

New Undergraduate Program (Majors, Minors, Sequences) Proposal
Illinois State University - University Curriculum Committee

Program Department School of Information Technology **Submission Date** Monday, September 21, 2015
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Initiator Department School of Information Technology
Coauthor(s) Glen Sagers (gsagers@ilstu.edu) **Version** 4
Title of New Program Web Computing Sequence **Proposed Starting Catalog Year** 2016-2017

Associated Course Proposal(s):

New Course proposal IT 358 titled *Mobile & Cloud Computing*

1. Proposed Action

New Major

New Minor

✓ New Sequence

More than 50% of courses in this program are Distance Education

No Is this program an Integrated Bachelors/Master's degree program?

Sequence Major

Computer Science

2. Provide Undergraduate Catalog copy for new program.

Web Computing Sequence:

The Web Computing sequence is designed for students who wish to pursue a broad education in computer science with special emphasis on Web, mobile, and cloud computing. It is to prepare students to work for a variety of companies including those that have a scientific, engineering, or mathematical focus, with Web computing needs. It would also prepare students to pursue graduate studies in Computer Science. A minor is not required.

— 86-88 hours required.

— 50 hours in Information Technology required.

— Required courses (44 hours): IT 168, 179, 191, 214, 225, 226, 261, 279, 327, 328, 353, 354, 358, 378, 383.

— 6 hours of IT 398.

— Supporting requirements (36-38 hours):

— Mathematics and Statistics (15-16 hours): MAT 145, 146, 260; 1 course from: MQM 100; MAT 250, 350.

— Communication (6 hours): COM 223; ENG 249.

— Science (15-16 hours): 1 pair of: CHE 140, 141; or PHY 110, 111; 2 additional courses from: BSC 196, 197; CHE 140, 141; PHY 110, 111, 112, 375.

ALLOWABLE SUBSTITUTIONS FOR REQUIRED COURSES:

— Acceptable substitution for 3 hours of IT 398 is 3 hours of IT 391.

— Acceptable substitution for 6 hours of IT 398 is 3 hours of IT 391 and 3 additional hours from IT 276, 326, 330, 340, 351, 356, 367, 382, 384, 385, 388 (if not used to satisfy other requirements).

3. Provide a description for the proposed program.

The Web Computing sequence is designed for students who wish to pursue a broad education in computer science with special emphasis on Web, mobile, and cloud computing. It is to prepare students to work for a variety of

companies including those that have a scientific, engineering, or mathematical focus, with Web computing needs. It would also prepare students to pursue graduate studies in Computer Science. A minor is not required.

4. Provide a rationale of proposed program.

The School of Information Technology has had a Web development sequence for its Information Systems majors for many years but its Computer Science majors have not been able to pursue a similar route. This proposed program addresses that void for Computer Science majors as it allows them to not only build a solid STEM (Science, Technology, Engineering, and Mathematics) background with the traditional Computer Science courses, but also integrate burgeoning Web, mobile, and cloud computing.

5. Describe the expected effects of the proposed program on existing campus programs (if applicable).

Not applicable.

6. Provide a sample four year plan of study demonstrating that a student could realistically complete the program requirements in a specific number of semesters.

First Year

Fall Semester

ENG 101 (3) or COM 110 (3)
IT 168 Struct Prob Solving (4)
GE United States Traditions (3)
MAT 145 Calculus I (4) GE-M

Spring Semester

IT 179 Intro Data Struct (3)
ENG 101 (3) or COM 110 (3)
MAT 146 Calculus II (4) BS-SMT
MQM 100 Statistical Reasoning (3) GE-QR

Second Year

Fall Semester

IT 225 Computer Organiz (3)
IT 261 Systems Devel I (3)
CHE 140 or PHY 110(4) GE-NS
University Wide Elective (3)
IT 191 Intro IT Prof Prac (1)

Spring Semester

GE Individuals & Civic Life (3)
MAT 260 Discrete Math (4)
CHE 141 or PHY 111 (4)
IT 226 Pract App Dv (3)

Third Year

Fall Semester

Science Elective (4) GE-NS
IT 378 Database Processing (3)
IT 353 Web Dev Technologies (3)
IT 279 Algorithms & Data St (3)
GE Language in the Humanities (3)

Spring Semester

Science Elective (4)
IT 383 Prin Op Systems (3)
GE Humanities (3)

IT 354 Adv Web Development (3)
University Wide Elective (3)

Summer Session

IT 398 Professional Practice (6)

Fourth Year

Fall Semester

ENG 249 (3)
IT 358 Mobile & Cloud Comp (3)
GE Social Science (3)
GE Fine Arts (3)
IT 327 Conc Programming Lang (3)

Spring Semester

IT 328 Intro Theory Comp (3)
COM 223 Small Group Processes (3)
University Wide Elective (3)
IT 214 Social, Legal, And Ethical Issues In IT (3)
Graduation Req if not met in GE (3)

7. Describe the expected curricular changes required, including new courses. If proposals for new courses have also been submitted, please reference those related proposals here:

IT 358 Mobile & Cloud Computing

8. Anticipated funding needs and source of funds.
Not applicable.

9. No Does this program count for teacher education?

10. No Is this an Interdisciplinary Studies program?

11. The following questions must be answered.

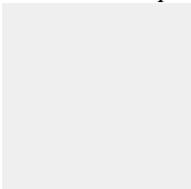
Yes Have you confirmed that Milner Library has sufficient resources for the proposed program?
No Are more than 124 hours required to complete a degree with this major?
No Beyond General Education, does the major require more than 66 semester hours?
No Does this sequence (if in a major) require more than 55 semester hours of major courses?
Yes Does this program stipulate specific general education courses offered in the major department/school as a part of the major requirements only if such courses serve as prerequisites for other courses required by the major?
Explain why specific general education courses are required.
IT 214 will now be required for all School of IT students to comply with accreditation requirements.

All other general education courses are part of a larger set, giving students a choice of several options.

No Is the proposed program intended to be longer than four years (as indicated by the plan of study)?

N.A. Have letter(s) of concurrence from affected departments/schools been obtained?

A departments/school is affected if it has a program with significant overlap or if it teaches a required or elective course in the program.



12. **Routing and action summary for New Program:** [Proposal Routing](#)

1. School of Information Technology Department Curriculum Committee Chair

<i>Glen Sagers (website)</i>	Glen Sagers	9/1/2015 12:56:33 PM
Signature	Print	Date

2. School of Information Technology Department Chair/School Director

<i>Mary Califf (website)</i>	Mary Califf	9/2/2015 12:41:00 PM
Signature	Print	Date

3. College of Applied Science and Technology College Curriculum Committee Chair

<i>Kevin Devine (website)</i>	Kevin Devine	9/21/2015 4:52:09 PM
Signature	Print	Date

4. College of Applied Science and Technology College Dean

<i>Todd McLoda (website)</i>	Todd McLoda	9/22/2015 8:05:37 AM
Signature	Print	Date

5. University Curriculum Committee Chair

<i>Mark Temple (website)</i>	Mark Temple	11/12/2015 11:51:49 AM
Signature	Print	Date

All new programs (majors, minors, sequences) are routed by the U.C.C. to the Academic Senate