2014-2015 LONG SIGNATURE SHEET

Proposal Number: SIS ~~ITIS~~ 08-28-14

UNC CHARLOTTE

Proposal Title: New graduate course ITIS ~~6460/8460~~ 6360/8360 User-Centered Design and Evaluation

Originating Department: Software and Information Systems (ITIS)

TYPE OF PROPOSAL: UNDERGRADUATE_____ GRADUATE_X___ UNDERGRADUATE & GRADUATE____
(Separate proposals sent to UCCC and Grad. Council)

DATE RECEIVED	DATE CONSIDERED	DATE FORWARDED	ACTION	SIGNATURES
11/10/14	11/10/14	11/4/14	*Approved*	**DEPARTMENT CHAIR** [print name here:] Mary Lou Maher
11/19/14	11/19/14	11/19/14	*Approved*	**COLLEGE CURRICULUM COMMITTEE CHAIR** [print name here:] Yuliang Zheng
11/19/2014	12/1/2014	12/8/2014	*Approved*	**COLLEGE FACULTY CHAIR (if applicable)** [print name here:] SRINIVAS AKELLA
			Approved	**COLLEGE DEAN** [print name here:] Yi Deng
			Approved	**GENERAL EDUCATION** (if applicable; for General Education courses) [print name here:]
			Approved	**HONORS COLLEGE** (if applicable; for Honors courses & programs) [print name here:]
			Approved	**UNDERGRADUATE COURSE & CURRICULUM COMMITTEE CHAIR** (for undergraduate content)
12-10-14	1-6-15	2-19-15	*Approved*	**GRADUATE COUNCIL CHAIR** (for graduate content) ALAN R. FREITAG
				FACULTY GOVERNANCE ASSISTANT (Faculty Council approval on Consent Calendar)
				FACULTY EXECUTIVE COMMITTEE (if decision is appealed)

UNC CHARLOTTE

LONG FORM
COURSE AND CURRICULUM PROPOSAL

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*To: The Graduate Council

From: College of Computing and Informatics

Date: August 28, 2014

Re: New graduate course ITIS 6360/8360 User-Centered Design and Evaluation

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The Long Form is used for major curriculum changes. Examples of major changes can include:

Undergraduate: Major changes include new undergraduate degrees, minors, concentrations, certificates, and changes to more than 50% of an existing program (Note: changing the name of an academic department does not automatically change the name(s) of the degree(s). The requests must be approved separately by the Board of Governors.)

Graduate: Major changes include new graduate courses, major changes to an existing graduate course or major changes to an existing graduate program

Submission of this Long Form indicates review and assessment of the proposed curriculum changes at the department and collegiate level either separately or as part of ongoing assessment efforts.

*****Proposals for undergraduate courses and programs should be sent to the Undergraduate Course and Curriculum Committee Chair. Proposals related to both undergraduate and graduate courses, (e.g., courses co-listed at both levels) must be sent to both the Undergraduate Course and Curriculum Committee and the Graduate Council.

UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE

NEW UNDERGRADUATE AND GRADUATE **ITIS 08-28-14**

COURSE PROPOSAL FROM: DEPARTMENT OF SOFTWARE AND INFORMATION SYSTEMS

TITLE: NEW GRADUATE COURSE ITIS 6360/8360 USER-CENTERED DESIGN AND EVALUATION

A. PROPOSAL SUMMARY.

1. SUMMARY:

The Department of Software and Information Systems proposes to create a new course, ITIS 6360 User-Centered Design and Evaluation and ITIS 8360 User-Centered Design and Evaluation. This course is designed to provide students with a deeper understanding of user-centered design and evaluation methods applied at various stages of the software design cycle ranging from needfinding to usability testing. This course is intended for SIS majors at the masters and PhD levels**.**

B. JUSTIFICATION

1. NEED:

One of the biggest challenges facing developers of software and information systems is creating useful, easy-to-use services which offer an effective and efficient experience to the users. This course provides students with hands on experience with methods for designing and evaluating software and information systems for users. Students will learn to identify user needs, to develop potential software solutions for those needs, and to evaluate if their system satisfies those needs. As a part of this process, students will learn how to improve the utility and usability, as well as create an effective overall user experience of their systems.

2. PREREQUISITES/COREQUISITES:

Knowledge of key concepts in human-computer interaction covered in ITIS 6400 / ITIS 8400 are required. This course will help students get a solid grasp of how to apply those concepts as a part of the user centered design and evaluation process with hands on projects and assignments.

3. COURSE NUMBERING:

ITIS 6360 is intended to be a Masters level course, ITIS 8360 is intended to be a PhD level course for students in Software and Information Systems and Computer Science. The numbering (6360/8360) reflects the fact that the course will be taken by graduate students after “ITIS 6400/8400 Human-Computer Interaction.”

4. **EFFECT ON SCOPE, QUALITY, AND EFFICIENCY:**
   The proposed courses will broaden the scope of the software and information systems curriculum to include a hands-on full term project based course on the user centered design and evaluation methods. This semester long design experience with a broad range of methods is important for our graduates to have a deep understanding through practice by using a wide range of design methods in the context of a specific design project. Our graduates will understand the importance of designing and evaluating for users as an integral part of developing useful and usable software systems.

C. IMPACT.

1. **STUDENTS SERVED**:
   This course provides graduate majors in information technology with an option for an elective course that would enhance their value to potential employers.

2. **EFFECT ON EXISTING COURSES AND CURRICULA:**
   a. ITIS 6360/8360 will be offered in the spring.
   b. The content/frequency of other courses will not be affected.
   c. The anticipated enrollment is 20 students for ITIS 6360 and 5 for ITIS 8360.
   d. Impact on enrollments in other elective courses will be minimal as it will be an elective course and the department offers a set number of electives each year.
   e. The proposed scope will not be covered in other existing courses.
   f. Other areas of catalog copy affected: The proposed courses should be listed as elective options.

D. RESOURCES REQUIRED TO SUPPORT PROPOSAL

1. **PERSONNEL**:
   a. Specify requirements for new faculty, part-time teaching, student assistants and/or increased load on present faculty.

      No new faculty members are needed to teach these courses.

   b. List by name qualified faculty members interested in teaching the course(s).

      In general, research faculty in human computer interaction areas are qualified to offer this course. In particular, Khai Truong, Heather Lipford, Celine Latulipe, and Mary Lou Maher are interested in offering this course.

2. **PHYSICAL FACILITY**:
   No new physical facilities are needed.

3. **EQUIPMENT AND SUPPLIES**:
   No new equipment and supplies are needed to teach the courses.

4. **COMPUTER**:
   Specify any computer usage (beyond Moodle) required by students and/or faculty, and include an assessment of the adequacy of software/computing resources by available for the course(s).

   Existing computer laboratories on campus or students' own personal computers will suffice as a computational platform for this course.

5. **AUDIO-VISUAL:**
   If there are requirements for audio-visual facilities beyond the standard classroom podiums, please list those here.

   Current facilities are adequate to support this course.

6. **OTHER RESOURCES:**
   Specify and estimate cost of other new/added resources required, e.g., travel, communication, printing and binding.

   None.

7. **SOURCE OF FUNDING:**
   Indicate source(s) of funding for new/additional resources required to support this proposal.

   None.

E. CONSULTATION WITH THE LIBRARY AND OTHER DEPARTMENTS OR UNITS

1. **LIBRARY CONSULTATION**:
   Library consultation was initiated on October 22, 2014 and completed October 24, 2014.

2. **CONSULTATION WITH OTHER DEPARTMENTS OR UNITS**:
   Consultation with the Department of Computer Science was initiated on October 22nd 2014 and completed November 15, 2014.

F. INITIATION, ATTACHMENTS AND CONSIDERATION OF THE PROPOSAL

1. **ORIGINATING UNIT**:
   Approved by the Software and Information Systems faculty on October 24, 2014 and by the College of Computing and Informatics faculty on October 26, 2014.

2. **CREDIT HOUR**:
   Review statement and check box once completed:
   ☒ The appropriate faculty committee has reviewed the course outline/syllabus and has determined that the assignments are sufficient to meet the University definition of a credit hour.

3. ATTACHMENTS:

1. CONSULTATION:

- Appendix I. Library consultation
- Appendix II. Department of Computer Science consultation

2. COURSE OUTLINE/SYLLABUS:

- Appendix III. ITIS 6360/8360 Syllabus.

3. PROPOSED CATALOG COPY:

- Appendix IV. Proposed Catalog Copy

a. For a new course or revisions to an existing course, check all the statements that apply:

____ This course will be cross listed with another course.
_x_ There are prerequisites for this course.
____ There are corequisites for this course.
____ This course is repeatable for credit.
____ This course will increase/decrease the number of credits hours currently offered by its program.
____This proposal results in the deletion of an existing course(s) from the degree program and/or catalog.

For all items checked above, applicable statements and content must be reflected in the proposed catalog copy.

4. ACADEMIC PLAN OF STUDY **(UNDERGRADUATE ONLY)**: Does the proposed change impact an existing Academic Plan of Study?

☐ Yes. If yes, please provide updated Academic Plan of Study in template format.
☒ No.

5. STUDENT LEARNING OUTCOMES (UNDERGRADUATE & GRADUATE): Does this course or curricular change require a change in Student Learning Outcomes (SLOs) or assessment for the degree program?

☐ Yes. If yes, please provide updated SLOs in template format.
☒ No.

6. TEXTBOOK COSTS: It is the policy of the Board of Governors to reduce textbook costs for students whenever possible. Have electronic textbooks, textbook rentals, or the buyback program been considered and adopted?

☒ Yes. Briefly explain below.
☐ No. Briefly explain below.

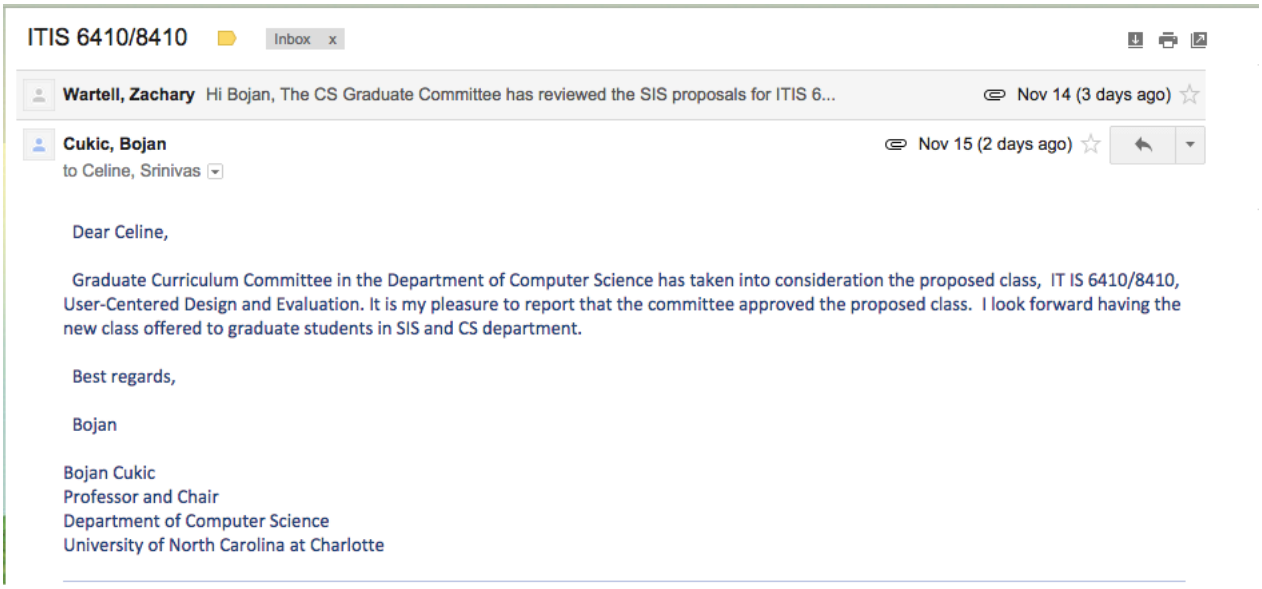
Only one textbook is used and it costs only $40 and is also available as a less expensive eBook.

IMPORTANT NOTE: A Microsoft Word version of the final course and curriculum proposal should be sent to facultygovernance@uncc.edu upon approval by the Undergraduate Course and Curriculum Committee and/or Graduate Council chair.

Appendix I: Library Consultation
(Note this was sent before realizing the course codes were updated to avoid a conflict).

Appendix II: Department of Computer Science Consultation
(Note this was sent before realizing the course codes were updated to avoid a conflict).

Department of Computer Science is satisfied with this course.



ITIS 6410/8410 Inbox x

Wartell, Zachary Hi Bojan, The CS Graduate Committee has reviewed the SIS proposals for ITIS 6... Nov 14 (3 days ago)

Cukic, Bojan Nov 15 (2 days ago)
to Celine, Srinivas

Dear Celine,

Graduate Curriculum Committee in the Department of Computer Science has taken into consideration the proposed class, IT IS 6410/8410, User-Centered Design and Evaluation. It is my pleasure to report that the committee approved the proposed class. I look forward having the new class offered to graduate students in SIS and CS department.

Best regards,

Bojan

Bojan Cukic
Professor and Chair
Department of Computer Science
University of North Carolina at Charlotte

Appendix III. ITIS 6360/8360 Syllabus.

ITIS 6360/8360
User-Centered Design and Evaluation

Syllabus

Course Description

This course is designed to teach the user-centered design and evaluation process. In particular, students will gain hands on experience with the process of interface design, methods of design, and ways to evaluate and improve the design of interactive software applications in a course-long project. Students will learn how to employ techniques which ensure that end-users are fully considered at all stages of the design process, from inception to implementation. Assignments will involve planning, designing and conducting studies to learn about user needs; developing the protocols and instruments for data collection; brainstorming, prototyping and refining interactive solutions for a user problem; and designing and executing user evaluations of interactive software interfaces.

Prerequisite: ITIS 6400/8400

3 credit hours.

Topics

- Formative user study methods for gathering requirements (e.g., interviews, surveys, observations)
- Artifacts for describing the user group and their requirements (e.g., personas, scenarios)
- Low-fidelity & rapid prototyping techniques (e.g., sketching, storyboards, paper prototypes)
- Inspection-based evaluation methods (e.g., walkthroughs, GOMS, heuristics evaluation)
- Evaluation with users (e.g., think-aloud, experiment)
- Reporting the results of evaluations

Learning Objectives

- For an identified user group, undertake and document an analysis of their needs.
- Use low fidelity & rapid prototyping techniques to gather, and report, user responses about a potential user experience
- Develop an interactive interface solution to address identified end-user needs
- Design and conduct user studies to evaluate interactive software
- Ability to write a scholarly article on user experience design

Instructional Method

The course will be taught primarily as a design studio: with content delivered via homework videos, followed by 3 hours per week in a studio setting in which students participate in teams to perform the following activities during the course of the term: planning, designing and conducting studies to learn about user needs; developing the protocols and instruments for data collection; brainstorming, prototyping and refining interactive solutions for a user problem; and designing and executing user evaluations of interactive software interfaces

Textbook

Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions by Martin and Hanington, Rockport Publishers, 2012

Assignments and Assessment of Final Grade ITIS6360

- 10% Weekly attendance and activity participation
- 15% User Studies Report
- 15% Design Poster
- 15% Implementation and Evaluation Plan
- 20% Interface Demo
- 20% Evaluation Results Report
- 5% Peer Evaluation Report

Assignments and Assessment of Final Grade ITIS8360

- 10% Weekly attendance and activity participation
- 15% User Studies Report
- 15% Design Poster
- 10% Implementation and Evaluation Plan
- 15% Interface Demo
- 15% Evaluation Results Report
- 5% Peer Evaluation Report
- 15% Scholarly article

Grading Scheme

A: 85-100
B: 70-85
C: 60-70
U: Below 60

University and College Policies

Code of Student Responsibility: The *UNC Charlotte Code of Student Responsibility* (the Code) sets forth certain rights and responsibilities in matters of student discipline. The Code defines these responsibilities and guarantees you certain rights that ensure your protection from unjust imposition of disciplinary penalties. You should familiarize yourself with the provisions and procedures of the Code" (Introductory statement from the UNC Charlotte brochure about the Code of Student Responsibility). The entire document may be found at this Internet address: http://legal.uncc.edu/policies/up-406

Academic Integrity: All students are required to read and abide by the Code of Student Academic Integrity. Violations of the Code of Student Academic Integrity, including plagiarism, will result in disciplinary action as provided in the Code. Students are expected to submit their own work, either as individuals or contributors to a group assignment. Definitions and examples of plagiarism and other violations are set forth in the Code. The Code is available from the Dean of Students Office or online at: http://www.legal.uncc.edu/policies/ps-105.html

Course Credit Workload: This 4-credit course requires three hour of classroom activities and on average nine hours of out-of-class student work each week for approximately 15 weeks. Out-of-class work may include but is not limited to: designing, programming, group meetings, user studies and data collection, required reading, library research, written assignments.

Special Needs: If you have a documented disability and require accommodation in this course, contact Disability Services, Fretwell 230, phone: 687 4355 voice/TDD) the first week of the semester. Information about available services may be found at http://legal.uncc.edu/policies/up-501. Accommodations for learning will be arranged by that office and communicated to the Instructor. If you speak English as a second language, please inform the instructor.

Diversity Statement: UNC Charlotte strives to create an academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.
All students are required to abide by the UNC Charlotte Sexual Harassment Policy (http://legal.uncc.edu/policies/up-502) and the policy on Responsible Use of University Computing and Electronic Communication Resources (http://legal.uncc.edu/policies/up-307). Sexual harassment, as defined in the UNC Charlotte Sexual Harassment Policy, is prohibited, even when carried out through computers or other electronic communications systems, including course-based chat rooms or message boards.

Appendix IV. Proposed Catalog Copy.

ITIS 6360 User-Centered Design and Evaluation. (3) Prerequisites: ITIS 6400. This course is designed to teach the user-centered design and evaluation process. In particular, students will gain hands on experience with the process of interface design, methods of design, and ways to evaluate and improve the design of interactive software applications in a course-long project. Students will learn how to employ techniques which ensure that end-users are fully considered at all stages of the design process, from inception to implementation. Assignments will involve planning, designing and conducting studies to learn about user needs; developing the protocols and instruments for data collection; brainstorming, prototyping and refining interactive solutions for a user problem; and designing and executing user evaluations of interactive software interfaces. Cross-listed as ITIS 8360. Offered in Spring.

ITIS 8360 User-Centered Design and Evaluation. (3) Prerequisites: ITIS 6400 or IT IS 8400. This course is designed to teach the user-centered design and evaluation process. In particular, students will gain hands on experience with the process of interface design, methods of design, and ways to evaluate and improve the design of interactive software applications in a course-long project. Students will learn how to employ techniques which ensure that end-users are fully considered at all stages of the design process, from inception to implementation. Assignments will involve planning, designing and conducting studies to learn about user needs; developing the protocols and instruments for data collection; brainstorming, prototyping and refining interactive solutions for a user problem; and designing and executing user evaluations of interactive software interfaces. Cross-listed as ITIS 6360. Offered in Spring.