-6, WR 1-7, QR 3,4, RC 2, Grad 1-4)						

Date approved by the department or school: 1/8/2018
Date approved by the college curriculum committee: 02/19/2019
Date approved by the Honors Council *(if this is an honors course):*
Date approved by CAA: CGS: 03/05/2019