Non-Substantive Program Modification Proposal Form

Instructions: All program modifications must be signed by the Chair and Dean and submitted to the Office of the Provost.

Faculty Initiating Request: Dr. Myungjae Kwok
Submission Date: 1/25/16

Department/School: Information Technology

Degree Program: BS Information Technology
Effective Date: Fall 2016

Provide a description of the program exactly as it will appear in the catalog:

See Attached.

Faculty Member

Chair

Assistant Provost of Academic Planning & Policy

Provost

Chair Academic Affairs Committee

Rev. 6.23.15
Area I: Information Technology Core Curriculum Credit: 30 hours

- ITEC 3155 - Systems Analysis and Design Credit: 3 hours
- ITEC 3235 - Human Computer Interaction Credit: 3 hours
- ITEC 3236 - Interactive Digital Media Credit: 3 hours
- ITEC 3245 - Database Principles Credit: 3 hours
- ITEC 3240 - Web Programming Credit: 3 hours
- ITEC 3300 - Project Management Credit: 3 hours
- ITEC 3310 - Information Technology and Organizational Integration Credit: 3 hours
- ITEC 4200 - Foundations of Information Assurance Credit: 3 hours
- ITEC 4205 - Legal and Ethical Issues in Information Technology Credit: 3 hours
- ITEC 4750 - Senior Capstone Credit: 3 hours

Upper-Level Electives Credit: 30 hours

Students are required to take 30 hours of upper-level courses to further enhance their skills, knowledge, and versatility. At least 15 hours must be IT courses. Students may choose to satisfy the 30 hours of upper-level electives in one of the following five ways:

1. Completing 30 hours of any upper-level electives.
2. An IT concentration plus an additional 15 hours of upper-level IT courses.
3. Two IT concentrations
4. An Informatics concentration and either an IT concentration or 15 hours of upper-level IT courses.

The upper-level IT courses may be chosen from various IT concentrations and/or upper-level IT courses outside major concentrations. Upper-level courses outside the IT discipline may be chosen from various Informatics concentrations and/or other approved upper-level courses outside the IT discipline. If a student completes one or two concentrations, the concentration name(s) will show on his or her transcript.

Area II – IT Concentrations

The IT Concentrations are Digital Forensics, Network Technologies & Administration, Information Assurance and Security, Integrated Digital Media, Software Development, and Gaming Design and Development. In order for a student to receive an IT Concentration, he/she must take at least 15 hours of coursework within a concentration.

Area III – IT courses, concentrations, or informatics (15 hours)

Area I: Information Technology upper-level Core Curriculum

(Required): 21 hours
- ITEC 3155 Systems Analysis and Design
- ITEC 3235 Human Computer Interaction
- ITEC 3245 Database Principles
- ITEC 3300 Project Management
- ITEC 4200 Foundations of Information Assurance
- ITEC 4205 Legal and Ethical Issues
- ITEC 4750 Senior Capstone

Area II: IT upper-level courses (Required): 21 hours
This area is satisfied by taking an ITEC concentration (See below). Or 21 hours of ITEC upper-level courses.

Area III. Additional courses (Required): 18 hours
These course may be taken in:
1. Upper-level ITEC courses in the program;
2. Informatics courses deemed appropriate for providing students with a strong foundation in IT as well as a deeper understanding of another discipline; or
3. Approved transfer courses.
Provide a brief rationale for this program modification. For example, does it reflect updated disciplinary content? Does it align the program with state or national norms? Does it promote progression?

This minor, but necessary revision to the B.S. in IT curriculum reflects the ever changing field of IT. This program modification is in line with other IT programs across the U.S. Students will be required to take 21 hours of coursework toward a concentration versus 15 hours.

Note: No changes in the assessment plan were required as a result of these minor changes.
School of Information Technology

Dean: Dr. Alex Koohang
Chair: Dr. Kevin Floyd

School of Information Technology Mission

The mission of the School of Information Technology (IT) is to educate students in information technology in ways that lead to fulfilling careers and enhance the economic vitality of Central Georgia. The School prepares its graduates to solve problems and apply new technologies within an increasingly interconnected and changing global environment. The School pursues this mission as an educational leader in teaching excellence, scholarship, professional service, and community outreach.

Acceptance into the Information Technology Program

The Bachelor of Science in Information Technology admission requires any transfer student to have at least a 2.0 GPA. Students must not have any Learning Support (LS) requirements to be eligible for admission to the program.

Information Technology Program Educational Objectives

The IT program provides students with knowledge in the core information technologies and builds on that knowledge to create professionals who meet the business and economic needs of Central Georgia. The program is designed to produce graduates with a diversified set of skills, roles, and experiences including knowledge in network administration and technologies, cyber security, cyber forensics, integrated digital media and game design, and software development. These knowledge areas will prepare our graduates for careers in a range of organizations, from small to large.

The core knowledge in the program includes programming, web design, systems analysis and design, human computer interaction, database principles, project management, legal and ethical issues in information technology, and foundations of information assurance. Senior capstone is the last core course students take in the program. In this course students (normally in teams of three to five members) will analyze, design, develop, implement, and assess an information system based on their accumulated knowledge throughout the IT program.

The courses in the program also emphasize critical thinking, problem solving, decision-making, and interpersonal and communication skills. Career success through lifelong learning and professional development is emphasized at all levels of the curriculum.

It is anticipated that a few years after graduation, graduates will

1. Assume productive roles in IT-related positions, such as network administrator, software developer, web master, systems analyst, information security analyst/officer, cybersecurity analyst/officer, cyberforensics analyst/officer, multimedia designer, and database administrator; and
2. Pursue life-long learning enabling them to adapt and grow as organizational responsibilities change

Information Technology Student Outcomes

Upon completion of the baccalaureate program in IT, students should be able to:

1. Identify and apply current technical concepts in the core information technologies
2. Define, analyze, and apply information system requirements in local and global environments
3. Design, implement, and administer effective IT solutions based on user requirements
4. Use appropriate project management methods in the creation of an effective IT project plan
5. Describe and apply best practices and standards in IT applications
6. Identify and apply IT methods used to protect the confidentiality, integrity, and availability of information and its delivery systems
7. Identify and incorporate relevant ethical, legal, security, and social issues in a technology environment
8. Work effectively in teams to develop IT based solutions
9. Communicate effectively both orally and in writing
10. Recognize the need for lifelong professional development

Area I: Information Technology upper-level Core Curriculum (Required): 21 hours
- ITEC 3155 Systems Analysis and Design
- ITEC 3235 Human Computer Interaction
- ITEC 3245 Database Principles
- ITEC 3300 Project Management
- ITEC 4200 Foundations of Information Assurance
- ITEC 4205 Legal and Ethical Issues
- ITEC 4750 Senior Capstone

Area II: IT upper-level courses (Required): 21 hours
This area is satisfied by taking an ITEC concentration (See below). Or 21 hours of ITEC upper-level courses.

Area III. Additional courses (Required): 18 hours
These course may be taken in:
1. Upper-level ITEC courses in the program;
2. Informatics courses deemed appropriate for providing students with a strong foundation in IT as well as a deeper understanding of another discipline; or
3. Approved transfer courses.

ITEC Concentrations

Cyber Forensics Concentration (21 hours): Students will learn the digital forensics process of acquisition, analysis, and reporting. Learners will carry out the procedures of identification, collection, preservation, examination, analysis, and reporting of evidence for civil and criminal cases. Students will learn about the tools and processes to handle digital evidence. Digital forensics includes using scientific methods and providing extensive documentation to ensure the preservation and integrity of the investigation.

Required (15 hours)
- ITEC 4321 Forensics/Data Recovery
- ITEC 4322 Advanced Forensics
- ITEC 4341 Incident Response and Contingency Planning
- CRU 3200 Criminal Procedure & Evidence
- CRU 4310 White Collar and Cybercrime

Select two classes from the following (6 hours)
- ITEC 3328 Linux Systems Administration
- ITEC 4344 Ethical Hacking
- ITEC 4299 Special Topics in Cyberforensics

Cybersecurity Concentration (21 hours): The Cybersecurity concentration involves detecting, reporting, and responding to cyber threats, making encryption codes to securely pass information between systems, and taking appropriate measures to ensure the security of valuable information. Students will learn about server and network security, incident response and contingency planning, conducting vulnerability assessments, and penetration testing.

Required (15 hours)
ITEC 4321 Network Security
ITEC 4341 Incident Response and Contingency Planning
ITEC 4361 Software Security
ITEC 4345 Cyber Systems Security
ITEC 4344 Ethical Hacking

Select two classes from the following (6 hours)
ITEC 4321 Forensics/Data Recovery
ITEC 4370 Virtual Computing
ITEC 4299 Special Topics in Cybersecurity

**Networking Technologies and Administration Concentration (21 hours):** The Network Technologies & Administration concentration educates students in the use of current concepts and technologies of networking. Students will learn to analyze the needs of organizations, communicate the needs to the users, and then design and build networks to meet those needs. Graduates will be prepared for positions in networking or systems administration.

**Required (15 hours)**
ITEC 3325 Windows Systems Administration
ITEC 3328 Linux Systems Administration
ITEC 4329 Data Communications
ITEC 4370 Virtual Computing
ITEC 4421 Network Security

Select two classes from the following (6 hours)
ITEC 3320 Hardware and Systems
ITEC 4285 Web Server Administration
ITEC 4242 Database Administration
ITEC 4324 Wireless Technologies
ITEC 4299 Special Topics in Networking Technologies and Administration

**Software Development Concentration (21 hours):** The Software Development concentration prepares students for the design, development, and implementation of software solutions. Graduates will be prepared for a variety of careers including software or systems developers, web application developers, or database programmers.

**Required (15 hours)**
ITEC 3264 Data Structures
ITEC 3280 Web Programming
ITEC 4261 Java Programming
ITEC 4361 Software Security
ITEC 4244 Database Programming

Select two classes from the following (6 hours):
ITEC 4248 Web Development Environments
ITEC 4266 C++ Programming
ITEC 4286 Web Applications Development
ITEC 4269 Client/Server Systems Programming
ITEC 4299 Special Topics in Software Development

**Integrated Digital Media & Game Design Concentration (21 hours):** The Integrated Digital Media and Game Design concentration prepares students in the design and development of digital media and games for use in a variety of IT applications. Through the various courses, students will develop competencies in evaluating user and product needs and in designing, developing, and implementing digital media products to meet those needs. Students learn a broad range of skills including graphic design and production, interface design, and analysis and design techniques for constructing interactive applications. Graduates will find career opportunities as digital media designers and developers, game developers, multimedia specialists, and trainers.
**Required (15 hours)**
ITEC 3236 Interactive Digital Media
ITEC 4230 Graphic Imaging
ITEC 4238 2D Computer Animation
ITEC 4237 3D Modeling
ITEC 4255 Game Design and Development

**Select two classes from the following (6 hours)**
ITEC 4250 Computational Intelligence
ITEC 4284 Web Multimedia Delivery
NMAC 3108 Writing for Digital Media
NMAC 3145 Digital Media Studio
NMAC 3600 Digital Storytelling
ITEC 4299 Special Topics in Integrated Digital Media and Game Design