

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

Program Department Technology

Initiator Theodore Branoff

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Coauthor(s) None

Title of New Program Computer Systems Technology

Submission Date Friday, February 15, 2019

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Campus Address Campus Box 5100 Technology

Version 2 **ID** 275

Proposed Starting Catalog Year 2020-2021

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/Masters degree program?

Degree Type(s)

Bachelor of Science

2. Provide *Undergraduate Catalog* copy for new program.

Computer Systems Technology is an interdisciplinary curriculum that provides a background in computer technology, software, programming, information imaging, and other industry-related technologies. The goal is to prepare professionals for the management and supervision of technical computer systems in industrial settings. Coursework emphasizes the use of computer systems to provide students with a diverse technical and professional background in communications, networking, interfacing, and electronic principles related to a variety of computer systems. Computer Systems Technology is accredited by the Association of Technology, Management, and Applied Engineering (ATMAE).

General Education (39 credit hours)

Refer to the General Education section of the Undergraduate Catalog for a complete list of General Education requirements and courses.

Communication and Composition (2 courses required)

___ 3 COM 110 Communication as Critical Inquiry

___ 3 ENG 101 or ENG 101A10 Composition as Critical Inquiry

Mathematics (1 course required)

___ 4 MAT 120 Finite Mathematics

Natural Science/Natural Science Alternatives (2 courses required)

Students must complete 1 course from 2 different sciences.

___ 3 CHE 102 Chemistry & Society

___ 4 PHY 105 Fundamentals of Physics

United States Traditions (1 course required) Individuals & Civic Life (1 course required)

Fine Arts (1 course/3 credit hours required)*** Humanities (1 course required)***

Language in the Humanities (1 course required)***

Quantitative Reasoning (1 course required)

___ 3 MQM 100 Statistical Reasoning

Science, Math, & Technology (1 course required)

Exempt for Computer Systems Technology majors

Social Sciences (1 course required)***

___ 3 PSY 110 Fundamentals of Psychology

Additional Graduation Requirements

/ 120 minimum total credit hours

___ 1 TEC 100 Professional Development in Technology

___ 3 TEC 143 Introduction to Electronics for Data Communications

___ 3 TEC 151 Introduction to Computer Systems Technology

___ 3 TEC 243 Computer Networking Systems

___ 3 TEC 244 Digital Electronics (P: MAT 120)

___ 3 TEC 245 Applications of Operating Systems (P: TEC 151 or conc. reg.)

___ 3 TEC 270 Managing Technological Systems (P: PSY 110 or conc. reg.; 45+ earned hours)

___ 3 TEC 283 Information & Imaging Technologies (P: C or better in TEC 151)

___ 3 TEC 284 Technical Computer Applications (P: TEC 143 and 283 or conc. reg.)

___ 3 TEC 313 Quality Systems for technology (P: MQM 100; MAT 120; 8+ hours of TEC courses)

___ 3 TEC 319 Graphical Software Interfaces (P: C or better in TEC 283)

___ 3 TEC 320 Project Management (P: TEC 270; 60+ earned hours)

___ 3 TEC 330 Applied Economic Analysis for Technologists (P: MAT 120; 6 credit hours of 200-level TEC courses)

___ 3 TEC 378 E-Commerce (P: TEC 283)

___ 3 TEC 383 Telecommunications Technology (P: TEC 243 or IT 254)

___ 3 TEC 390 Computer Systems Applications (P: TEC 270; PHY 105; 9 credit hours of senior college Computer Systems Technology courses)

___ 3 CHE 102 Chemistry & Society

___ 4 MAT 120 Finite Mathematics (P: C or better in MAT 119 or placement)

___ 3 MQM 100 Statistical Reasoning (P: MAT 120, 121, 144, or 145)

___ 4 PHY 105 Fundamentals of Physics

___ 3 PSY 110 Fundamentals of Psychology

Take 12 additional credit hours of Computer Systems Technology electives:

(TEC 116, 152, 216, 250, 348, 358, 370, 398 (3 hours); IT 168, 178, 254, 261, 262)

Please consult with your academic advisor.

Technology Courses:

<https://coursefinder.illinoisstate.edu/directory/tec/>

All Courses:

<https://coursefinder.illinoisstate.edu/directory/>

/ 42 minimum senior college hours

AMALI requirement

***certain courses in General Education fulfill the AMALI requirement

B.S. Science, Math, & Technology (1 course required)

___ 3 TEC 313 Quality Systems for Technology

Major (75 credit hours)

___ 1 TEC 100 Professional Development in Technology

___ 3 TEC 143 Introduction to Electronics for Data Communications

___ 3 TEC 151 Introduction to Computer Systems Technology

___ 3 TEC 243 Computer Networking Systems

___ 3 TEC 244 Digital Electronics (P: MAT 120)

___ 3 TEC 245 Applications of Operating Systems (P: TEC 151 or conc. reg.)

___ 3 TEC 270 Managing Technological Systems (P: PSY 110 or conc. reg.; 45+ earned hours)

___ 3 TEC 283 Information & Imaging Technologies (P: C or better in TEC 151)

___ 3 TEC 284 Technical Computer Applications (P: TEC 143 and 283 or conc. reg.)

___ 3 TEC 313 Quality Systems for technology (P: MQM 100; MAT 120; 8+ hours of TEC courses)

___ 3 TEC 319 Graphical Software Interfaces (P: C or better in TEC 283)

___ 3 TEC 320 Project Management (P: TEC 270; 60+ earned hours)

___ 3 TEC 330 Applied Economic Analysis for Technologists (P: MAT 120; 6 credit hours of 200-level TEC courses)

___ 3 TEC 378 E-Commerce (P: TEC 283)

___ 3 TEC 383 Telecommunications Technology (P: TEC 243 or IT 254)

- ___ 3 TEC 390 Computer Systems Applications (P: TEC 270; PHY 105; 9 credit hours of senior college Computer Systems Technology courses)
- ___ 3 CHE 102 Chemistry & Society
- ___ 4 MAT 120 Finite Mathematics (P: C or better in MAT 119 or placement)
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PROPOSED CATALOG COPY IN 2019-2020 FORMAT (UCC Secretary Edit)

Major (75 credit hours)

- ___ 1 TEC 100 Professional Development in Technology
- ___ 3 TEC 143 Introduction to Electronics for Data Communications
- ___ 3 TEC 151 Introduction to Computer Systems Technology
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3. Provide a description for the proposed program.

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4. Provide a rationale of proposed program.

Currently, Computer Systems Technology is the only sequence left under the Industrial Technology degree. The Industrial Technology degree name is not the best descriptor of this program. It has created confusion for students when they apply to Illinois State University or they are looking to transfer into the program. The faculty in the Department of Technology approved to move all sequences to degree programs on September 30, 2007. Since that time Construction Management, Engineering Technology, Graphic Communications, Renewable Energy, and Technology & Engineering Education have been approved to be stand-alone degrees.

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

Since this is just changing the sequence to a major, there should be no effect on existing campus programs.

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.

Total Hours Required for Computer Systems Technology - 120

First Year

Fall Semester (16 credit hours)

ENG 101 or COM 110 (3)

CHE 102 (3)

MAT 120 (4)

General Education course (3)

University wide elective (3)

Spring Semester (15 credit hours)

ENG 101 or COM 110 (3)

PSY 110 (3)

General Education course (3)

University wide elective (3)

University wide elective (3)

Second Year

Fall Semester (14 credit hours)

TEC 100 (1)

TEC 143 (3)

TEC 151 (3)

PHY 105 (4)

MQM 100 (3)

Spring Semester (15 credit hours)

TEC 245 (3)

TEC 270 (3)

Computer Systems Technology major elective (3)

General Education course (3)

University wide elective (3)

Third Year

Fall Semester (15 credit hours)

TEC 243 (3)

TEC 244 (3)

TEC 330 (3)

Computer Systems Technology major elective (3)

General Education course (3)

Spring Semester (15 credit hours)

TEC 283 (3)

TEC 284 (3)

TEC 320 (3)

General Education course (3)

AMALI requirement or University wide elective (3)

Fourth Year

Fall Semester (15 credit hours)

TEC 319 (3)

TEC 378 (3)

TEC 383 (3)

Computer Systems Technology major elective (3)

University wide elective (3)

Spring Semester (15 credit hours)

TEC 313 (3)

TEC 390 (3)

Senior College Computer Systems Tech. major elective (3)

University wide elective (3)

University wide elective (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:

No new courses.

8. Anticipated funding needs and source of funds.

No new resources are needed.

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 120 hours required to complete a degree with this major?

No Beyond General Education, does the major require more than 66 semester hours?

Yes Does this B.A., B.S., B.S.Ed. 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.

With the exception of Technology and Engineering Education, all other B.S. programs in the Department of Technology require PHY105, CHE102, MAT120, MQM100, and PSY110. These General Education courses are best fits for the majors in the Department. In addition, MAT120, MQM100, and PSY100 serve as prerequisites for several TEC classes.

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

Yes 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.

Provost Approval Memo

12. Routing and action summary for New Program:

1. Technology Department Curriculum Committee Chair

<u>Kevin Devine (website)</u>	<u>Kevin Devine</u>	<u>2/15/2019 3:45:52 PM</u>
Signature	Print	Date

2. Technology Department Chair/School Director

<u>Theodore Branoff (website)</u>	<u>Theodore Branoff</u>	<u>2/19/2019 7:58:03 AM</u>
Signature	Print	Date

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

<u>Daniel Wilson (website)</u>	<u>Daniel Wilson</u>	<u>3/25/2019 1:58:03 PM</u>
Signature	Print	Date

4. College of Applied Science and Technology College Dean

<u>Cara Rabe-Hemp (website)</u>	<u>Cara Rabe-Hemp</u>	<u>3/25/2019 2:05:03 PM</u>
Signature	Print	Date

5. University Curriculum Committee Chair

<u>Lance Lippert (website)</u>	<u>Lance Lippert</u>	<u>9/24/2019 10:31:18 AM</u>
Signature	Print	Date

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

Comments

Comments from Version 1 from Kevin Devine (Department Curriculum Committee Chair):
 Only saw one typo... In section 11, "MAT20" should be "MAT120"