

**ABET-ACCREDITATION
Self-Study Report**

for the

Bachelor of Science in Information Technology

at

Indiana State University

Terre Haute, Indiana, USA



July 1, 2015

CONFIDENTIAL

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BACKGROUND INFORMATION

A. Contact Information

The direct contact personnel for ABET accreditation at ISU for IT program are: Dr. Joe Ashby, Dr. William Clyburn, Dr. Patrick Appiah-Kubi, Jared Wuerzburger and Edie Wittenmyer. Their contact information is listed in Table 1, Table 2, Table 3, Table 4 and Table 5.

Table 1 Contact Information- Chairperson (before August 1, 2015)

Dr. Joe Ashby	
Chairperson	
Electronics and Computer Engineering Technology	
Office: TC301E	Phone: 812-237-3457
Fax: 812-237-3397	Email: joe.ashby@indstate.edu
Address: Room 301, 101 North Street, Terre Haute, IN 47809	

Table 2 Contact Information – Chairperson (after August 1, 2015)

Dr. William Clyburn	
Chairperson	
Electronics and Computer Engineering Technology	
Office: TC301L	Phone: 812-237-3450
Fax: 812-237-3397	Email: william.clyburn@indstate.edu
Address: Room 301, 101 North Street, Terre Haute, IN 47809	

Table 3 Contact Information- Program Coordinator

Dr. Patrick Appiah-Kubi	
Program Coordinator	
Electronics and Computer Engineering Technology	
Office: TC301K	Phone: 812-237-3400
Fax: 812-237-3397	Email: patrick.appiah-kubi@indstate.edu
Address: Room 301, 101 North Street, Terre Haute, IN 47809	

Table 4 Contact Information – Committee Member

Jared Wuerzburger	
Committee Member	
Electronics and Computer Engineering Technology	
Office: TC301M	Phone: 812-237-2865
Fax: 812-237-3397	Email: jared.wuerzburger@indstate.edu
Address: Room 301, 101 North Street, Terre Haute, IN 47809	

Table 5 Contact Information – Committee Member

Edie Wittenmyer	
Committee Member	
Electronics and Computer Engineering Technology	
Office: TC301E	Phone: 812-237-3456
Fax: 812-237-3397	Email: eddie.wittenmyer@indstate.edu
Address: Room 301, 101 North Street, Terre Haute, IN 47809	

B. Program History

During the 2000-2001 academic year, the Information Technology major was developed at the behest of the state of Indiana. The state wanted a four year degree program in Information Technology developed, and ISU accepted this state-mandated program which had been turned down by Purdue and Indiana University. The Information Technology program was a “triumvirate” program, that is, the program was housed in the Colleges of Technology, Business and Math/Computer Science. Dr. Nicholas Farha was hired and in spring 2002 began teaching Information Technology courses in the Electronics and Computer Engineering Technology department. The IT major officially started in fall 2002, although students were taking courses towards this major prior to its start date. In December 2002, Dr. Nicolas Farha was approved as the Interim Information Technology Program Coordinator. The IT major was the first major ever created at ISU in any department, without the entire program in place at its inception.

For a time frame of five years, Dr. Farha was instrumental in developing the required IT courses and obtaining approval for the curriculum. By 2008, the “triumvirate” was dissolved and the four year degree program was controlled totally by the ECET department. In June of 2009, Dr. Farha accepted a position at another institution. Upon his departure, he recommended that the Interim Information Technology Program Coordinator be turned over to Edie L. Wittenmyer who was employed by the department to instruct Information Technology courses along with basic electronics courses. From fall 2009 through fall 2013, Ms. Wittenmyer continued to instruct and develop additional courses for the program. In fall 2013, Dr. Patrick Appiah-Kubi was hired as the Information Technology Program Coordinator and tenure-track faculty. His job was to revamp the program and take it through the accreditation process.

C. Options

The program does not have options, tracks or concentration currently. We however recommend a minor in Computer Science, Electronics Engineering Technology, Management Information Systems, Computer Engineering Technology or Automation and Control Engineering Technology. This minor is only recommended but not required.

D. Organizational Structure

The organizational structure of the IT program at ISU is as shown in Figure 1 below. This chart shows the chain of communication and authority.

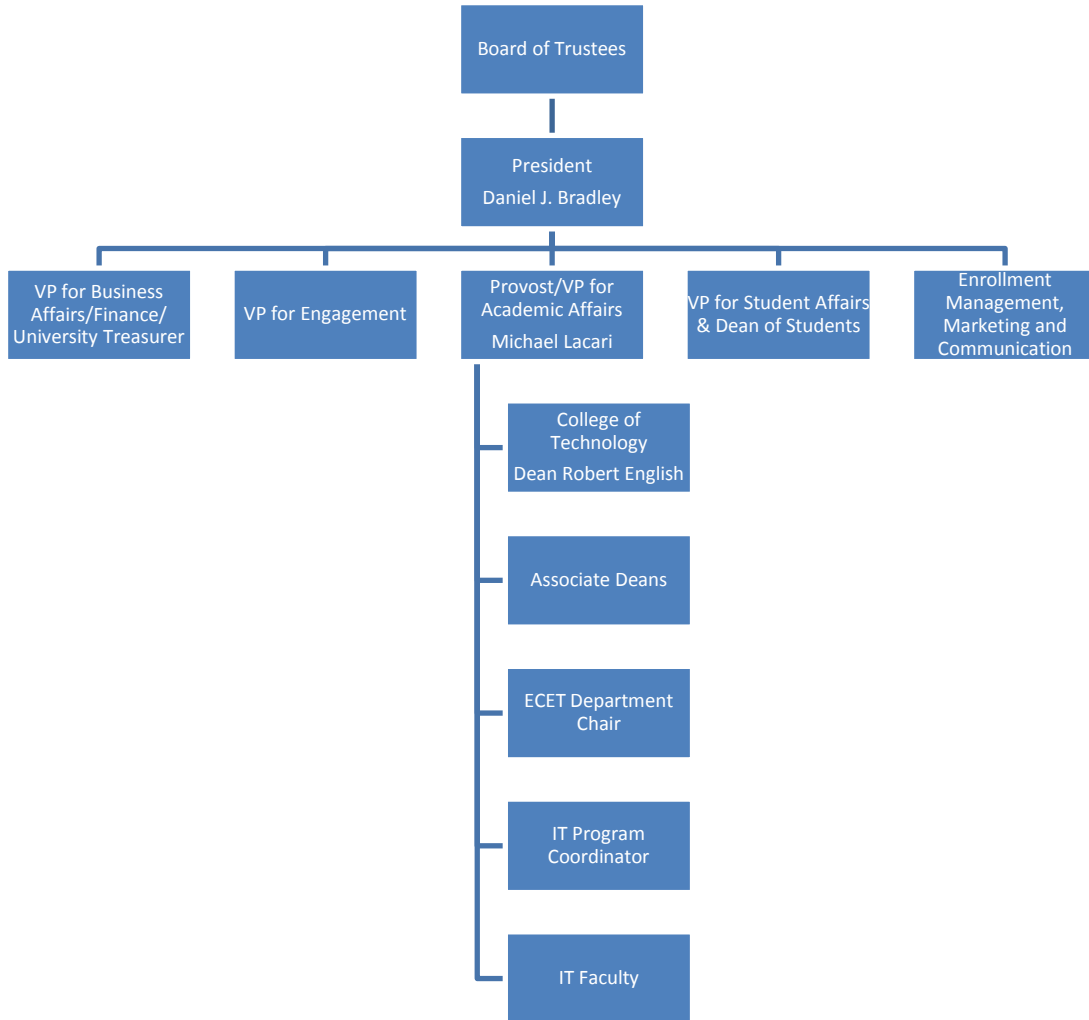


Figure 1 Organizational Structure

E. Program Delivery Modes

Generally the classes are offered during days on campus. Courses with multiple sections may include evening class meeting times. The classes are a mix of lecture/in-class activity based classes or a mix lecture/lab/in-class activity based classes. Blackboard is used as a supplemental tool in all face-to-face courses.

F. Program Locations

The main campus is located in Terre Haute and the program is offered on the main campus under the Department of Electronics and Computer Engineering Technology, in the College of Technology. In all but a few instances, major courses are delivered in the Myers Technology Center (TC) building. Our students are also required to take some foundation classes and major required courses not in the home department, from the College of Business (Management Information Systems program) and College of Arts and Sciences (Computer Science program).

G. Public Disclosure

The IT program educational objectives can be found:

1. On the ISU 2015-2016 Undergraduate Catalog, in the section detailing the IT major, online at:
http://catalog.indstate.edu/preview_program.php?catoid=24&poid=4211&hl=it&returnto=search
2. On the College of Technology website, in the section detailing the IT major, online at:
<http://technology.indstate.edu/it/>
3. On the ISU website, in the section detailing the IT major, online at:
http://cms.indstate.edu/academics#accordion-undergrad_programs_accordion=0

H. Deficiencies, Weaknesses or Concerns from Previous Evaluation(s) and the Actions Taken to Address Them

This is an initial accreditation.

GENERAL CRITERIA

CRITERION 1. STUDENTS

In this section, we will describe the policies and procedures instituted by the Department and program as required by Criterion 1 to evaluate, advise and monitor students' progress in a way that is consistent with the program objectives. This process is done with one goal of achieving the program outcome and having impressive student outcomes.

A. Student Admissions

Admittance to ISU at the undergraduate level is handled by the Admissions Office. Outside of assisting Admissions with recruiting (Sycamore Preview, Experience State & arranged visits) and participation in new student orientation and initial freshman advising and registration for classes, the program has no involvement with this process. An IT freshman has the same eligibility requirements as freshmen in other majors. The general ISU admission standards are as follows;

1. Admission Process

Submit application materials to the Office of Admissions (at right). Applicants normally receive a response within two weeks of receipt of all application materials, including:

- I. Application. Apply online. Walks-ins also welcomed.
- II. Official High School Transcripts. To be official, transcripts must be sent directly from the high school to Indiana State University electronically or through postal mail. A final high school transcript will be required upon graduation and completion of all high school course work.
- III. Official SAT or ACT scores.
- IV. Military credit. To receive credit for military education, applicants must submit a DD214 and a Joint Services Transcript (if security message appears when visiting this link, follow the instructions to continue to the Web site).
- V. Copy of alien registration card (green card) if applicable.
- VI. \$25.00 application fee (nonrefundable). Payable by Visa, MasterCard, or check or money order payable to Indiana State University (include SSN or student ID)

Exceptions: SAT/ACT scores not required if the applicant is 21 (or more) years of age. Official GED scores may be substituted for high school transcripts.

2. Deadlines

To ensure full consideration, application materials must be received before the following dates. Early application is encouraged for scholarship considerations.

Fall semester..... June 1
Spring semester..... December 1
Summer session..... May 1

Applications received after these deadlines will be accepted and every attempt made to ensure consideration for the desired semester or term.

3. Admission Requirements

To qualify for admission, applicants normally must satisfy the following:

- I. Completion of the Indiana Core 40 high school curriculum (or equivalent for non-Indiana graduates) with a grade point of 2.5 on a 4.0 scale.
- II. Indiana high school graduates must have passed both the mathematics and English sections of ISTEP or receive an official waiver from their high school.

Exceptions: Indiana Core 40 (or equivalent) not required if high school diploma was awarded prior to 1998. ISTEP not required if high school diploma was awarded prior to 2002. Acceptable GED scores may be submitted to satisfy admission requirements listed above.

B. Evaluating Student Performance

To earn a bachelor's degree in information technology from ISU, students must complete the major coursework, and have a minimum GPA of 2.0/4.0 in all work attempted at ISU.

Banner (the student information system) contains the pre-requisites information and the system doesn't allow enrollment if pre-requisites are not met. To ensure students have the necessary foundation for courses in the sequence, the program requires students to obtain a better grade in the pre-requisite. Passing the pre-requisite is necessary for an advisor to approve student's course registration for the following semester. An 'F' grade in a course that is a pre-requisites for other courses in the curriculum requires the course to be repeated. There may be exceptions, when a student has the required knowledge contained in the re-requisite course. In such cases the department chair can override the pre-requisite requirement.

C. Transfer Students and Transfer Courses

Indiana State University accepts credit from regionally accredited college and universities within the United States and from selected schools across the globe. Credit may also be granted for military training and experience. The Information Technology bachelor's program follows the general campus guidelines for transferable credit, online at:

<http://www.indstate.edu/transfer/guidelines.htm>

The following are general guidelines for accepting transfer credit:

1. Credit earned from regionally accredited colleges and universities is transferable.
2. Transfer credit is assigned only for courses at the 100 level (or above) for an earned grade of "C" or higher.

3. Generally, an equivalent number of credit hours are given.
4. Remedial, audited, or non-credit courses do not transfer.
5. College living, orientation, and study skills classes do not transfer.
6. In some cases, credit may be transferable to the University and count toward graduation, but may not be applied toward completion of the intended major.
7. As much as 90 credit hours of total transfer credit will be accepted for transfer into a bachelor degree program; at least 30 credit hours must be completed through ISU to earn the bachelor degree.
8. Grades (GPA) do not transfer except for the purpose of graduation honors.
9. If students transfer a bachelor degree from a regionally accredited U.S. institution, all of the University's Foundational Studies/General Education requirements will be waived.
10. If students transfer an associate of applied science (A.A.S.) from a regionally accredited U.S. institution, a portion of Foundational Studies/General Education requirements will be waived, including: freshman composition; communication; quantitative literacy/mathematics; health and wellness; non-native language; social and behavioral sciences; and laboratory science.
11. If students transfer an associate of science (A.S.) or an associate of arts (A.A.) from a regionally accredited U.S. institution, a portion of Foundational Studies/General Education requirements will be waived, including: freshman composition; communication; quantitative literacy/mathematics; health and wellness; non-native language; social and behavioral sciences; laboratory science; literary studies; fine and performing arts; historical studies; and global perspective and cultural diversity.
12. If students successfully complete the Statewide Transfer General Education Core (STGEC) at an Indiana public institution of higher education, you can transfer that coursework as a block of 30 credit hours towards completion of Foundation Studies requirements at Indiana State University.

D. Advising and Career Guidance

Academic advising is an integral part of the educational process. The primary purpose of advising is to assist students in the development of meaningful educational plans compatible with the attainment of their life goals.

i. Advisor and Student Role

IT faculties foster a good working relationship with students, and adapt to their experiences and changing needs to assure the effectiveness of advising. By having faculty members serving in university and college level academic affairs committees, the program is able to enhance understanding, affirming, and respecting the individual differences within the University community to assure quality advising. The department and program expect advisors to develop the knowledge, experience, and interest for successfully communicating with students in a genuine, sincere, accurate, and confidential manner. Students are expected to understand University and program requirements and accept the responsibility for fulfilling them. Together advisors and students are expected to maintain a professional and mutually respectful relationship as they review students' progress toward the attainment of educational objectives.

Academic advising is an interactive process in which both students and advisors share the responsibility. The advisor serves as a facilitator of communication, as a source of accurate information, as a coordinator of academic planning, as an assistant in helping students to solve academically related problems, and as an agent of referral to other professionals and campus resources.

ii. Advising Units

Advising in the IT program starts from the freshman year and will continue through the senior year. Students have a variety of advising resources provided by units at the college and department level. Non-transfer freshmen are co-advised by the University College and the IT program advisors. Upon completion of 30 credits, student matriculate from the University College co-advising program, receiving all academic and career advising from the IT program faculty. As a student progresses through the academic program, each advising unit will play a different role, depending on the status and concern of the student. Key advisement personnel include:

1. Associate Dean's office. The Associate Dean is the chief administrator in the College of Technology for undergraduate academics. This office oversees all advising and curriculum issues. There are several support staff in this office who help students with advising, scheduling and registration:
 - A central academic advisor currently assists as an academic advisor for IT majors. This position was created after the college reorganization in fall 2006 with the goal of having a centralized advising contact. They handle the advising requests when IT faculty are not available or during special advising events.
 - The central records coordinator. This role is to assist the Associate Dean in organizing and coordinating the New Students Orientation program, assist students' registration, process transfer request, provide information on General Education requirements, and review degree requirements at the time of graduation.

Meetings with dean's staff are generally on an "as needed" basis, usually upon student's request. Having a single point of contact provides a convenient and consistent base for students to seek help on issues such as transfer credits, general education, course substitutions, etc.

As the student progresses through his/her program of study, individual advisement is increasingly provided by IT faculty advisor.

2. Academic advisor. When a student enrolls as an IT major, he/she is assigned an academic advisor who is a full-time member of the faculty. The student will retain this advisor as long as he/she feels advising has been productive, thereby enabling the development of a closer, more interactive relationship between the two parties. Students may request a change in their assigned advisor at any time by contacting the department chair or program coordinator. The role of the faculty advisor is to provide general guidance regarding IT curriculum and career paths. Each faculty advisor has a crucial role in

monitoring and advising students and in catching academic problems before they become serious.

iii. General Advising Policy

It is mandatory for students to arrange advisement meeting with their advisor at least once per semester to review their academic progress and discuss plans and courses for subsequent semesters. The advisor will evaluate the student's up-to-date information on MySAM (Degree Works) (ISU previously used DARS) data to help with advising. The meeting is to take place prior to registering for classes each semester. All freshman and sophomore students are required to obtain advisement PIN from their advisor before they can register online for courses; students at the rank of junior and senior may register for class without advisement PIN, but are required to meet with their academic advisor prior to registration for each upcoming semester.

Besides advisement meetings, advisors routinely monitor each student's progress towards the degree and work carefully to identify any deficiencies. Student progress is tracked by advisors with Ellucian Degree Works™ (implemented fall 2012) academic advising and tracking tool; branded MySAM by the university. Students also have full access to the tool. Academic records including progress toward the degree, course grades, remaining coursework to be completed, class registration tools, what-if functions for degree major or minor additions or changes and areas for academic advisor notes and recommendations are included. Any issues identified are communicated to students through emails and, meetings if necessary. Students may also request more frequent meetings depending on their needs.

In addition to academic advising, advisors also offer counsel with help from appropriate authority on campus to students who are experiencing emotional, personal or family troubles. For students with documented physical and learning disabilities, advisors will help accommodate their special needs by referring them to the Office of Student Success. The Office of Student Success exists as a central resource for a number of programs and tools to assist students with special needs or support.

iv. New Student Orientation Program

Fall and spring semester freshman are required to attend the Sycamore Advantage registration program held in June and early January of each year. Any freshman who fails to attend this program will not be allowed to register for classes before attending the "Knowing Sycamores" Orientation program in August and completing a consultation with Student Financial Aid.

During this orientation program, freshmen have the first experience with academic advising. Not only will they meet with the entire College level advising team including the Associate Dean and support staff, participating IT faculty member will have one-on-one sessions with the students to introduce important advising tools such as the university catalog, program guide sheet, and online Ellucian Degree Works or MySAM report. Advisors also review student's first semester schedule: these courses are pre-registered based on their ACT/SAT score and placement results. Additionally students learn to how to search, add or drop courses online.

v. Advising Tools

Student progress is tracked by advisors with the Ellucian Degree Work (implemented fall 2012) academic advising and tracking tool, named MySAM by the university. Students also have full access to the tool. This application integrates with the student information system to display progress toward the degree, course grades, remaining coursework to be completed, what-if functions for degree major or minor additions or changes and a note area for academic advisor notes and recommendations. Prior to Degree Works/MySAM the Degree Audit Reporting System (DARS) software package was used. Students who entered the program before fall 2012 are still using the DARS tool. The upgrade to Degree Works has been well received, giving students and advisors additional and more flexible academic review tools.

Additional advising tools include the curriculum guide sheet and four-year plan. The guide sheet is a one-page curriculum form that itemizes all the courses required to obtain a degree in IT. For the student's program of study, this is a one-page form that many students find to be the most useful means for tracking progress toward degree completion. Figure 1-1 shows the old curriculum plan and Figure 1-2 shows the new plan with new courses. The flow sheet is updated on a semester guide sheet that itemizes all of the classes required to obtain a degree in IT. Students can carry a copy of the guide sheet as a check list to monitor academic progress.

vi. Mentoring

It has been part of the department's culture for faculty to have an "open-door" policy for student visits. The primary role of mentoring encompasses general non-curriculum related guidance to student concerns on transition to college, employment perspective, and professional development, etc. Although there is no structured system for these activities, our department prides itself in creating an informal and comfortable social atmosphere in which students can routinely communicate with faculty outside classrooms. Survey results continue to show students are satisfied with department faculty's availability and willingness to serve the mentoring responsibility.

vii. Student Awards

A number of awards sponsored by professional societies and individual donors recognize outstanding student academics and services. Among these awards are:

1. Kenneth and Zorah (Atkins) Syphax-Rapid Reproduction, Inc. Scholarship - Student must be a full-time student in the College of Technology and possess a minimum GPA of 2.5.
2. Thelma F. Mills Scholarship - Students must have completed the freshman year and have demonstrated outstanding academic performance, must be an undergraduate student engaged in a meaningful work experience related to their vocational/professional objectives which does not average more than 20 hours per week during the academic year.
3. ECT Alumni Endowed Scholarship - This scholarship is awarded to a student who has declared a major in electronics and computer technology. The student must be in good standing with the University and the Department of Electronics and Computer Engineering Technology.

4. Pamela and Earl Godt Scholarship - The award is presented once every two years to a full-time student in the Department of Electronics and Computer Engineering.

The nominations for award recipients are done annually by a selected faculty member.

The faculty nominates the students in accordance with the award guidelines and makes the final decision through comprehensive evaluation.

viii. Tutoring

The rigorous nature of collegiate level study requires tutoring as an indispensable part of the learning process. Tutoring services for IT students are available through three avenues.

1. Through Office of Student Success at ISU - Students have access for free tutoring for most Foundational Studies courses. Sessions may be arranged on one-to-one or small study group basis for either long or short term periods each semester. Some problems can even be handled on a “drop-in” basis. These services are accessible Monday through Thursday from 9:00 AM to 9:00 PM and until 4:30 PM on Fridays. Sunday evening tutoring is available 6:00 PM to 9:00 PM.
2. The College of Technology has a centralized tutoring service coordinated by the Associate Dean’s office - The tutors are of junior/senior standing and have excellent grades and classroom performance. The hours are flexible and occur on weekdays. The COT tutors are responsible for assisting students on introductory circuit analysis, digital logic, computer science and math.
3. In-class tutors – The Office of Student Success supports the inclusion of tutors to reside during class meeting in 100 level courses. IT majors benefit from this assistance in 100 level electronics, freshman orientation and introduction to automation courses.

ix. Career Guidance

The ISU Career Center offers services to prepare, educate and assist students throughout their career development, to prepare them for a competitive work environment and to pro-actively develop and maintain effective relationships among students, employers and other relevant constituencies. The Career Center is responsible for hosting two career fairs a year on campus. Other services benefiting IT student careers include:

1. MyPlan - a Career Center on-line service to help students plan their career.
2. CAREERLINK - a national recruiting network and suite of web based recruiting and career services automation tools serving the needs of colleges, employers and job candidates.
3. Networking and etiquette workshops - workshops that allows students to learn about and practice important networking and dining skills including conversation, interviewing tips and proper dress.
4. Speed interview review workshops - workshops that offer students practice in interviewing skills in group setting alongside their peers.

**INFORMATION TECHNOLOGY MAJOR
(BACHELOR OF SCIENCE DEGREE)**

INDIANA STATE UNIVERSITY
COLLEGE OF TECHNOLOGY
ECET DEPARTMENT
TERRE HAUTE, IN 47809

Student's Name _____
Advisor's Name _____

<u>MAJOR COURSES</u>		<u>FOUNDATIONAL STUDIES COURSES</u>	
<u>Required 51 Semester Hours</u>		<u>Sem.</u>	<u>Grade</u>
Basic Core	Sem. Grade		
ECT 170 (3) Intro. to Information Tech	_____	ENG 101 (3) Funds of Writing I AND* *	_____
ECT 172 (3) Computer Hardware Compts	_____	ENG 105 (3) Funds of Writing II	_____
ECT 160 (3) Fundamentals of Electrns	_____	OR	
CS 151 (3) Intro to Computer Science	_____	ENG 107 (3) Rhetoric & Writing	_____
CS 170 (3) Web Programming	_____	ENG305T (3) Junior Composition	_____
CS 256 (3) Princip. Structured Design	_____	COMM 101 (3) Intro to Speech	_____
Second Level		MATH 102 (3) Quantitative Literacy	
ECT 301 (3) Technical Data Management	_____	or ECON 101	
ECT 372 (3) Computer Software Compts	_____	or FIN 108	
ECT 373 (3) Networking	_____	or higher level math course per placement	_____
ECT 437 (3) Computer Syst Management	_____	PE 101/101L (3) Fitness for Life	
CS 260 (3) Object Oriented Programng	_____	or HLTH 111 (3) Hlth Sci & Wellness	_____
MIS 301 (3) Systems Analysis for IT	_____		
Tracks/Electives	Sem. Grade	Foreign Language 1 st semester (3)	_____
(Required 15 Semester Hours - select five)		Foreign Language 2 nd semester (3)	_____
ARTD 400K, 420, 422	_____	Laboratory Science (LS) (3+1)	_____
CS 253, 258, 357, 361, 365, 440, 452, 458	_____	Social or Behavioral Studies (SBS) (3)	_____
CS 463, 468, 469, 470, 471, 475, 477, 481	_____	Literary Studies (LS) (3)	_____
CS 483, 485	_____	Fine & Performing Arts (FPA) (3)	_____
ECT 231, 232, 281, 351, 381, 490	_____	Historical Studies (HS) (3)	_____
MIS 276, 310, 355, 376, 380, 430, 431, 275	_____	Global Persp & Cultural Diver. (GPCD) (3):	_____
		Ethics & Soc. Resp. (ESR) (3)	_____
		Upper-Division Integrative Electives (9)	
		(3)	_____
		(3)*	_____

*Not required if ISU Minor or Certificate is completed

Credits in Major 51
Foundational Studies Credits 49-58
Minimum Number of Semester Hours Required to Graduate 120

Figure 1-1 Old IT Curriculum Plan

INFORMATION TECHNOLOGY MAJOR
(Bachelor of Science Degree)

Indiana State University
College of Technology
ECET Department
Terre Haute, IN 47809

Student's Name _____

Advisor's Name _____

MAJOR COURSE REQUIREMENTS		FOUNDATIONAL STUDIES REQUIREMENTS	
Required 65 Semester Hours		Sem.	Grade
Basic Core			
ECT 160 (3) Fundamentals of Electrn	_____	_____	_____
ECT 170 (2) Intro. to Information Tech	_____	_____	_____
ECT 172 (3) Computer Hardware Compts	_____	_____	_____
ECT 173 (3) Fund. Of Info. Tech	_____	_____	_____
ECT 176 (3) Mobile Sys. Design Tech.	_____	_____	_____
ECT 231 (3) Digital Computer Logic	_____	_____	_____
ECT 272 (3) Computer Software Compts	_____	_____	_____
ECT 275 (3) Digital Ani. & HCI Tech.	_____	_____	_____
CS 151 (3) Intro to Computer Science	_____	_____	_____
CS 170 (3) Web Programming	_____	_____	_____
CS 256 (3) Princip. Structured Design	_____	_____	_____
ECT 301 (3) Tech. Data Mgt.	_____	_____	_____
ECT 371 (3) Emerging Trends in IT	_____	_____	_____
ECT 373 (3) Intro. Data Comm. & Netw	_____	_____	_____
ECT 374 (3) Info. System Security	_____	_____	_____
ECT 375 (3) Adv. Digital Ani. & HCI Tech.	_____	_____	_____
ECT 378 (3) Enterprise IT Architecture	_____	_____	_____
MIS 301 (3) Systems Analysis for IT	_____	_____	_____
ECT 437 (3) Computer Syst Management	_____	_____	_____
ECT 471 (3) Adv. Tech. Data Mgt.	_____	_____	_____
ECT 473 (3) Doc. And Policy for IT	_____	_____	_____
ECT 477 (3) Culminating Exp. in IT	_____	_____	_____
<i>A minor that complements and expands on the IT major requirements is recommended (but not required). Recommended minors include:</i>			
<i>Computer Science (CS)</i>			
<i>Management Information Systems (MIS)</i>			
<i>Computer Engineering Technology (CET)</i>			
<i>Automation & Control Engineering Technology (ACET)</i>			
<i>Electronics Engineering Technology (EET)</i>			
		Freshman Composition (6**)	
		ENG 101 and	_____
		ENG 105	_____
		or **(3 per SAT/ACT) ENG 107 or ENG 108	_____
		Junior Composition (3)	
		Recommended: ENG305T or HRD340	
		or BEIT 336 or ENG 305 or ENG 307	
		or ENG 308	_____
		Communication (3)	
		COMM 101 or 202 or 215 or 302	_____
		Quantitative Literacy (3)	
		MATH 102 or ECON 101 or FIN 108	
		or higher level math course per placement	_____
		Health and Wellness (3)	
		PE 101/101L	
		or AHS 111	_____
		Non-native Language (6)	
		or 4 semesters in HS w. C grade or >	
		or ESL completion	_____
		Science and Laboratory (3+1)	_____
		Social or Behavioral Sciences (SBS) (3)	_____
		Literary Studies (LS) (3)	_____
		Fine & Performing Arts (FPA) (3)	_____
		Historical Studies (HS) (3)	_____
		Global Persp. & Cultural Diver. (GPCD) (3)	_____
		Ethics & Soc. Resp. (ESR) (3)	_____
		Upper-Division Integrative Electives (UDIE)	
		(3)	_____
		(3)*	_____
		*Not required if ISU Minor or Certificate is completed	

Required credits in major – 65
Minimum total credits required to graduate - 120

Figure 1-2 New IT Curriculum Plan

- The four-year plan (Figures 1-3 and 1-4) arranges the curriculum in a suggested semester-by-semester track. This document also shows students when classes are guaranteed to be offered (fall or spring).

Information Technology Bachelor of Science Degree					
Typical Four Year Plan					
Fall Year 1			Spring Year 1		
ECT 170		3 Credit Hour	ECT 372		3 Credit Hours
ECT 172		3 Credit Hours	CS151		3 Credit Hours
ENG 101 (107/108)		3 Credit Hours	ENG 105 (107/108)		3 Credit Hours
MATH 102 (or remedial)		3 Credit Hours	MATH 102 (if had remedial)		3 Credit Hours
PE 101 & 101L		3 Credit Hours	COMM 101		3 Credit Hours
		15 Credit Hours			15 Credit Hours
Fall Year 2			Spring Year 2		
CS 170		3 Credit Hours	CS 256		3 Credit Hours
ECT 160		3 Credit Hours	MIS 301		3 Credit Hours
Non-native Language		3 Credit Hours	Science w. lab		4 Credit Hours
FS: Historical		3 Credit Hours	Non-native Language		3 Credit Hours
FS: Fine & Perform Arts		3 Credit Hours	FS: Soc and Behav Sci		3 Credit Hours
		15 Credit Hours			16 Credit Hours
Fall Year 3			Spring Year 3		
IT Elective (1 of 5)		3 Credit Hours	IT Elective (2 of 5)		3 Credit Hours
CS 260		3 Credit Hours	ECT 373		3 Credit Hours
ENG 305T		3 Credit Hours	FS: IUDE (1 of 2)		3 Credit Hours
FS: Literary Studies		3 Credit Hours	FS: Glob P. & C. Diversity		3 Credit Hours
FS: Ethics & Soc. Resp.		3 Credit Hours			
		15 Credit Hours			12 Credit Hours
Fall Year 4			Spring Year 4		
IT Elective (3 of 5)		3 Credit Hours	IT Elective (5 of 5)		3 Credit Hours
IT Elective (4 of 5)		3 Credit Hours			
ECT 301		3 Credit Hours			
ECT 437		3 Credit Hours			
FS: IUDE (2 of 2)		3 Credit Hours			
		15 Credit Hours			3 Credit Hours

Figure 1-3 Old four year plan

Information Technology Bachelor of Science Degree			
Standard 8 Semester Plan			
<u>Fall Year 1</u>		<u>Spring Year 1</u>	
ECT 170	2 Credit Hours	ECT 172	3 Credit Hours
ECT 173	3 Credit Hours	ECT 176	3 Credit Hours
FS: Freshman Comp	3 Credit Hours	CS 151	3 Credit Hours
FS: Health & Wellness	3 Credit Hours	FS: Quant Literacy	3 Credit Hours
FS: Communication	3 Credit Hours	FS: Fine & Perform Arts	3 Credit Hours
14 Credit Hours		15 Credit Hours	
<u>Fall Year 2</u>		<u>Spring Year 2</u>	
ECT 160	3 Credit Hours	ECT 275	3 Credit Hours
ECT 231	3 Credit Hours	CS 256	3 Credit Hours
ECT 272	3 Credit Hours	FS: Science with Lab	3 Credit Hours
CS 170	3 Credit Hours	FS: Soc and Behav Sci	4 Credit Hours
FS: Historical	3 Credit Hours	FS: Literary Studies	3 Credit Hours
15 Credit Hours		16 Credit Hours	
<u>Fall Year 3</u>		<u>Spring Year 3</u>	
ECT 301	3 Credit Hours	ECT 371	3 Credit Hours
ECT 374	3 Credit Hours	ECT 373	3 Credit Hours
MIS 301	3 Credit Hours	ECT 378	3 Credit Hours
FS: Jr Composition	3 Credit Hours	FS: Glob P & C Diversity	3 Credit Hours
FS: Ethics & Soc Resp	3 Credit Hours		
15 Credit Hours		12 Credit Hours	
<u>Fall Year 4</u>		<u>Spring Year 4</u>	
ECT 375	3 Credit Hours	ECT 473	3 Credit Hours
ECT 437	3 Credit Hours	ECT 477	3 Credit Hours
ECT 471	3 Credit Hours	FS: UDIE (2 of 2)	3 Credit Hours
FS: UDIE (1 of 2)	3 Credit Hours		
12 Credit Hours		9 Credit Hours	

Figure 1-4 New four year plan

x. Student Records

Student records at the department level are maintained the Ellucian Degree Works or MySAM tools and the Oracle Fusion Middleware database delivered in Banner. The content includes the courses in which the student is currently enrolled, which courses have been taken, along with student's grades and notes regarding advice to the student. Figure 1-5 shows an example of the Degree Works (MySAM) academic record tool.

The screenshot displays the MySAM Academic Record Tool interface. At the top, there is a navigation bar with links for Portal, FAQ, Help, Print, and Back to Self-Service. Below this is a search bar with fields for Student ID, Name, Degree (BS), Major (Computer Engineering Te), Level (U), Classification (Junior 1), Last Audit (05/14/2015), and Last Refresh (Today at 3:11 am). The main content area is divided into several sections:

- Worksheets:** Includes tabs for Plans, Notes, and GPA Calc. A dropdown menu shows 'Student View' selected, with buttons for 'View', 'Save as PDF', and 'Process New'. There are also checkboxes for 'Include in-progress classes' and 'Include preregistered classes', and a link for 'Class History'.
- History:** A section titled 'Class History' showing a table of student information. The table includes fields for Student ID, Level (Undergraduate), Degree (Bachelor of Science), Classification (Junior 1), College (College of Technology), Advisor (Applah-Kubi, Patrick), Overall GPA (3.703), Alternate PIN (174360), Citizenship (Citizen), Transfer Hours (N/A), Veteran status (N/A), and Transfer Institution/Degree (N/A). Other fields include 4 Year Guarantee (Grad Guarantee Denied, priv-Yes), Honors (Honors Student), Sport (N/A), Distance Learner (N/A), Concentration (N/A), Academic Standing (Good Standing), Holds (No Holds), GPA Hours (66), GPA Quality Points (244.4), and Admit Term (Fall 2013).
- Degree Progress:** A section titled 'Degree Progress' showing a progress bar for 'Requirements' at 72%. Below this is a table for the 'Computer Engineering Technology Major' with a Catalog Year of 2013-2014 and a GPA of 3.860. The table lists 'MAJOR REQUIRED COURSES' with checkboxes for completion. Courses marked as complete include: Intro to Electrnics & Comprtr Technology (ECT 130), D.C. Circuits & Design (ECT 165), A.C. Circuits & Design (ECT 167), Computer Design Technology (ECT 168), Digital Computer Logic (ECT 231), Digital Computer Circuits (ECT 232), and Intro to Robotics & Automation (ECT 281). Courses marked as 'Still Needed' include: Technical Data Management & Applications (1 class in ECT 301*), Microcontroller Hardware & Software (1 class in ECT 303*), Computer Network Management Technology (ECT 306, B+, 3, Spring 2015), Microcontroller Applications & Interfacing (1 class in ECT 308*), Data Communication & Internet Technology (1 class in ECT 401*), Practical Digital Logic Design (1 class in ECT 403*), and Senior Project (1 class in ECT 406).

Figure 1-5 Degree Works (MySAM) Academic Record Tool

The College of Technology Student Services department works in conjunction with the ISU Office of Registration and Records in maintaining student records involving transfer credit and graduation requirements review/confirmation. A review of each student's academic record is triggered by the submission of an application for graduation by the student. A review letter is sent to the student indicating what requirements remain for graduation. The COT student services department then performs an initial check of completion prior to the Registrar's final review and the conferring of the degree.

E. Work in Lieu of Courses

For the IT major, credit towards graduation is awarded only upon successful completion of coursework at ISU or transfer of equivalent credit as described previously. Any dual credit awarded by high schools must have college credit awarded and a transcript received by the ISU Registrar from that accredited university. This policy also applies to military credit for Joint Service Transcripts or CCAF transcripts, awarded by the American Council on Education (ACE) or Advanced Placement (AP) or College Level Examination Program (CLEP) or The Defense Activity for Non-Traditional Education Support (DANTES).

F. Graduation Requirements

A Bachelor of Science in Information Technology (IT) is awarded upon completion of the following requirements:

1. The student earns a minimum of 120 credits, excluding any duplicate course credits
2. The student has no incomplete courses on their record when the incomplete was assigned for any semester or term after spring 2007
3. The student has completed at least 30 credits enrolled at Indiana State University, of which at least nine must be at the 300-400 level
4. The student has completed a minimum of 45 credit hours of course work in 300 and 400-level courses
5. The student has completed the Foundational Studies Program as shown in Figures 1-1 and 1-2.
6. The IT student has completed or transferred credit for all required courses in the major
7. The student has earned a minimum cumulative grade point average of 2.0.

A student who desires a second or additional bachelor's degree must complete a minimum of 30 credit hours at ISU after the awarding of the first degree and must fulfill all requirements for the degree being pursued. Two baccalaureate degrees may be granted simultaneously provided all requirements for both degrees have been completed and a minimum of 150 credit hours has been earned.

Those candidates who are free of all University obligations and who are designated as having completed degree requirements are issued the corresponding diploma and the transcript through the Office of Registration and Records. After graduation, if the student desires to pursue a second degree, he/she must be readmitted.

G. Transcripts of Recent Graduates

Transcripts of program graduates will be made available to the ABET team during the visit.

CRITERION 2. PROGRAM EDUCATIONAL OBJECTIVES

Educational objectives for the information technology program have been developed in conjunction with our constituents based on, and are consistent with, the mission statements of parent units. This section contains the mission statements of the university and College of Technology, and elaborates the process by which these objectives were determined, how the program ensures these objectives are achieved, and the systematic assessment to assure continuous improvement of the program.

A. Mission Statements

1. Institutional Mission

On February 22, 2008, the Indiana State University Board of Trustees approved the following revised version of mission statement and value statement that reflects a commitment to research, public service and a well-rounded education. The statements were developed by a committee of faculty, staff and students chaired by Dr. C. Jack Maynard, Indiana State's former provost and vice president for academic affairs.

***ISU Mission Statement:** Indiana State University, a doctoral research university, combines a tradition of strong undergraduate and graduate education with a focus on community and public service. We integrate teaching, research, and creative activity in an engaging, challenging, and supportive learning environment to prepare productive citizens for Indiana and the world.*

ISU Core Values

- We value high standards for learning, teaching, and inquiry.
- We provide a well-rounded education that integrates professional preparation and study in the arts and sciences with co-curricular involvement.
- We demonstrate integrity through honesty, civility, and fairness.
- We embrace the diversity of individuals, ideas, and expressions.
- We foster personal growth within an environment in which every individual matters.
- We uphold the responsibility of University citizenship.
- We exercise stewardship of our global community.

The mission and values statement are published at the following URL:

<http://www.indstate.edu/whyisu/>.

***ISU Vision Statement:** Indiana State University is inspired by a shared commitment to improving our communities, Indiana State University will be known nationally for academic, cultural, and research opportunities designed to ensure the success of its people and their work.*

2. College of Technology Mission Statement

The College of Technology will provide exemplary undergraduate and graduate programs, generate solutions and knowledge through research, and serve the technology needs of the State, the nation, and the international community.

The mission statement of COT is online at <http://technology.indstate.edu/about/values.htm>

COT Core Values

- The study of technology is an essential part of our cultural heritage and of a university education.
- High quality, state-of-the-art programs and the embracing of future technologies are highly valued.
- The College of Technology faculty value experiential instruction using modern laboratories to develop knowledge and skill.
- The College of Technology is a student-centered academic unit (i.e., high quality teaching and advising as well as meeting individual needs of students is central for all). The College of Technology is dedicated to identifying, enhancing, and rewarding faculty and student excellence in scholarship (all forms) and service, and is committed to excellence, in general.
- Based upon these core values, the College of Technology commits itself to fulfilling the mission and goals.

3. Department of Electronics and Computer Engineering Mission Statement

The mission of the Department of Electronics and Computer Engineering Technology (ECET) at Indiana State University is to prepare students for careers as technical professionals to work in industry environment that involves applications in the areas such as design, control and integration of electronic products or systems, and requires a practical problem solving approach that emphasizes hands-on skill with modern productivity tools (e.g. design, analysis, control, diagnostic, and project management tools).

4. BS in Information Technology Program Mission

The mission of the BS program Information Technology (IT) is to prepare individuals by providing a comprehensive knowledge and hands-on skills in a state-of-the-art information technology education. The IT program perpetuates Indiana State University's mission to educate students to become productive citizens and enhance the quality of life of the citizens of Indiana by preparing technical professionals for business and industry through a balanced curriculum.

B. Program Educational Objectives

From the program mission statement we derive the following objectives:

IT graduates from ISU are expected to demonstrate:

1. Technical competency. Demonstrate technical proficiency by applying general and disciplinary reasoning and critical thinking to identify, analyze and solve problems.
2. Communication skills. Demonstrate effective communication skills in both oral and written form to articulate technical knowledge, ideas, and proposals to peers, senior management, and other potentially diverse audience.
3. Managerial skills. Demonstrate organizational and increasing levels of managerial skills in their chosen field.
4. Ethical, social and professional responsibility. Demonstrate awareness of the impact, and professional, ethical and social responsibility of the practice of information technology in the state of Indiana and in a diversified world.
5. Teamwork mentality. Demonstrate the ability to function effectively and think independently in a multi-disciplinary team environment.
6. Lifelong learning. Demonstrate individual desire and commitment to remain technically current by engaging in continuous self-improvement and lifelong learning.

The IT program educational objectives can be found:

1. On the ISU 2015-2016 Undergraduate Catalog, in the section detailing the IT major, on-line at:
http://catalog.indstate.edu/preview_program.php?catoid=24&poid=4211&hl=it&returnto=search
2. On the College of Technology web site, in the section detailing the IT major, on-line at:
<http://technology.indstate.edu/it/>
3. On the ISU website, in the section detailing the IT major, online at:
http://cms.indstate.edu/academics#accordion-undergrad_programs_accordion=0

C. Consistency of the Program Educational Objectives with the Mission of the Institution

The program's educational objectives correlate well with mission statements of all parenting units. These statements share the common educational values: graduating professionally competent students who can serve both as leader and team member under different circumstances, and understand the impact of their work both to themselves and society as a whole.

D. Program Constituencies

We identify the following stake-holders to be the constituencies with respect to program educational objectives and program outcomes. Each group has special interest in these stated aims:

- Students of the IT program. The students expect themselves to become a technically competent, professionally and socially responsible individual after earning a bachelor degree from the program.
- Alumni. The alumni expect a continued high quality educational program as their career and reputation is associated with the quality of their alma mater. They are part of the Industrial Advisory Board for the program.
- Faculty. The faculty is expected to fulfill their educational responsibility in leading the students in the learning process, and by periodically evaluating, and adjusting if necessary, the educational outcomes relative to the educational objectives.

- Student employers. This group expects to hire fresh employees who are technically competent, productive, self-motivated learners, team members, and have excellent communication skills. They are part of the Industrial Advisory Board for the program.
- Graduate schools. These institutions to which our graduates may continue to pursue advanced degree expect our graduates to have sound fundamentals and capability for smooth transition into the more self-reliance mode of graduate study.

E. Process for Review of the Program Educational Objectives

We formulated the program educational objectives based on several considerations including ABET guidelines and mission statements of parent units. In the process we relied heavily on input and feedback from constituencies.

The process of developing educational objectives started soon after three departments (Computer Science Department, Management Information Systems Department and Electronics and Computer Engineering Department) decided to run the Information Technology program. The program faculty then developed a set of objectives in conjunction with key constituencies. These objectives were submitted to faculty for discussion and revision.

CRITERION 3. STUDENT OUTCOMES

A. Student Outcomes

Specific IT program curriculum includes the core information technologies of human computer interaction, information management, programming, networking, web systems and technologies, information assurance and security, system administration and maintenance and system integration and system architecture.

Students at the time of graduation are prepared to demonstrate:

- SO (a): An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline
- SO (b): An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
- SO (c): An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- SO (d): An ability to function effectively on teams to accomplish a common goal
- SO (e): An understanding of professional, ethical, legal, security and social issues and responsibilities
- SO (f): An ability to communicate effectively with a range of audiences
- SO (g): An ability to analyze the local and global impact of computing on individuals, organizations, and society
- SO (h): Recognition of the need for and an ability to engage in continuing professional development
- SO (i): An ability to use current techniques, skills, and tools necessary for computing practice.
- SO (j): An ability to use and apply current technical concepts and practices in the core information technologies of human computer interaction, information management, programming, networking, and web systems and technologies.
- SO (k): An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation, and administration of computer-based systems.
- SO (l): An ability to effectively integrate IT-based solutions into the user environment.
- SO (m): An understanding of best practices and standards and their application.
- SO (n): An ability to assist in the creation of an effective project plan.

B. Relationship of Student Outcomes to Program Educational Objectives

We view student outcomes as measurable effects of our curriculum. The particular choice of outcomes was strongly influenced by our program objectives. As such, there is close correspondence between them, which is best illustrated in the matrix shown in Table 3-1.

C. Process for the Establishment and Revision of the Student Outcomes

We believe these Student Outcomes represent the foundation of knowledge and skills for IT graduates to maintain competence and achieve professional success upon graduation. These outcomes were developed and approved by IT faculty during the preparation for ABET accreditation. The program faculty will be responsible for collecting, reviewing, and interpreting information drawn from individual courses at the end of each semester. The outcomes

assessment results will be discussed at all faculty meetings and during annual industry advisory board meeting, where issues regarding program outcomes are identified and viable strategies are developed.

D. Enabled Student Characteristics

The IT curriculum is designed to support the outcomes with one or more technical or foundational studies courses. By mapping individual course learning objectives to the appropriate outcomes, we can use the results to identify the areas of strengths, and to develop strategies to address the weakness. Table 3-2 shows the connections between program curriculum and the outcomes. Table 3-3 also shows the connection between program educational objectives and curriculum.

Table 3-1 Correspondence between Student Outcomes and Program Objectives

Educational Objectives, Student Outcomes and ABET Criteria Matrix		IT Student Outcomes													
		a	b	c	d	e	f	g	h	i	j	k	l	m	n
ABET Criteria		An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline	An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution	An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs	An ability to function effectively on teams to accomplish a common goal	An understanding of professional, ethical, legal, security and social issues and responsibilities	An ability to communicate effectively with a range of audiences	An ability to analyze the local and global impact of computing on individuals, organizations, and society	Recognition of the need for and an ability to engage in continuing professional development	An ability to use current techniques, skills, and tools necessary for computing practice.	An ability to use and apply current technical concepts and practices in the core information technologies of human computer interaction, information management, programming, networking, and web systems and technologies.	An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation, and administration of computer-based systems.	An ability to effectively integrate IT-based solutions into the user environment.	An understanding of best practices and standards and their application.	An ability to assist in the creation of an effective project plan.
IT Educational Objectives	Technical competency	√	√	√						√	√	√	√		√
	Communication skills				√		√								√
	Managerial skills				√										√
	Ethical, social and professional responsibility					√		√						√	
	Teamwork mentality				√										√
	Lifelong learning								√						

Table 3-2 Correspondence between Student Outcomes and Curriculum

Curriculum, Student Outcomes and ABET Criteria Matrix		IT Student Outcomes													
		An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline	An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution	An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs	An ability to function effectively on teams to accomplish a common goal	An understanding of professional, ethical, legal, security and social issues and responsibilities	An ability to communicate effectively with a range of audiences	An ability to analyze the local and global impact of computing on individuals, organizations, and society	Recognition of the need for and an ability to engage in continuing professional development	An ability to use current techniques, skills, and tools necessary for computing practice.	An ability to use and apply current technical concepts and practices in the core information technologies of human computer interaction, information management, programming, networking, and web systems and technologies.	An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation, and administration of computer-based systems.	An ability to effectively integrate IT-based solutions into the user environment.	An understanding of best practices and standards and their application.	An ability to assist in the creation of an effective project plan.
ABET Criteria		a	b	c	d	e	f	g	h	i	j	k	l	m	n
IT Curriculum	ECT 160	√	√							√	√	√			
	ECT 170	√	√	√				√	√	√	√				
	ECT 172	√	√	√					√	√	√	√	√		
	ECT 173	√	√	√	√			√	√	√	√	√	√	√	
	ECT 176	√	√	√		√				√	√	√	√	√	
	CS 151	√	√	√						√	√	√	√	√	
	CS 170	√	√	√					√	√	√	√	√	√	
	CS 256	√	√	√						√	√	√	√	√	
	ECT 275	√	√	√						√	√	√	√	√	√
	MIS 301	√	√	√						√	√	√	√	√	√
	ECT 231	√	√	√						√	√	√	√	√	
	ECT 272	√	√	√						√	√	√	√	√	
	ECT 301	√	√	√	√			√	√	√	√	√	√	√	√
	ECT 371	√	√	√		√		√	√	√	√	√	√	√	
	ECT 373	√	√	√	√			√	√	√	√	√	√	√	
	ECT 374	√	√	√	√	√		√	√	√	√	√	√	√	√
	ECT 378	√	√	√	√			√	√	√	√	√	√	√	
	ECT 375	√	√	√	√	√		√		√	√	√	√	√	√
	ECT 437	√	√	√	√	√		√	√	√	√	√	√	√	√
	ECT 471	√	√	√	√	√		√		√	√	√	√	√	√
ECT 473	√	√	√				√						√	√	
ECT 477	√	√	√	√	√				√	√	√	√	√	√	
COMM 101							√								
ENG 101/107/108							√								
MATH 102	√														

Table 3-3 Correspondence between Educational Objectives and Curriculum

Curriculum, ABET Criteria and IT Educational Objectives Matrix		IT Educational Objectives					
		Technical competency	Communication skills	Managerial skills	Ethical, social and professional responsibility	Teamwork mentality	Lifelong learning
ABET Criteria		a,b,c,I,j,k,l,n	d,f,n	d,n	e,g,m	d,n	h
IT Curriculum	ECT 160	√					
	ECT 170	√			√		
	ECT 172	√				√	
	ECT 173	√	√		√	√	
	ECT 176	√				√	
	CS 151	√					
	CS 170	√					
	CS 256	√					
	ECT 275	√					
	MIS 301	√					
	ECT 231	√					
	ECT 272	√					
	ECT 301	√	√	√	√	√	√
	ECT 371	√					
	ECT 373	√			√	√	√
	ECT 374	√			√	√	√
	ECT 375	√					
	ECT 378	√	√	√	√	√	√
	ECT 437	√	√	√	√	√	√
	ECT 471	√					
ECT 473	√	√	√	√	√	√	
ECT 477	√	√	√	√	√		
COMM 101		√				√	
ENG 101/107/108		√				√	
MATH 102	√						

CRITERION 4. CONTINUOUS IMPROVEMENT

ABET definition: Student outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the knowledge, skills, and behaviors that students acquire as they progress through the program.

ABET definition: Assessment is one or more processes that identify, collect, and prepare data to evaluate the attainment of student outcomes. Effective assessment uses relevant direct, indirect, quantitative and qualitative measures as appropriate to the outcome or objective being measured. Appropriate sampling methods may be used as part of an assessment process.

ABET definition: Evaluation is one or more processes for interpreting the data and evidence accumulated through assessment processes. Evaluation determines the extent to which student outcomes are being attained. Evaluation results in decisions and actions regarding program improvement.

A. Assessment of Student Outcomes

The IT faculty in the ECET department has adopted the following processes/evidences to assess the achievements of the student outcomes including computer and mathematics skills, design and implementation skills, and written and oral communications. Using single evidence may not be enough to assess all the outcomes. Therefore several evidences have been identified as follows.

1. Student project evaluation for the outcome assessment

The following performance criteria were developed to measure the attainment of student outcomes a, b, c, f, I, j, k, l, and n. Students were asked to assess the following outcome categories (design, implementation, report, presentation and references) on the scale of 1 to 5, 1 = strongly disagree and 5 = strongly agree.

Assessment Categories

Design

- SO (a): An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline.
- SO (b): An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
- SO (c): An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- SO (i): An ability to use current techniques, skills, and tools necessary for computing practice.
- SO (j): An ability to use and apply current technical concepts and practices in the core information technologies of human computer interaction, information management, programming, networking, and web systems and technologies.
- SO (k): An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation, and administration of computer-based systems.
- SO (l): An ability to effectively integrate IT-based solutions into the user environment.

Implementation

SO (c): An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs

SO (i): An ability to use current techniques, skills, and tools necessary for computing practice.

SO (j): An ability to use and apply current technical concepts and practices in the core information technologies of human computer interaction, information management, programming, networking, and web systems and technologies.

SO (k): An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation, and administration of computer-based systems.

SO (l): An ability to effectively integrate IT-based solutions into the user environment.

Report

SO (n): An ability to assist in the creation of an effective project plan.

Presentation

SO (f): An ability to communicate effectively with a range of audiences

References

SO (n): An ability to assist in the creation of an effective project plan.

The students in ECT 301 were surveyed in fall 2014, to collect their responses for the assessment purpose. The survey is conducted annually as part of program continuous improvement and university level assessment requirement. In fall 2014 we had 30 participants for ECT 301. All the gathered data are presented here in the table below and hardcopies of the responses have been kept with the program folder in the department. These data will be made available to the ABET team.

ECT 301 Team Project Rubric to assess outcomes a, b, c, f, I, j, k, l, and n in fall 2014

Team #	SO: a, b, c, I, j, k, l	SO: c, I, j, k, l	SO: n	SO: f	SO: n
	Design	Implementation	Report	Presentation	References
1	5	5	5	5	4
2	5	5	5	5	5
3	5	5	5	5	5
4	5	5	5	5	4
5	5	5	5	5	5
6	5	5	5	5	5
7	3	4	3	3	2
8	4	5	3	4	3
9	5	5	5	5	5
10	3	4	3	4	5
Average	4.5	4.8	4.4	4.6	4.3
Percentage	90%	96%	88%	92%	86%

2. Student presentation evaluation for the outcome assessment

The following performance criteria were developed to measure the attainment of student outcomes d, f, i and j. Students were asked to assess the following outcome categories (design,

implementation, report, presentation and references) on the scale of 1 to 5, 1 = strongly disagree and 5 = strongly agree.

Assessment Categories

Delivery

SO (f): An ability to communicate effectively with a range of audiences

Organization

SO (d): An ability to function effectively on teams to accomplish a common goal

Content

SO (i): An ability to use current techniques, skills, and tools necessary for computing practice.

SO (j): An ability to use and apply current technical concepts and practices in the core information technologies of human computer interaction, information management, programming, networking, and web systems and technologies

Q&A

SO (f): An ability to communicate effectively with a range of audiences

The students in ECT 172, 301 and 490 were surveyed in fall 2014 to collect their responses for assessment purposes. The survey is conducted annually as part of program continuous improvement and university level assessment requirement. In fall 2014 we had 20 participants for ECT 172, 30 for ECT 301-001, 21 for 301-002 and 19 for ECT 490. All the gathered data are here in tables and the hardcopies of the responses have been kept with the program folder in the department. These data will be made available to the ABET team.

ECT 301-001&002 Presentation survey to assess outcomes d, f, i and j in fall 2014

Students	SO: f	SO: d	SO: i, j	SO: f
	Delivery	Organization	Content	Q&A
301-001 Avg. (30 students)	4.34	4.46	4.35	4.4
301-002 Avg. (21 students)	4.23	4.19	4.27	4.17
Total Avg.	4.285	4.325	4.31	4.285
Percentage	85.7%	86.5%	86.2%	85.7%

ECT 172 Presentation survey to assess outcomes d, f, i and j in fall 2014

Students	SO: f	SO: d	SO: i, j	SO: f
	Delivery	Organization	Content	Q&A
Average of 20 students	3.8	4.4	4.15	3.95
Percentage	76%	88%	83%	79%

ECT 490 Presentation survey to assess outcomes d, f, i and j in fall 2014

Students	SO: f	SO: d	SO: i, j	SO: f
	Delivery	Organization	Content	Q&A
Average of 19 students	4.53	4.37	4.42	4.26
Percentage	90.5%	87.4%	88.4%	85.3%

3. Team evaluation for the outcome assessment

The following performance criteria were developed to measure the attainment of student outcomes b, c, d, f, I, j, k, l and n. Students were asked to assess the following outcome categories (design, implementation, report, presentation and references) on the scale of 1 to 5, 1 = strongly disagree and 5 = strongly agree.

Assessment Categories

Contributions

SO (f): An ability to communicate effectively with a range of audiences

SO (l): An ability to effectively integrate IT-based solutions into the user environment.

SO(k): An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation, and administration of computer-based systems.

SO (j): An ability to use and apply current technical concepts and practices in the core information technologies of human computer interaction, information management, programming, networking, and web systems and technologies.

SO (i): An ability to use current techniques, skills, and tools necessary for computing practice.

Task Execution

SO (b): An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution

SO (c): An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs

Team Work

SO (d): An ability to function effectively on teams to accomplish a common goal

SO (n): An ability to assist in the creation of an effective project plan.

Helpfulness

SO (n): An ability to assist in the creation of an effective project plan.

The students in ECT 30, sections 001 and 002 were surveyed for the first time in fall 2014 to collect their responses for the assessment purpose. The survey is conducted annually as part of program continuous improvement and university level assessment requirement. In fall 2014 we had 30 participants for ECT 301-001 and 21 for 301-002. All the gathered data are presented here in table and the hardcopies of the responses have been kept with the program folder in the department. These data will be made available to the ABET team.

ECT 301-001&002 Team member evaluation survey to assess outcomes
b, c, d, f, I, j, k, l and n in fall 2014

Students	SO: f, l, k, j, i	SO: b, c	SO: d, n	SO: n
	Contribution	Task Execution	Team Work	Helpfulness
301-001 Avg. (30 students)	4.93	4.93	4.95	4.9
301-002 Avg. (21 students)	4.36	4.38	4.39	4.30
Total Avg.	4.645	4.655	4.39	4.6
Percentage	93%	93%	93%	92%

4. Homework/Quizzes/Exams

The following performance criteria were developed to measure the attainment of student outcomes a, e, h, m, and g. Students of ECT 373 were tested in spring 2015 on the ability to apply the criteria appropriately. Students either scored a 2 for a correct answer or 0 for incorrect. Sample of student work from ECT 373, 172, 490, 437 and 301 have been kept in the department and will be made available to the visiting team. The assessment questions with corresponding criteria are as follows.

Assessment Categories

SO (a): An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline

Exam Questions:

1. Convert the binary value 1000101110 to decimal

SO (e): An understanding of professional, ethical, legal, security and social issues and responsibilities

Exam Questions:

1. Which of the following is the result of running cleartext through an algorithm using a key?
2. Which of the following layers of the OSI model does NOT offer any commonly used encryption methods or technologies?

SO (g): An ability to analyze the local and global impact of computing on individuals, organizations, and society

Exam Questions:

1. Which of the following terms refers to the process that guarantees that data remains as originally sent, and that it came from an appropriate source?

SO (h): Recognition of the need for and an ability to engage in continuing professional development

Exam Questions:

1. Before you schedule your Network+ exam, you should know how to do all of the following EXCEPT which task?
2. In addition to the CompTIA Network+ Certification, which of the following certifications is also offered by CompTIA?
3. Which of the following is NOT a CompTIA Network+ domain?

SO (m): An understanding of best practices and standards and their application.

Exam Questions:

1. Of all the 10 GbE standards described in the chapter, which one was most recently released?
2. Together, three versions of Gigabit Ethernet, published under the 802.3z standard, are known by what name?

All the gathered data are presented here in the table and the hardcopies of the responses are kept with the program folder in the department. These data will be made available to the ABET team.

ECT 373-002&004 Exam evaluation to assess outcomes a, e, g, h and m in spring 2015

Students	SO: a	SO: e	SO: g	SO: h	SO: m
373-002 Avg. (15 students)	1.73	1.73	1.2	1.47	1.2
373-004 Avg. (23 students)	1.3	1.39	1.22	1.74	1.65
Total Avg.	1.515	1.56	1.21	1.605	1.425
Percentage	76%	78%	61%	80%	71%

5. Course Syllabi

Syllabi of all the required technical, math, and science courses have been attached in Appendix A and will be made available to the ABET team members on their visit as well. The syllabi demonstrate how the courses have been designed to deliver the program educational objectives and student outcomes (SO: a-n).

B. Continuous Improvement

In general the program’s Industry Advisory Committee (IAC) meets annually with the department to give their input on the educational objectives, program outcomes, and curriculum. The program coordinator also calls about 2-3 program committee meetings each semester (committee include all program faculty) to discuss the industry need, curriculum modification and accreditation, course development and offering, equipment and software need, IAC feedback, and student comment or concern to make the program better. These discussions and a desire for continuous improvement have led to a major program revamp after the program started in fall 2002 (see Program History under Background Information). Indiana State University, dictates that every program in the university should be evaluated annually to ensure continuous improvement. The IT program adheres to this directive and has instituted an annual assessment plan to assess the program and report to the university authorities. Since the program is going for ABET accreditation this cycle it revamped it assessment plan to correspond to the new curriculum and ABET requirements. From the interpretation of these data it seems our program is doing well. The program faculty met in spring 2015 to review/interpret the fall 2014 data in detail to see what steps can be taken to improve the program further. A benchmark of 80% was set for all student outcomes. All student outcomes achieved the 80% benchmark and do not need changes. The program will however continue to assess these outcomes to make sure there is consistency in the program. Outcomes g, m and e did not meet the target benchmark. Outcome g got 61% and will need improvements to the courses to achieve the target. As part of the measures local and global impact of computing on individuals, organizations, and society will be integrated into the fundamental courses to increase awareness in fall 2015. Outcome m got 71% and will need improvements to the courses to achieve this target. As part of the measure computing best practices and standards will be introduced into the fundamental courses to increase awareness in fall 2015. Outcome e got 78% and will need improvements to the courses to achieve the target benchmark. As part of the measures professional, ethical, legal, security and social issues and responsibilities concepts will be introduce into fundamental courses to increase awareness in fall 2015. Generally program meeting minutes are not kept, however department and IAC meeting minutes are kept. These minutes will be made available to the ABET team. In regard to other continuous improvement measures for the program, a satisfaction survey will be given to the students in fall 2015/spring 2016. Students will be asked to assess on a scale of 1

to 5, 1 = very dissatisfied and 5 = very satisfied, and NA = not applicable to the program. The student satisfaction surveys will be collected from sophomore to senior levels of the IT program in fall 2015/spring 2016. The survey questions will distributed in all IT classes for both semesters.

In order to ensure consistency in the results, students will be asked to respond to only one survey, even if they have enrolled in more than class for the semester or they took the survey in the fall semester. Students ID will be used to validate students.

Sample questions in the survey will include 1. Rate the quality of instruction in IT, 2. Rate the quality of the design courses, 3. Rate the quality of experimental labs, 4. Rate the quality of resources, 5. Rate the effectiveness of management courses, 6. Rate the effectiveness of problem solving techniques used in class or lab, 7. Rate the quality of advising and help with scheduling and academic progress, 8. Rate the frequency of course-offerings, 9. Classroom environment conducive to learning, 10. Career planning assistance, job placement, and professional skills development, 11. Opportunities for networking with fellow students and faculty through professional societies, 12. Quality of help from the department staff (non-faculty), 13. Overall professional learning experience at ISU, and 14. Overall quality of IT education. Results of the survey response will help the program to identify areas for improvement and develop plans towards improvement.

C. Additional Information

Copies of all the assessment instruments or materials referenced and minutes will be available for review at the time of the visit. Student work for all the survey courses will also be made available to the ABET team as evidence of direct assessment for those outcomes.

CRITERION 5. CURRICULUM

A. Program Curriculum

Table 5-1 shows the curriculum for the B.S. in Information Technology program as approved by the department and university. Tables 3-1, 3-2, and 3-3 in Criterion 3 show how the curriculum meets the Program Educational Objectives and Outcomes. The courses prepare students for a professional career in an IT discipline. Adequate time and attention are given to each curricular component, consistent with the objectives of the program and the institution. The program provides an integrated educational experience thru IT 477 Culminating Experience in IT, Co-op and internship which develops the ability of graduates to apply pertinent knowledge to solving problems in the information technology. The program requires a minimum of 120 semester hours. The communications content in COMM 101, composition courses, and course project or term paper for technical courses develops the ability of graduates to;

- a. Plan, organize, prepare, and deliver effective technical reports in written, oral, and graphical formats appropriate to the discipline and goals of the program.
- b. Incorporate communications skills throughout the technical content of the program.
- c. Utilize the appropriate technical literature and use it as a principal means of staying current in the information technology field.
- d. Utilize the interpersonal skills required to work effectively in teams.

Mathematics course MATH 102 covers arithmetic, algebraic, geometric, statistical, and financial computational methods to solve problems. Thus the level and focus of the mathematics content provides students with the skills to solve technical problems appropriate to the IT discipline and program educational objectives. Physical science courses PHYS 100 and 100L support the program educational objectives and include laboratory experiences which develop expertise in experimentation, observation, measurement, and documentation. The social sciences and humanities courses support technical education by broadening student perspective and imparting an understanding of diversity and the global and societal impacts of technology.

The required technical courses of 6 semester hours are more than 1/3 and less than 2/3 of the total 120 semester hours. The technical content develops the skills, knowledge, methods, procedures, and techniques associated with the IT discipline and appropriate to the goals of the program. The technical content consists of a technical foundation like ECT 160, 170, 173, 176, etc. and the increasingly complex technical specialties like ECT 272 , 231, 275, 371, 375, 473, etc. Lab-based and project based activities in ECT 301, 373, 374, 437 and 471, develop students competence in the use of analytical, software and tools common to the IT field and appropriate to the goals of the program. Technical courses develop students' knowledge and competence in the use of standard design practices, tools, techniques, and computer hardware and software appropriate to the IT field and goals of the program. Capstone ECT 477 Culminating Experience in IT, Co-op and Internship draw together diverse elements of the curriculum and develop students competence in focusing both technical and nontechnical skills in solving problems. Internships are evaluated by the industry supervisor (employer) and the faculty who is teaching the course. Evaluation forms have been developed by the university Career Center and are available at their website.

B. Prerequisite Flow Chart

A flowchart that illustrates the prerequisite structure of the program's required courses is shown in figure 5-1.

<u>Prerequisite</u>	<u>Course</u>
None	ECT170
IT Major	ECT172
None	ECT173
None	ECT176
None	CS151
None	ECT160
CS151	CS170
None	CS256
ECT172	ECT272
None	ECT231
So./Jr./Sr.	ECT275
Jr./Sr.	ECT301
Jr./Sr.	ECT371
ECT 272	ECT373
CS256	ECT374
ECT275	ECT375
CS256	ECT378
Jr./Sr.	ECT437
ECT301	ECT471
Jr./Sr.	ECT473
Jr./Sr.	ECT477
Jr./Sr.	MIS301

Figure 5-1 Flowchart of prerequisite structure

C. Course Syllabi

Course syllabi have been enclosed in Appendix A for each course used to satisfy the mathematics, science, and discipline-specific requirements required by Criterion 5 or any applicable program criteria.

Table 5-1 Curriculum

BS. Information Technology

Course (Department, Number, Title) List all courses in the program by term starting with first term of the first year and ending with the last term of the final year.	Indicate Whether Course is Required, Elective or a Selected Elective by an R, an E or an SE. ¹	Subject Area (Credit Hours)				Last Two Terms the Course was Offered: Year and, Semester, or Quarter	Average Section Enrollment for the Last Two Terms the Course was Offered ²
		Math & Sciences	Computing Topics Mark with an F or A for Fundamental or Advanced	General Education	Other		
COMM 101 Intro to Speech	R			GE		Fall14, Spring15	25
ENG 101 Funds of Writing	R			GE		Fall14, Spring15	25
MATH 102 Quantitative Literacy	R	MS				Fall14, Spring15	25
PE 101/101L Fitness for Life	R			GE		Fall14, Spring15	25
ECT 170 Intro. to Information Technology	R		F			Fall14, Spring15	60
CS 151 Intro to Computer Science	R		F			Fall14, Spring15	25
ECT 176 Mobile System Design Technology	R		F			Fall14, Spring15	25
Fine & Performing Arts	R			GE		Fall14, Spring15	25
ECT 172 Computer Hardware Components	R		F			Fall13, Fall14	50
CS 170 Web Programming	R		F			Fall14, Spring15	25
ECT 160 Fundamentals of Electronics	R		F			Fall14, Spring15	25
ECT 272 Computer Software Components	R		A			Spring14, Spring15	25
Historical Studies	R			GE		Fall14, Spring15	25
CS 256 Principles Structured Design	R		F			Fall14, Spring15	25
MIS 301 Systems Analysis for IT	R		A			Fall13, Fall14	25
Laboratory Science	R			GE		Fall14, Spring15	25
Social or Behavioral Studies	R			GE		Fall14, Spring15	25
ECT 275 Intro. Digital Animation And Visual Effects Technology	R		F			Spring15	25
ECT 373 Intro. Data Comm. & Networks	R		A			Spring14, Spring15	50
ENG 305T Junior Composition	R			GE		Fall14, Spring15	25
ECT 231 Digital computer Logic	R		F			Fall14, Spring15	25
Literary Studies	R			GE		Fall14, Spring15	25
Ethics & Social Responsibilities	R			GE		Fall14, Spring15	25
ECT 301 Technical Data Management and Application	R		A			Fall13, Fall14	25

ECT 378 Enterprise IT Architecture	R		A			New	
Upper-Division Integrative Electives	R				GE	Fall14, Spring15	25
Global Perspective & Cultural Diversity	R				GE	Fall14, Spring15	25
ECT 473 Documentation And Policy for IT	R		A			New	
ECT 437 Computer System Management	R		A			Fall14, Spring15	25
ECT 477 Culminating Experience In IT	R		A			New	
ECT 177 Fundamentals of IOS Technology	E		F			New	
ECT 281 Introduction to Robotics and Automation	E		F			Fall14, Spring15	25
ECT 232 Digital Computer Circuits	E		F			Fall14, Spring15	25
ECT 351 Cooperative Industrial Practice	E		A			Fall14, Spring15	25
ECT 381 Advanced Robotics and Automation	E		A			Spring14, Spring15	25
ECT 375 Advanced Digital Animation And Visual Effects Technology	E		A			New	
ECT 371 Emerging Trends in IT	E		A			New	
ECT 471 Advanced Technical Data Management and Application	E		A			New	
ECT 377 Advanced IOS Technology	E		A			New	
MIS 276 Business Information Processing Systems	E		A			Fall14, Spring15	25
MIS 310 Business Applications Development I	E		A			Spring14, Spring15	25
MIS 376 Business Computer Systems	E		A			Spring14, Spring15	25
ARTD 400K Graphic Design Workshop	E		A			Fall14, Spring15	25
ARTD 422 Marketing Graphics	E		A			Fall14, Spring15	25
CS 452 Software Engineering	E		A			Spring14, Spring15	25
CS 458 Algorithms	E		A			Fall13, Fall14	25
CS 440 Graphics Programming	E		A			Fall13, Fall14	25
CS 475 Artificial Intelligence	E		A			Fall10, Fall11	25
CS 463 Compiler Design	E		A			Fall10, Fall11	25
CS 470 Programming Languages	E		A			Fall13, Fall14	25
CS 469 Unix/Linux Administration and Networking	E		A			Spring14, Spring15	25
TOTALS-ABET BASIC-LEVEL REQUIREMENTS							
OVERALL TOTAL CREDIT HOURS FOR COMPLETION OF PROGRAM							

1. **Required** courses are required of all students in the program, **elective** courses (often referred to as open or free electives) are optional for students, and **selected elective** courses are those for which students must take one or more courses from a specified group.
 2. For courses that include multiple elements (lecture, laboratory, recitation, etc.), indicate the maximum enrollment in each element. For selected elective courses, indicate the maximum enrollment for each option.
- Instructional materials and student work verifying compliance with ABET criteria for the categories indicated above will be required during the campus visit.

CRITERION 6. FACULTY

In this chapter, we review the qualifications and accomplishments of IT faculty. IT Faculty shares diversity in background, race, and ethnicity. The regular full-time workload includes teaching, scholarly activities, and services. Some Faculty members have terminal degrees in Information Technology or closely related areas. The teaching of the faculty as a whole is well received by our students as evidenced by the students' evaluations each semester.

A. Faculty Qualifications

Table 6.1 shows the rank and educational background of IT program faculty, where full CVs are included in Appendix B. The table provides details of faculty activities which include teaching, service to the department, college of technology and the school. Other professional engagements are captured in the table and the faculty CVs.

B. Faculty Workload

Table 6-2, shows Faculty Workload Summary. The teaching assignments are designed to accommodate individual interests and skills, while maintaining accountability and a reasonable level of balance. This flexibility in the teaching load distribution is possible because our faculty can teach comfortably several of the courses in our curriculum.

C. Faculty Size

There are four (4) full-time faculty members (tenured, tenure-track or instructor) directly associated with IT program, and five (5) full-time ECET faculty teaching technical core or elective courses. The four IT faculty members include one associate professor, one assistant professor and two instructors. The department has a tradition of hiring adjunct faculty members but due to the budget constraints has decided to cut back on these appointments. Dr. Appiah-Kubi is the coordinator who takes charge of representing the program to external entities. All faculty members share the responsibility of teaching, advising and service pertinent to the program. The faculty is also the main body to define, revise, implement and achieve program objectives. The current number of full-time faculty is sufficient to accommodate teaching, student faculty interaction, service activities, professional development, and communications with industrial partners.

D. Professional Development

The faculty of the program are involved in a number of professional development activities. These include: organizing professional conferences, serving as technical society program committee members, serving as peer-reviewers for professional journals, and serving as appointed members in professional societies. These activities can also be found in the faculty members resume. Travel to professional conferences is included in faculty start up packages (funded by College). Department travel funds, although the budgeted amount is limited, are used to sponsor faculty members to attend professional meetings or workshops. The university

Faculty Center for Teaching Excellence organizes several professional development workshops. Sabbatical leave is offered per the university guidelines.

E. Authority and Responsibility of Faculty

The program faculty has the primary authority and responsibility in developing, revising, and implementing curriculum issues. However the program educational objectives, outcomes, and curriculum have to satisfy the needs of industry, students/parents, college/university administration, and the state Higher Education guidelines. Before proposing a new development or revision, program faculty gets input from the students, graduates, employers, Industry Advisory Board (IAB), Accreditation body, etc. and seeks the advice from the department Chair and college Dean's office. Generally the Dean makes sure that the program educational objectives, outcomes, and curriculum follow the state government and university administration (President and/or Provost's office) instructions. See the description in Criteria 2 and 3 how the educational objectives and program outcomes were established seeking inputs from the students, IAB members comprising of the graduates, employers, and 2-year community colleges where transfer students mostly come from. The approval process of course/curriculum development starts from the program faculty and goes through the department faculty, department Chair, college curriculum committee, Dean, Registrar, Library, university curriculum committee, and the Academic Affairs (Provost).

Table 6-1. Faculty Qualifications

BS Information Technology

Faculty Name	Highest Degree Earned- Field and Year	Rank ¹	Type of Academic Appointment ² T, TT, NTT	FT or PT ³	Years of Experience			Registration/ Professional Certification	Level of Activity ⁴ H, M, or L		
					Govt./Ind. Practice	Teaching	This Institution		Professional Organizations	Professional Development	Consulting/summer work in industry
Patrick Appiah-Kubi	Doctorate, IT, 2011	AST	TT	FT	10	6	1		M	M	L
Joe Ashby	Doctorate, CTE, 2009	ASC	T	FT	28	12	12	ISA	M	M	L
Yuetong Lin	Doctorate, ECE, 2006	ASC	T	FT	6	11	10		M	M	L
Xiaolong Li	Doctorate, SIE, 2005	ASC	T	FT	1	9	7		M	M	L
Edith Wittenmyer	Masters, ECT, 1998	I	TT	FT	35	25	25		M	M	L
Jared Wuerzburger	Masters, ECT, 2011	I	NTT	FT	3	3	3	A+	L	M	L
John Sweat	Masters, ECT, 2013	I	NTT	FT	1	1	1		L	M	L

Instructions: Complete table for each member of the faculty in the program. Add additional rows or use additional sheets if necessary. Updated information is to be provided at the time of the visit.

1. Code: P = Professor ASC = Associate Professor AST = Assistant Professor I = Instructor A = Adjunct O = Other

2. Code: T = Tenured TT = Tenure Track NTT = Non Tenure Track

3. Code: FT = Full-time PT = Part-time Appointment at the institution.

4. The level of activity (high, medium or low) should reflect an average over the year prior to the visit plus the two previous years.

Table 6-2. Faculty Workload Summary

Information Technology

Faculty Member (name)	PT or FT ¹	Classes Taught (Course No./Credit Hrs.) Term and Year ²	Program Activity Distribution ³			% of Time Devoted to the Program ⁵
			Teaching	Research or Scholarship	Other ⁴	
Dr. Patrick Appiah-Kubi	FT	(ECT 301/3hrs) Fall 2014 (ECT 301/3hrs) Fall 2014 (ECT 301/3hrs) Fall 2014 (ECT 603/3hrs) Fall 2014 (ECT 603/3hrs) Fall 2014 (ECT 635/3hrs) Fall 2014 (ECT 635/3hrs) Fall 2014 (ECT 373/3hrs) Spring 2015 (ECT 373/3hrs) Spring 2015 (ECT 603/3hrs)Spring 2015 (ECT 603/3hrs)Spring 2015 (ECT 603/3hrs)Spring 2015 (ECT 631/3hrs) Spring 2015 (ECT 633/3hrs) Spring 2015	50	40	10	100%
Dr. Joe Ashby	FT	(ECT 174/3hrs) Fall 2014 (ECT 324/3hrs) Fall 2014 (ECT 325/3hrs) Fall 2014 (ECT 351/3hrs) Fall 2014 (ECT 490A/3hrs) Fall 2014 (ECT 633/3hrs) Fall 2014 (ECT 633/3hrs) Fall 2014 (ECT 321/3hrs) Spring 2015 (ECT 421/3hrs) Spring 2015 (ECT 603/3hrs) Spring 2015	40	20	40	10%

		(ECT 697/3hrs) Spring 2015				
Dr. Yuetong Lin					Sabbatical	
Dr. Xiaolong Li		(ECT 231/3hrs) Fall 2014 (ECT 231/3hrs) Fall 2014 (ECT 603/3hrs) Fall 2014 (ECT 603/3hrs) Fall 2014 (ECT 168/3hrs) Spring 2015 (ECT 306/3hrs) Spring 2015 (ECT 406/3hrs) Spring 2015 (ECT 603A/3hrs) Spring 2015 (ECT 603A/3hrs) Spring 2015	60	20	20	80%
Edie Wittenmyer	FT	(ECT 160/3hrs) Fall 2014 (ECT 160/3hrs) Fall 2014 (ECT 437/3hrs) Fall 2014 (ECT 437/3hrs) Fall 2014 (ECT 537/3hrs) Fall 2014 (ECT 537/3hrs) Fall 2014 (ECT 160/3hrs) Spring 2015 (ECT 160/3hrs) Spring 2015 (ECT 160/3hrs) Spring 2015 (ECT 437/3hrs) Spring 2015 (ECT 490A/3hrs) Spring 2015	90	5	5	50%
Jared Wuerzburger	FT	(ECT 172/3hrs) Fall 2014 (ECT 172/3hrs) Fall 2014 (ECT 490D/3hrs) Fall 2014 (ECT 490D/3hrs) Fall 2014 (ECT 490D/3hrs) Fall 2014 (ECT 372/3hrs) Spring 2015 (ECT 490A/3hrs) Spring 2015 (ECT 490D/3hrs) Spring 2015 (ECT 490D/3hrs) Spring 2015 (ECT 490D/3hrs) Spring 2015	90	5	5	50%
John Sweat		(ECT 130/2hrs) Fall 2014	90	5	5	50%

		(ECT 170/3hrs) Fall 2014 (ECT 437/3hrs) Fall 2014 (ECT 130/2hrs) Spring 2015 (ECT 170/3hrs) Spring 2015 (ECT 437/3hrs) Spring 2015 (ECT 437/3hrs) Spring 2015 (ECT 537/3hrs) Spring 2015				

1. FT = Full Time Faculty or PT = Part Time Faculty, at the institution
2. For the academic year for which the Self-Study is being prepared.
3. Program activity distribution should be in percent of effort in the program and should total 100%.
4. Indicate sabbatical leave, etc., under "Other."
5. Out of the total time employed at the institution.

CRITERION 7. FACILITIES

We will review the adequacy of lecture rooms, laboratories and office space that accommodates the program educational needs and provides an atmosphere that is conducive for learning.

A. Offices, Classrooms and Laboratories

The IT program which is under the ECET department is housed in the John T. Myers Technology center, home of the College of Technology. The building was erected in 1997 and has received regular hardware and material upgrade to incorporate state-of-the-art instructional facilities as well as student work and lounge areas.

1. Offices

The ECET Department office complex is located on the third floor of Myers Center. Most of the classrooms on this floor are used by the department and IT program. Research lab and graduate assistants office also take some space on the same floor. The central location of these facilities offers students the convenience to further enhance encounters with faculty, fellow students and graduate assistants.

All IT faculties have their own offices in Suite 301, close to the class rooms, labs, and meeting rooms. It is standard for faculty to have Dell PC desktop computers and/or IBM-Lenovo T430u laptop computers. The suite also has office space for undergraduate/graduate student workers and adjunct faculty.

2. Classrooms

ECET classrooms also function as laboratories, which allow students to continue on lab experiments in the same room when the lecture session of the class is complete. All classrooms are equipped with PC's with network access and educational software required for courses taught in the room, and the latest teaching apparatus: the audio/visual cabinet with master control, VCR/DVD player and audio amplifier. Most of the rooms have installed an overhead projector and pull-down projector screen. Each room also has multiple equipment/documentation cabinets to store lab tools and manuals, e.g., motherboards, oscilloscopes, multimeters, function generator etc.

Room physical dimension is usually large enough to accommodate up to 24 seats, which is the normal capacity for class size. The layout is designed to facilitate students' interaction and collaboration on labs.

Room TC305 is the primary teaching room for core IT courses. The room has about 20 networked Linux-based computers with appropriate software installed on them.

Room 304 is one of the 17 new symposium classrooms across ISU campus. The Smart Symposium in this room operates identically to a Smart Board. The system allows each input switch from desktop, laptop, and other visual sources. Writing on the touch screen

can also be saved through special software. Table 7-1 shows a summary of facilities available for the program.

Table 7-1 Room number and main functions

Room	Lab Specialization	IT Major courses taught
TC304	ECT Lecture Room	ECT130, ECT160, ECT170, ECT437
TC305	IT Lab	ECT172, ECT301, ECT372, ECT373, ECT490
TC306	Microcontroller Lab	
TC307	Transistor Lab	
TC308	Solid State Lab	ECT 231, ECT 232
TC311	Controls Lab	
TC312	Wet Process Lab	ECT232
TC315	Electronics Lab	ECT160
TC108	Automation Lab	ECT281

3. Laboratory, Equipment and Tools

The Industrial Automation laboratory (formerly the Computer-Integrated Manufacturing lab (CIM) has evolved to represent modern automation in a 3600 square foot space. The lab includes eight Mitsubishi industrial robots, four Adept robots; some with vision systems, one Fanuc robot, and a variety of student built and integrated automation demonstration systems.

In addition, the College of Technology in the ECET department has a lab dedicated to the study of programmable logic controllers (PLC) (2400 square feet), a wet process control lab (2400 square feet) that delivers instruction and hands-on experience in process control industries.

Besides commonly-used software such as Microsoft Office Suite, most of the classroom PC's have field-specific software including MultiSim, LabView, Microsoft Visual Studio and Rockwell Automation Factory Talk/Programming applications installed.

B. Computing Resources

ISU has 85 technology enhanced classrooms, 15 public labs and 45 discipline specific computer labs, and 5 distance-learning classrooms. Campus infrastructure currently supports over 100 servers and high performance computing facilities. The campus has become a notebook institution beginning with freshmen in fall 2007. The campus is served by an extensive fiber optic cable system, and uses a gigabit backbone to deliver data and interactive video connections to every building. Wireless network access is available in all academic areas. High speed connection to both the commercial Internet and Internet2 is provided for faculty and student use. Student computing needs are served by 450 microcomputers in general use computer clusters, and 600 microcomputers in special use clusters.

Students have multiple venues for computer access. Besides PC's in every classroom, staffed public computer labs are available to students, faculty and staff, one of which is located in Myers Center (Room 212) that is equipped with 52 stations (IBM PC's), one laser printer, one Smartboard, two additional projector screens, and one scanner.

The list of software packages accessible on these stations can be seen online at <http://www.indstate.edu/oit/students/software.php>.

The computers in each classroom receive regular upgrades. The hardware configuration is sufficient to meet the requirements to run various educational software.

F. Overall Comments on Facilities

Overall the quantity of space available to the program, for both teaching and administrative needs, is adequate. However as we continue to roll out new courses to meet program objectives and outcomes, we may require the department to allocate a separate room for computer networking and data management respectively. Also a particular necessity to the undergraduate program is to have more suitable space for informal student meetings and student organizations gathering.

CRITERION 8. INSTITUTIONAL SUPPORT

A. Leadership

The administration, from ISU president, to the College of Technology and the department, has been very supportive of the direction the IT program is headed. President Bradley has frequently inquired about the preparation of accreditation process. The Dean has met with the IT program committee to discuss resource needs and students project. He is also very interested in the accreditation process and has met with the committee on several occasions to discuss the process.

B. Program Budget and Financial Support

The Dean has allocated funds to support ABET accreditation in the college. The Associate Dean for assessment, who is the coordinator for all accreditation efforts, has directed his office to help furnish data on faculty, enrollment, and transfer students etc.

ISU is a public university and its main resources are state funds and tuition revenues. The university allocates its funds to each college following a formula that considers the number of faculty, staff, graduate assistants, and student workers with their salaries and benefits, number of students, student credit hours generated, equipment and supplies including labs, travel funds for professional development, etc. The College of Technology Dean allocates funds to each department. From the department it is used for different programs and associated faculty and equipment for the programs based on the need.

C. Staffing

The department has provided both personnel (office assistant and part-time worker during summer), and consulting (an expert in ABET accreditation was invited to campus for consultation) support. Department chair and IT faculty are all involved in the accreditation process.

D. Faculty Hiring and Retention

The Dean of the College recommends to the Provost the hiring of tenure-track faculty, and authorizes the hiring of part-time instructors based on demonstrated need for maintaining adequate size of faculty and excellence of the program. Department Chair makes the request, and recommends to the dean the candidate, on personnel issues.

The Dean meets with junior IT faculty, among tenure-track faculty from other programs, individually after every annual review to offer his own suggestions on how to prepare tenure & promotion dossier. The Dean also supports program faculty to apply for both internal and external funding. The department chair works closely with IT faculty to balance work load, and to provide administrative support for program development in issues such as recruiting and articulation.

E. Support of Faculty Professional Development

These supports predominately come in the format of travel funds. The faculty members are encouraged to make presentations at the professional meetings and/or attend professional workshops. The travel funds included in budget categories though limited are used to support faculty travels related to the research and professional development.

The university's Faculty Center for Teaching Excellence also organizes different types of workshops for faculty development. Each tenured/tenure-track faculty member is evaluated in terms of teaching, scholarship, and service.

PROGRAM CRITERIA

Refer to the descriptions under Criterion 2 and 3

Appendix A – Course Syllabi



ECT 170-001 – Fundamentals of Information Systems

Instructors:	John Sweat
Graduate Assist:	Cale Erwin
Class Time:	9:30 – 10:20am TR
Classroom:	TC105
E-mail:	john.sweat@indstate.edu cerwin2@sycamores.indstate.edu

Course Description

ECT 170 Fundamentals of Information Systems is a two (2) credit hour survey course of the Information Technology (IT) industry, and an overview of IT as a discipline. Presented are a variety of concepts and topics utilized by IT professionals including: the role of IT in organizations, hardware, software, computers and mobile devices, digital safety and security, operating systems, telecommunications and networking, the Internet and intranets, information and data management, system development, and security and ethical issues.

Also and equally as important - Issues involving new student orientation, academic issues, university policy, academic advising and careers will also be discussed.

Required Text and Course Materials

Vermaat, Misty E. (2010). *Discovering Computers*. 1st ed.
Shelley Cashman Series. [ISBN-13: 978-1285161761]

All supporting course materials, including the latest revision of the syllabus will be posted in Blackboard. The syllabus may be modified to best incorporate the diversity of topics and resources we have in this class. Thus you are responsible to follow the latest syllabus.

Course Objectives

The student successfully completing ECT 170 will:

- have an overview of the essential concepts of Information Technology
- be aware of the strategic importance of data and information in today's society
- appreciate the complex interrelationship between IT and organizational structure
- be able to recognize and correctly use standard IT vocabulary and acronyms
- understand basic hardware and software concepts
- be able to discuss IT classifications such as TPS, MIS, DSS, ESS and Artificial Intelligence
- have a basic overview of telecommunications; data communications; networking; the Internet;
- intranets and extranets; and the massive impact the Internet has had on society

be exposed to Systems Development processes

- Have an awareness of critical issues associated with intellectual property, computer security, privacy and ethics.

Course Organization and Assignments

1. The class will cover chapters of the textbook in the course. You will be expected to follow the pace detailed in this syllabus, reading and studying the text book outside of class. The content in each chapter will be briefly discussed but not in entirety.
2. There will be 8 chapter tests which will be open-book, delivered in Blackboard with a 2 hour time limit. Thus you will have time to use the book as a reference, but not time to look-up every answer “cold”. The exams will be a mix of all types of questions.
3. The final exam (Tuesday of finals week, December 9, 10am-noon). The content will come from any and all material covered in the class, primarily the IT coursework.

Assessment

90 - 100%	85 - 89%	80 - 84%	75 - 79%	70 - 74%	65 - 69%	60 - 64%	< 60%
A	B+	B	C+	C	D+	D	F

<u>Assessments</u>	<u>Total Points</u>	<u>1</u>
Chapter Tests	8 @25 points	200
Final Exam	1 @60 points	60
Class activities*	5 @25 points	125
Attendance**	30@3 points	90
Career Center Workshops	25@3 sessions	75
Resume		50
Spring Class Schedule		40
Four Year Major Plan		50
Total		690 points

**Attendance points will be 25 points on the days of Career Center workshops in class. If you miss the in class workshops then you can attend an outside workshop through the Career Center to make it up.

Chapter Tests will be done online not in class. Each week we will do chapter activities in class and then the tests will be done outside the class.

Attendance Policy

Attendance is *extremely* important. Therefore, for each class attended *in its entirety*, students will receive attendance points. The only exception will be if you are absent having received prior approval from the instructor. You may have two free absence days without penalty. However you still need to email to let the instructor(s) know you will not be in attendance. If these are days when Career Center Workshops are being presented, you will need to make those up outside of class with their scheduled workshops.

NOTE: Any time you are absent, it is your responsibility to find out what took place during your absence and make up *all* missed work *before* the next class meeting that you attend. Students

may be penalized for late assignments, at the instructor’s discretion.

E-mail the instructor or graduate assistant if you cannot attend class stating the reason. It is the discretion of the instructor/graduate assistant if the absence will be excused and any work can be made up.

Communication Device and Laptop Use

As a member of the learning community, each student has a responsibility to other students who are also members of the community. When cell phones ring and students respond in class or leave class to respond, it disrupts *everyone* in the class. Set your cell phone to the “vibrate” or “quiet” mode.

During the final exam, the use of your cell phone, Bluetooth™ or other hands-free wireless headsets, in-ear headphones or laptop is not allowed.

In this course, the use of laptop computers or similar electronic devices will be limited to note taking and in-class web assignments. Playing computer games, surfing the Internet, emailing, instant messaging, etc. will not be tolerated.

Academic Integrity and Originality (Plagiarism)

It is the student’s responsibility to read and understand the ISU policy concerning plagiarism and cheating as articulated in the *ISU Student Handbook*. All students are expected to adhere to this policy, and any student participating in any form of academic dishonesty will be subject to sanctions as described in the policy.

ECT 170 – Fall 2015 Class Schedule (Subject to Change)

Date	
August 21	Kickoff, class syllabus, questions
Aug 26	Career Center Introduction
Aug 28	Using Blackboard/excelling in online courses
Sept 2	Student email, smartphone apps, software downloads, printing Blackboard Test Assignment
Sept 4	Email etiquette, absences, time management, student services introductions Email Assignment
Sept 9	Dr. Joe Ashby, Department Majors, MySAM review
Sept 11	Financial Aid Office Speaker Financial Aid Assignment
Sept 16	Tutoring Center, Academic Probation
Sept 18	IT Chapter 1
Sept 23	Career Center Workshop 1
Sept 25	IT Chapter 2
Sept 30	COT Majors and Minors
Oct 2	IT Chapter 3
Oct 7	DARS, MySam and Class Scheduling
Oct 9	IT Chapter 4
Oct 14	Career Center Workshop 2
Oct 16	Resume Workshop Day
Oct 21	IT Activities
Oct 23	IT Chapter 5

Oct 28	Fall Class Schedules due/Review of COT Majors/Minors
Oct 30	IT Chapter 6
Nov 4	Career Center Workshop 3
Nov 6	IT Chapter 7
Nov 11	Fall Registration Week/Fall Class Schedules Due/Begin Four Year Plans
Nov 13	IT Chapter 8
Nov 18	Four Year Plan Workshop Day
Nov 20	IT Chapter 9
Nov 25	Fall Break
Nov 27	Fall Break
Dec 2	Class Wrap-Up – Review
Dec 4	Study Week Review
Final Exam	Final Exam

Indiana State University

Department of Electronics and Computer Technology

Fall 2015

ECT 172 – Computer Component Essentials

[ECT 172 001 / CRN 50689]

Instructor: Jared Wuerzburger
Class Time: Monday-Wednesday 2:00-3:15pm
Classroom: TC 305
E-mail: jwuerzburger@sycamores.indstate.edu

Course Description

ECT 172 Computer Hardware Components is a three (3) credit hour course that presents in-depth technical information about the hardware and software that makes up a typical PC computer system. It is intended to provide theory as well as hands-on experiences to familiarize students with computer hardware and software components. The course introduces students to PC hardware and software and their installation, troubleshooting, upgrading, preventative maintenance, and repair. Hardware topics are limited to PCs – there will be no coverage of midrange or mainframe hardware. Software topics are limited to Microsoft operating system software – there will be no coverage of UNIX, Linux, Mac O/Ss, or mainframe O/Ss.

Required Text and Course Materials

Meyers, Michael (2012). CompTIA A+ Certification All-in-One Exam Guide, 8th Edition
ISBN: 9780071795128

PC Toolkit (**attend first class before purchasing!**)

¹ A+ 2009 Certification is a two-step process requiring passing scores on the CompTIA A+ Essentials (220-701) exam **and** CompTIA A+ Practical Application (220-702) exam. **Note:** Performance in this course *does not* assure, explicitly or implied, or directly correlate to success on the actual CompTIA A+ Certification test(s).

¹ The CompTIA 220-701 exam is targeted for individuals who work or intend to work in a mobile or corporate technical environment with a high level of face-to-face client interaction. Job titles in some organizations which are descriptive of the role of this individual may be: Enterprise technician, IT Administrator, Field Service technician, PC technician, etc.

Course Objectives

ECT 172 introduces students to PC hardware and Microsoft operating system software concepts and components by utilizing a lecture/hands-on approach to cover various topics including: 1) the interaction and control elements of hardware components; 2) interconnections and interfaces that are necessary for communicating with peripheral devices and external systems; and 3) graded tests that are consistent with the content of the CompTIA™ Essentials (801) A+ Certification^{1*} Exam based on the **2013** objectives.

The student successfully completing ECT 172, should be able to describe and/or demonstrate the operation, underlying principles, and necessary maintenance associated with each of the following topics:

- Basic PC Hardware
- Operating System Essentials
- PC Repair Fundamentals
- Advanced Hardware Concepts
- Form Factors/Power Supplies
- Processors/Chipsets
- Motherboards
- Hard Drives
- Installing and Supporting I/O Devices
- Installing and Maintaining Windows 2000/XP
- PCs on a Network
- Notebooks, Tablet PCs, and PDAs
- Supporting Printers and Scanners
- The PC Technician-Customer Support; and Professionalism

Information from the text as well as lecture will be utilized to provide theory; and in-class activities will be utilized to reinforce theory. Class sessions will involve individual and group tasks to enhance the student's core hardware and software competencies.

Course Organization and Assignments

We will cover eleven chapters in the semester (see Class Schedule). Therefore this is a very demanding course and you must stay on schedule to be successful. There will be a three chapter exams and a cumulative final. There will also be end-of-chapter review questions for each chapter. This course also will provide students with a several hands-on lab experiences that will allow them to better understand computer hardware and software components.

Throughout the semester you will be receiving additional materials (either hard copies or Blackboard links) to supplement the text and lectures. You should date, label (chapter and topic), and organize your handouts in a folder or binder for future reference.

As part of the course requirements, you will be responsible for preparing and presenting a topic pertaining to the course material (and approved by the instructor) in a Power Point presentation format. The specific criteria for the presentation will submitted in advance and provide you with sufficient time to prepare. You may create your presentation as an individual or choose to present as a team.

<u>Outcomes Assessment</u>	<u>Points</u>
Chapter Homework (approx.)	100
Chapter Tests 4 @ 100 points	400
Final Exam	100
Labs 2 @ 25 (approx.)	50
PowerPoint Presentation 1 @ 100	100
Attendance 5 x 30	150
TOTAL	900

Extra credit will NOT be offered during this course – do your best work the first time. There will be no make-up tests, except in *extreme* circumstances, at the Instructor's discretion; there will be no opportunity

to make up the Labs.

Outcomes Assessment Scale

Grades are based on a point system. Each test is worth a given number of points and your final grade will be calculated by dividing total points earned by total points possible; then converted to a letter grade based on the scale below:

90 - 100%	85 - 89%	80 - 84%	75 - 79%	70 - 74%	65 - 69%	60 - 64%	< 60%
A	B+	B	C+	C	D+	D	F

If you are very close to the next higher grade, the Instructor *may* take into consideration attendance, class participation, and/or other factors.

Attendance Policy

This class meets twice a week and attendance is *extremely* important. Therefore, for each class attended *in its entirety*, students will receive five (5) attendance points. The only exception will be if you are absent while officially representing the University (technology conference, varsity sports, ROTC, etc.). An absence the day before a vacation starts or the first day back from a vacation (this includes the first day of classes) is considered a “double cut” i.e. counts as two absences. Every three tardies count as one absence.

NOTE: Any time you are absent, it is your responsibility to find out what took place during your absence and make up *all* missed work *before* the next class meeting that you attend. Students may be penalized for late assignments, at the instructor’s discretion.

Dropping a Class

It is your responsibility to understand the University’s procedure for dropping a class. For policies on dropping a class see <http://www1.indstate.edu/registrar/FAQs.html>. For drop deadlines see the Academic Calendar at <http://www1.indstate.edu/registrar/dates.html>.

Communication Devices

As a member of the learning community, each student has a responsibility to other students who are also members of the community. When cell phones or pagers ring and students respond in class or leave class to respond, it disrupts *everyone* in the class. If you carry a pager or cell phone, set it to the “vibrate” or “quiet” mode. If your device does not have either of these modes, then turn it off during class time. I will not compete with a beeping pager or ringing phone at any time during class. No telephone conversations will be tolerated in the classroom during class time.

Given the fact that these same communication devices are an integral part of the University’s Rave Alert (formerly e2Campus) emergency notification system, an exception to this policy would occur when multiple devices activate simultaneously. If this occurs, students should consult their devices to determine if a university emergency exists. In testing situations, the use of the calculator function of a cell phone is not allowed. Wearing Bluetooth™ or other hands-free wireless headsets is not allowed during tests, nor is wired ‘ear buds’ (in-ear headphones).

In testing situations, the use of the calculator function of a cell phone is not allowed. Wearing Bluetooth™ or other hands-free wireless headsets is not allowed during tests, nor is wired ‘ear buds’ (in-ear headphones).

Laptop Usage

While the university has chosen to require laptops of its students beginning in 2007, the university also recognizes and respects the right of faculty to conduct their classes as they deem appropriate. In this course, the use of laptop computers—as well as tablet PCs, UPCs, PDAs, smart phones, or similar

electronic devices—will be limited to note taking only. Playing computer games, surfing the Internet, emailing, instant messaging, etc. will not be tolerated during class. There may also be occasions where laptop usage is prohibited.

Academic Integrity and Originality (Plagiarism)

It is the student’s responsibility to read and understand the ISU policy concerning plagiarism and cheating as articulated in the *ISU Student Handbook*. All students are expected to adhere to this policy, and any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy.

Non-Discrimination Policy

Indiana State University is an equal opportunity/affirmative action institution, and maintains a grievance procedure incorporating due process available to any person who believes he or she has been discriminated against. At all times, it is your right to address inquiries or concerns about possible discrimination to the Office of Diversity and Affirmative Action (ODAA), Tiley Hall 136, 812-237-2877. You may also visit the ODAA web site at <http://www.indstate.edu/diversity>. Concerns about discrimination can also be brought directly to your instructor’s attention, and/or to the attention of your instructor’s Department Chair.

American Disabilities Act

Indiana State University seeks to provide effective services and accommodations for qualified individuals with documented disabilities. If you need an accommodation because of a documented disability, you must register with Disability Support Services at the beginning of the semester by contacting the Director of Student Support Services. The telephone number is 812-237-2301 and the office is located in Gillum Hall, 202A. The Director will ensure that you receive all the additional help that Indiana State offers. If you will require assistance during an emergency evacuation, notify your instructor immediately. Look for evacuation procedures posted in your classrooms.

Week of	Activity & Assignments Due	Homework
Aug. 21	Introductions, Overview & Housekeeping	Read Chapter 1
26 28	Chapter 1, Introduction to a Typical PC Ch. 1 Review Questions	Read Chapter 2
Sept. 2 4	Labor Day – No Class Chapter 2, Operating Systems Ch. 2 Review Questions	Read Chapter 3
9 11	Chapter 3, Motherboards Ch. 3 Review Questions	Read Chapter 20 Ch. 20 Review Questions, p. 874, even
16 18	Hardware Lab Chapter 20, Customer Support, Communication & Professionalism Ch. 20 Review Questions	Study for Test #1
23 25	Chapter 20, Customer Support, Communication & Professionalism – continued Test #1, Ch. 1, 2 and 3	Read Chapter 4 Ch. 4, Review Questions, p. 200, odd

Oct.	30 2	Chapter 4, CPU Ch. 4 Review Questions	Read Chapter 5 Ch. 5, Review Questions, p. 245-246, even
	7 9	Chapter 5, Power Supplies Ch. 5 Review Questions	Study for Test #2 Read Chapter 6 Ch. 6, Review Questions, p.289, odd
	14 16	Chapter 6, Memory Ch. 6 Review Questions Test #2, Ch. 20, 4 and 5	Read Chapter 7 Ch. 7 Review Questions, p. 331, even
	21 23	Chapter 6, Memory - continued Chapter 7, Input Devices Ch. 7 Review Questions	
	28 30	Chapter 7, Input Devices - continued	Read Chapter 8 Ch. 8 Review Questions, p. 389, even
Nov.	4 6	Chapter 8, Video Displays & Audio Systems Ch. 8 Review Questions	
	11 13	Chapter 8, Video Displays & Audio Systems - continued Chapter 15, PC Troubleshooting/LAB Ch. 15 Review Questions	Read Chapter 15 Ch. 15 Review Questions, p. 679-680, all Study for Test #3

Instructor

Name: Edie L. Wittenmyer

Office: TC301E

Phone: (812) 237-3387

Email: Edie.Wittenmyer@indstate.edu

Office Hours: M – F 8:00-9:50am, 4:00-5:30pm

Semester: Spring 2015

Section: 001

Course Introduction

Fundamentals of Information Systems is a survey course of the Information Technology (IT) industry, and an overview of IT as a discipline. Presented as a variety of concepts and topics utilized by IT professionals including: the role of IT in organizations, hardware, software, data organization, decision support, e-commerce, telecommunications and networking, the Internet and intranets, artificial intelligence, system development, and security and ethical issues. (3 credits)

The purpose of this course will provide the student with a solid foundation in the fundamentals of information systems through the most recent research, references, and examples in the field. The student will analyze topics such as multimedia in today's business; application development for the iPhone, iPad, and similar devices; cloud computing; forecasting; and environmental design and green computing.

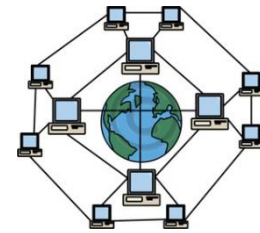


Image courtesy of
[Classroom Clipart](#)

Prerequisites

No prerequisites for this course. This course has been designed for the non-IT student who desires to know more about surviving in the IT world.

Learning Objectives

The learning objectives in this course are designed to prepare the student to comprehend the core of IT principles along with the changing role of the IT professional. It is also to offer a realistic perspective of information systems in business and to also provide the student with skills that can be used to be effective leaders in industry.

By the end of this course, you will be able to:

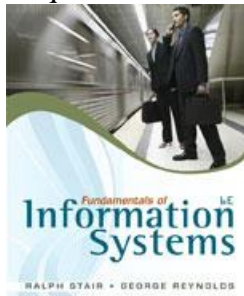
- **Identify and define the characteristics of valuable information.**
- **Explain the elements and/or components of an information system.**

- Analyze the application development for the iPhone, iPad and similar devices.
 - Discuss the key software issues and trends that have an impact on organizations and individuals.
 - Define general data management concepts and terms, explaining the advantages of the database approach to database management.
 - Explain the types of database applications that will continue to evolve and yield real business benefits.
1. All nine chapters of the textbook in the course will be covered in the course. The student will be expected to follow the pace detailed in this syllabus, reading and studying the text book.
 2. There will be nine chapter tests which will be delivered in Blackboard. Student may open, close and reopen the exam during the posted period. The exams will be a mix of T/F and multiple choice questions.
 3. There will be nine discussion questions to which the student will need to answer in the Blackboard Discussion area.
 4. There will be nine “Ethical and Societal Issues” case studies that will be submitted within the Blackboard, Weekly Course Modules.
 5. Each Week there will be a time to record your thoughts, challenges and successes in the Weekly Reflective Journal area.
 6. The final exam will be available in Blackboard during the assigned final exam time. It will be a two hour timed test with 40 questions.

All supporting course materials, including the latest revision of the syllabus will be posted in Blackboard.

Textbooks

Required textbook for this course:



Required: Stair, R. M., & Reynolds, G. W. (2010). *Fundamentals of Information Systems*. 5th or 6th ed. Boston, MA: Thomson Course Technology. [ISBN-10: 1133629628 | ISBN-13: 978-1133629627 | Edition: 7; ISBN-10: 0840062184 | ISBN-13: 978-0840062185 | Edition: 6; ISBN-10: 1423925815 | ISBN-13: 978-1423925811 | Edition: 5]

You can order your books from the [Indiana State University Barnes and Noble bookstore](#). If you chose another route such as [Amazon](#) or [Half.com](#), please be sure to check the ISBN carefully. It is imperative that you order the correct edition, as other editions may not have all the same materials and articles.

Technology Requirements

For this online course, you will need access to a reliable computer with high-speed internet access. To access the course, please log into <http://blackboard.indstate.edu> using your Sycamore

ID and password. Do not access Blackboard through the MyISU Portal; if you do, your access may get timed out, and you will likely lose some of your work! You are expected to log in to Blackboard at least three times a week, and you must check your Sycamore email daily at <http://webmail.indstate.edu> in order to keep up with class updates.

Your computer should meet the following MINIMUM requirements:

- 2.0 GHz Processor or higher
- 4 GB Memory
- 120 GB Hard Drive or higher
- Wireless Connectivity (802.11 b/g minimum)
- Updated Windows or Mac Operating System
 - Windows
 - Windows XP SP2 or higher
 - Update: Start > All Programs > Windows Update
 - Mac
 - Update: Apple > Software Update

You must also have access to the following software and hardware:

- Antivirus Software (free download at <http://downloads.indstate.edu>)
- Firefox (free download at <http://www.mozilla.org/en-US/firefox/new/>) – Blackboard generally prefers this browser.
- Internet Explorer (free download at <http://windows.microsoft.com/IE>) – This is a backup browser for Blackboard. If you cannot access something in Firefox, try IE (or another browser) before contacting your professor or Indiana State’s OIT Help Desk.
- Java (free download at <http://www.java.com/getjava>)
- Adobe Flash Player (free download at <http://get.adobe.com/flashplayer/>)
- Microsoft Office (free download at <http://downloads.indstate.edu>)
- Video editing program (such as [Windows Movie Maker](#) or iMovie)
- Noise-cancelling headphones/microphone (external, not one built into your computer)

Real-World Application

There are many parallels between your role as a student and that of a practicing professional in the workplace. In both the real world and the academic world, you have a mission with goals, problems to solve, and work to do. The quality of your work is evaluated by your instructor or supervisor. Students taking this course are preparing to compete for placement in careers of their choice, or for career advancement if they are already employed. Therefore, there is great value in using our class to learn and practice professionalism. To the extent that it is possible in this course, the instructor will teach what it takes to compete well for jobs and to succeed in your career as it relates to communication and writing. This section of the syllabus explains how closely your work as a college student correlates to success factors in the workplace.²

² Adapted from Williamson, M. “Professional Development.” Course Syllabus: HRD 420/520.

Professional Conduct	Classroom Learning & Performance Assessment Criteria
<p>Professional Communications Skills : Uses a variety of tools to clearly and effectively inform, discuss, instruct, debate, and relate with colleagues.</p>	<ul style="list-style-type: none"> ✓ Engages in class activities. ✓ Posts high-quality contributions to discussion boards, blogs, and wikis. ✓ Delivers professional-level written assignments and communications with instructor and classmates. ✓ Effectively uses communication technologies when interacting with group during team projects.
<p>Dependability: Follows instructions, turns projects in on time; follows through with responsibilities and obligations.</p>	<ul style="list-style-type: none"> ✓ Maintains regular and active presence on Blackboard. ✓ Frequently communicates with instructor and peers. ✓ Turns in assignments complete, accurate, and on time.
<p>Active Learning: Utilizes self-initiative to learn and grow and seeks ways to connect and transfer learning to experiences.</p>	<ul style="list-style-type: none"> ✓ Is in sync with what is going on in class, on top of details, meaningful engagement in class through advance preparation. ✓ Takes initiative to gain the most benefit from the course and to contribute helpful ideas. ✓ Uses concepts learned to enhance discussions and course assignments.
<p>Analytical/Research Skills: Demonstrates the ability to assess a situation, seek multiple perspectives, gather more information if necessary, and identify key issues that need to be addressed.</p>	<ul style="list-style-type: none"> ✓ Builds problem-solving skills through meaningful research and composition. ✓ Applies critical and analytical thinking skills through purposeful discourse. ✓ Crafts meaningful and effective arguments.
<p>Interpersonal Abilities: Exhibits the ability to relate to co-workers, inspire others to participate, and mitigate conflict. (Note: Employers nearly always list this ability as imperative when screening potential employees.)</p>	<ul style="list-style-type: none"> ✓ Builds rapport and trust with other through respect, compassion, caring, and helpfulness. ✓ Successfully participates in meaningful group work.
<p>Positive Affectivity: Demonstrates positive attitude, motivation, energy, drive, and enthusiasm through words (diction and tone), body language, and actions.</p>	<ul style="list-style-type: none"> ✓ Maintains positivity, a key to success in anything you do. It clearly stands out in a group and creates incredible energy to achieve important goals and influence others to achieve a team mission.
<p>Professional Etiquette: Exhibits courteous and respectful conduct. Good manners are the foundation for demonstrating respect for others.</p>	<ul style="list-style-type: none"> ✓ Is sensitive to the needs and opinions of others. ✓ Is attentive in class, focuses on the tasks at hand, and listens carefully, even in an online environment. ✓ Employs careful wording, respectful tones, and attentive consideration in class discourse.

Course Policies

The following are the course policy requirements:

1. My goal is for you to excel in this class and to develop the skills necessary to succeed in your chosen career. However, **you have the major responsibility for doing well.** Achievement of course standards requires *you* to know what you need to do to improve your performance. You are expected to study carefully all reading material and the feedback returned to you, to note evaluation comments made to the entire class regarding assignments returned, and to participate in group and class activities. *You cannot meet the objectives of this course by being a passive learner.* As the semester progresses, you should be able to implement several ideas to improve your performance. Also, you are expected to ask questions and or/schedule individual appointments to clarify evaluations or other aspects of the course not clear to you.
2. **Participate in class.** This is an active community of learners; passively completing the course materials is not enough to ensure success in this course. You are therefore expected to log into Blackboard at least three times a week and check your email daily in order to maintain contact with your classmates and instructor. Additionally, responding to discussion boards, blogs, wikis, and other coursework *on time* will help establish a community of learners and ensure the best possible outcomes.
3. **Time-management** is crucial in online courses. As a distance class, this course is as rigorous and demanding as a face-to-face class. Typical 3-credit-hour courses meet 2.5 hours every week, and you are expected to spend 2-3 times that on activities outside the classroom. Therefore, in general you should spend a total of 7.5-10 hours per week for a face-to-face class. Because you do not get the advantage of direct interaction with your fellow students and instructor, that time typically increases in a distance course. For this course, as [per Indiana State Distance Education Guidelines](#), you should be willing and able to commit **9 to 15 hours per week**. If you are new to distance education, you should expect your distance course to take more time than you would typically spend in a traditional classroom setting.
4. Follow the required **formatting** for all coursework:
 - a. **Word-process** all submitted work using Microsoft Word (downloadable at <http://downloads.indstate.edu>).
 - b. **Use the standardized formatting associated with your discipline.**
 - i. You will use **MLA formatting** if your paper topic falls within the English studies, (language and literature), foreign language and literatures, literary criticism, comparative literature, or culture studies fields. Follow the guidelines as described in *Beacon* (p. 371- 375) —one-inch margins; double-spaced, twelve-point font (Times New Roman); and required identifying information. For more information on MLA formatting, please refer to Purdue's [Online Writing Lab \(OWL\)](#) or the writing resources available within Blackboard > Start Here.

- ii. You will use **APA formatting** if your paper topic falls within the business, nursing, or social sciences fields, such as psychology, linguistics, sociology, economics, and criminology. For more information on APA formatting, please refer to [Purdue's Online Writing Lab \(OWL\)](#) or the writing resources available within Blackboard > Start Here.
 - c. **Save** all documents as the following: LastName_AssignmentName_Draft#. For example, Smith_ArguetoInquire_2.
5. Each assignment must be submitted **BY THE DUE DATE & TIME** to obtain full credit. Late assignments will be accepted only when legitimate reasons (i.e., illness, religious observances or required University participation) warrant the lateness and the student must provide a proof of document to the instructor. For assignments turned in late that do not meet the above conditions, one full letter grade will be deducted for each day an assignment is handed in late. **Assignment will NOT be accepted if more than 7 days late under any circumstances.**
6. Due to the nature of online assessments, all quizzes and tests will only be available for three days and make-up work is *not* permitted.
7. Extensions for papers are granted only in exceptional circumstances and must be *made in advance*. The decision to accept a late paper is at the instructor's discretion.
8. Students in this course are expected to comply with the policies found in the booklet, *ISU Code of Student Conduct*. All papers submitted for credit in this course must be your original work. Plagiarism is a form of academic dishonesty, just like cheating, and when you claim someone else's ideas and words as your own, you are stealing. Your written work will be electronically tested for plagiarized content through a new University tool. See details regarding the academic integrity policy here:
<http://www.indstate.edu/academicintegrity/> .

Be courteous and respectful to your classmates and your instructor. The [ISU Code of Student Conduct](#) grants instructors authority to maintain classroom discipline, including asking disruptive students to leave the classroom, and this includes the digital classroom.

- a. Maintain a formal, respectful, civil, professional tone with *all* course communications, including but not limited to blog posts, discussion boards, and emails. Remember, your instructor is your supervisor and your classmates are your colleagues.
- b. Use Standard American English at all times. This means no text-speak.
- c. Avoid derogatory language, obscenity, and hate speech.
- d. Avoid the use of CAPS, as this indicates shouting.

Virtual Office Hours

Every week, the instructor will host synchronous, online office hours via Bb Collaborate Fridays from 2-3:30 p.m. should you have any questions regarding the course or wish for additional support, office hours are a great way to take advantage of DE services. To join us, please navigate to Bb Collaborate > ECT173 Classroom during the scheduled time.

Conferences and Individual Help

Via Blackboard Collaborate or a face-to-face meeting, we will have at least one required, scheduled **one-on-one conference** during the semester—to give us a chance to talk about your progress in the course. However, you can also contact me by setting up individual phone or Collaborate appointments by emailing me a request. If you have problems, communicate with me; worrying and complaining are not substitutes for getting available help.

I will also be available via **Blackboard Collaborate Help Sessions** at various critical points throughout the semester (see below). By the end of the course, you are required to attend at least one synchronous Help Session, but you are strongly encouraged to attend more. During the hour-long synchronous meeting time I can assist with assignment-specific questions as well as general writing skills.

Here are the dates and times I will be available via Blackboard Collaborate (see the corresponding Weekly Module folder for a link to the synchronous session):

- Week 1, 3, 5, 7 and 10, 12, 14: Wednesday, 2:00-4:00 p.m. EST
- Week 2, 4, 6, 8 and 9, 11, 13, 15: Friday, 2:00-3:30 p.m. EST [Office Hours]

You are also strongly encouraged to **take advantage of [ISU's Math & Writing Center](#)**. In addition to one required consultation during the semester, you should consider utilizing this student service throughout the course. Along with workshops and online guides, the Math & Writing Center offers face-to-face and online one-on-one writing assistance for all Indiana State students for all stages of the writing process: pre-writing, drafting, revising, editing, and incorporating research. The Center's purpose is not to correct or proofread final drafts for you, but to help you learn strategies that good writers use during the process of writing. Current hours of operation and additional services can be found at their website: <http://libguides.indstate.edu/writing>. Click on the Distance Tutoring tab to learn more about the consults available to online students. They also offer free PowerPoints on various writing skills through their Writing Workshops tab.

Communication Policy

Please understand that as your professor, I am not on-call 24/7. You can expect responses to your inquiries based on the following guidelines:

- 👉 I require that you should **check your ISU email daily** to stay current and avoid missing any important announcements or other correspondence. Missing important communications may jeopardize your success in the course. You can email me at Edie.Wittenmyer@indstate.edu at your convenience.
- 👉 Before emailing a question or calling, please **consult the Syllabus, Blackboard site, textbook, FAQ discussion board, and other available resources**. You will find many answers among the sources provided.



Image courtesy of [Indiana State Photography Services](#)

Emails or phone messages that ask questions that can be answered by reading the available resources will result in a response conveying as much.

- 👉 If you have general questions whose answer would benefit the class as a whole, please **use the FAQ forum** available within the Course Documents button on Blackboard. Only specific, individual questions should be emailed to your instructor. If you email a general question whose answer would benefit your classmates, you will likely be directed to post your inquiry in the FAQ where your instructor will respond accordingly.
- 👉 Emails will be **answered in 48 business hours**; emails are not likely to be answered during the weekend or on holidays. Please do not expect a return to your email at 10 p.m.; just because you work late. Be patient. Be assured, you *will* receive my response to your inquiries.
- 👉 Emails must be sent **using your ISU email account** (associated with Blackboard). Emails that are sent using non-ISU accounts are automatically funneled by the email program into the junk folder, which is very rarely checked.
- 👉 **Emails must contain at least the following information:** your name, which class you are in (ECT 173), and the subject of your message in the subject line of the email (e.g. Question about Homework Assignment). Emails that do not contain the above identifying information may be deemed spam/junk and may be inadvertently deleted.
- 👉 The *easiest* and most *efficient* way to get ahold of me is email; however, if you choose to call, **voicemails** to my office phone will be returned within two business days. I am not available to take phone calls after 4:30 p.m. EST.

Technology Help

As a member of this learning community, you are expected to have basic computer skills, take responsibility for using appropriate hardware and software, and have a general understanding of how to use Blackboard, plug-ins, etc. Technical problems will not serve as a valid excuse for a missed or late assignment.

Please inform your instructor as soon as you know there is an issue. He or she may be able to assist you, otherwise, the Office of Information Technology (OIT) offers many resources to assist with your technology needs. First, you can use a self-help tool available through the [MyISU Portal](#) as well as on the [OIT website](#). Here you have direct access to the OIT [Knowledge Base](#) with up-to-date information about common errors, problems, and issues within Blackboard and other supported technologies. Think of this as an FAQ resource. Simply log into the MyISU Portal and click on the **Help Desk Self-Service** badge available in the Workspace tab to browse the categories.

You can also submit a help desk ticket through the [OIT website](#) or via the [Submit a Ticket](#) link within the **Help Desk Self-Service** in the Workspace tab in the [MyISU Portal](#). By defining in detail your problem with the drop-down selections available, your ticket will be routed directly to the group or individual who can best assist you. As you are typing your ticket, Knowledge

Base articles may be presented to you that may help you resolve your issue without having to create a ticket in the first place.

If you are wondering about the status of a ticket that you currently have open with OIT, you can click on the **My Tickets** link within the **Help Desk Self-Service** in the Workspace tab in the [MyISU Portal](#) to view your history. You can use this mechanism to track progress or to add information to the ticket yourself.

If you have a specific Blackboard concern, please contact **Instructional Tools**:

Phone: 812-237-7000
Email: isu-blackboard-support@mail.indstate.edu

Or contact the **OIT Help Desk** directly for general technology help:

Phone: 812-237-2910 or 888-818-5465
Email: IT-Help@indstate.edu

Grades and Feedback

Every week of the course you will complete a variety of tasks that help you achieve the course and Module level objectives. The amount and type of activities and assessments is based on the objectives and the resulting workload. Most tasks will be due on TUESDAYS, WEDNESDAYS and THURSDAYS at 11:59 p.m. (EST).

You can expect to receive feedback by the FRIDAY after the close of the Module so that you can use their guidance to revise existing work and better develop future projects. You can find your feedback in the Grades/Feedback button. Some feedback will be provided internally within Discussion Boards and Blogs, for example. Other feedback will be accessed by clicking on the Comments link or, in the case of tests and Turnitin, clicking on the title of the task. The bulk of the feedback will be available within the Weekly Reflective Journals by clicking on the View Rubric link.

There will be THREE major Checkpoints throughout the course that mark the end of the revision window for certain modules (see below). Although you are strongly encouraged to take advantage of the revision opportunities and revise your work as soon as you get your instructor's feedback each week, please do not consider this a chance to simply get "caught up" after every few weeks. If you fail to submit assignments along the way, as per the course Schedule, you will likely not receive your instructor's feedback, making it much more difficult to achieve the expected standards. Revised work after the noted Checkpoints will not be accepted.

Checkpoint	Due Date	Work that Can Be Revised
1	End of Week 4	Weeks 1-3
2	End of Week 7	Weeks 4-6
3	End of Week 10	Weeks 7-9
4	End of Week 12	Weeks 10-11
5	End of Week 14	Weeks 12-14

Evaluation Method

- Case Studies
- Discussion Boards
- Weekly Reflective Journal Entries
- Chapter Quizzes (including the MIDTERM exam)
- Final Exam

There will be no make-up exams, except in *extreme* circumstances, at the Instructor’s discretion.

Outcomes Assessment Scale

Grades are based on a point system. Each “evaluation method” is worth a given number of points and your final grade will be calculated by dividing total points earned by total points possible; then converted to a letter grade based on the scale below:

90 - 100%	85 - 89%	80 - 84%	75 - 79%	70 - 74%	65 - 69%	60 - 64%	< 60%
A	B+	B	C+	C	D+	D	F

If you are very close to the next higher grade, the Instructor *may* take into consideration attendance, class participation, the timeliness, neatness, and completeness of the problem-solving assignments, and/or other factors.

Plagiarism, Academic Honesty, and Citing Sources

We certainly consider all ISU students professionals and do not expect anyone to intentionally violate professional ethics. This content below is provided so that you have a better grasp of Indiana State’s approach to plagiarism.

The ISU Code of Student Conduct defines plagiarism as follows:
Plagiarism is intentionally or carelessly presenting the work of another as one’s own. It includes submitting an assignment purporting to be the student’s original work which has wholly or in part been created by another. It also includes the presentation of the work, ideas, representations or words of another without customary and proper acknowledgement of sources. Students must consult instructors for clarification in any situation in which documentation is an issue. Students will be considered to have plagiarized whenever their work is not properly documented.

Academic Integrity is a core value of our community of learners. Every member of the academic community (students, faculty, and staff) is expected to maintain high standards of integrity in all facets of work and study. The Student Guide to Academic Integrity describes appropriate academic conduct in research, writing, assessment and ethics.

Academic dishonesty is not tolerated at Indiana State. The penalties can be severe and include: failing the assignment, failing the course, and referral to Student Judicial Programs to face form conduct charges. Students found in violation may be suspended or expelled and can have a

permanent notation affixed to the official transcript indicating that an academic integrity violation occurred. Students are urged to discuss questions regarding academic integrity with instructors, advisors, or with the academic Deans.

Please note that even if you paraphrase another's work, you must also cite your source in the text, just as you would a direct quote. Additionally, submitting a paper you have written for another course is also a form of plagiarism known as multiple submissions.

You will be turning in papers through Turnitin, an online tool that assists in discovering plagiarism. A great resource to help you avoid plagiarism is the Plagiarism Tutorial offered by Indiana State's Cunningham Memorial Library.

If you intentionally or blatantly plagiarize in this class, you will fail the class, and the case will be reported to Student Judiciary.

For this course you will be using either MLA or APA formatting, depending on the topic of your paper. Projects focused on the fields of English, literature, languages, or culture will use MLA; projects focused on the social sciences, business, or nursing will use APA. See Course Documents > Research and Writing Resources for specific resources.

Generally, the following principles apply:

1. All quotes, summaries, paraphrases, and facts must have two types of documentation. The first is a parenthetical or in-text citation inserted in the text where the referenced content appears?

The second is a bibliographic entry or endnote on a References/Works Cited page at the end of the paper.

2. Anything cited word-for-word is a quote and must appear in quotation marks. Quotes must be documented.

3. Any source cited in the paper should have a corresponding bibliographic entry/endnote at the end of the document.

4. Only sources cited in the paper should appear in the References/Works Cited. Sources you read but do not cite may be cited in a separate Works Consulted.

5. All quotes, paraphrases, and summaries must have page numbers as they are identified in the original source. Many internet sites do not have page numbers listed online (it does not count if they appear when you print out the document), although some do (such as pdfs and online journals). Only site a page number if it is identified in the original source.

Academic Freedom

Indiana State follows the American Association of University Professors' guidelines for academic freedom as described on their website

(<http://www.aaup.org/aaup/pubres/policydocs/content/1940statement>):

Teachers are entitled to freedom in the classroom in discussing their subject, but they should be careful not to introduce into their teaching controversial matter which has no relation to their subject.

Accessibility

Indiana State University seeks to provide effective services and accommodation for qualified individuals with documented disabilities. The technology tools utilized within this course offer a variety of accessibility features, such as compatibility with screen readers, text-based visual alternatives, video scripts, and attention to Universal Design. The central platform for this course, Blackboard, also complies with ADA requirements. If you need additional accommodations because of a documented disability, you are required to register with Disability Support Services at the beginning of the semester.

Contact the Director of Student Support Services at 812-237-2301. Once registered, the Director and course instructor will ensure that you receive all the additional help that Indiana State University offers.

Emergency Services

Unfortunately a catastrophic event could occur on a local, regional, or national level that disables communication to or from Indiana State University. Students should provide for their own safety and the safety of their family and then contact their instructors by phone, private e-mail, or through alternately provided numbers. Every effort on the faculty's part will be made to reasonably attempt to continue with the course and to meet the course objectives. If, for any reason, there is no internet or telephone communication available for an extended period of time, postal service will be used to continue; and in this instance students will be awarded incomplete grades until revised completion plans can be determined. The Department of Public Safety website can be accessed for the emergency response plan and other documents concerning student and faculty safety.

For more information on academic and student support services that will help you be successful at Indiana State and beyond, please refer to the Indiana State Student and Academic Support Services link available in the "Start Here" button on ECT 173 Blackboard site.



Department of Electronics and Computer Engineering Technology

Fall 2015

ECT: 176 – Mobile System Design Technology

Instructor:	Jared L. Wuerzburger
Email:	Jared.Wuerzburger@indstate.edu
Blackboard site:	blackboard.indstate.edu
Office Hours:	TBD

ECT 176 – Mobile System Design Technology. This three (3) credit hour course is designed to further the student’s understating of computer hardware and software problem solving techniques and practices. The course provides technical information and hands-on experience for a more in-depth look at current methodologies and technologies that help develop resolutions for evolving technological difficulties. The problem solving topics include Mobile Application Development using the Android Operating System. **Prerequisite:** None.

Required Text and Course Materials

This course has been redesigned to promote Indiana State University’s Open Education Initiative. As such the material presented and required in this course is free to use, share, and adapt and is published under the [Creative Commons License](#).

Android Phone or Tablet – *Optional. Tablet computers will be provided.*

Course Organization and Methods

Mobile Computing Applications provides IT majors and others interested in hardware and software with a lecture/hands-on approach to various topics including: 1) Problem solving using mobile Android devices 2) troubleshooting and problem logical analysis; and 3) various hardware/software concepts solutions 4) mobile application development. The course also provides students with team-based problem solving scenarios including a final project; developed in its entirety from identifying the problem to documentation of the solution.

There is a laboratory assignment that is required for every chapter assigned. The primary purpose of these assignments is to assure that the chapter is read ahead of time and to further comprehension of weekly course objectives therefore *no late homework will be accepted*.

Text information, lecture, video, and supplemental materials will be utilized to provide theory; and in-class and outside (lab) activities will be employed to reinforce theory. Lab sessions will involve individual and group tasks to enhance the student’s competencies with problem solving

technics.

Course Objectives

The student who successfully completes this course will be able to:

- Develop applications to solve software problems utilizing Google/MIT's App Inventor.
- Utilize the Android Operating System and devices to resolve various software limitations through application development.
- Comprehend logical system syntax and protocol as preparation for further problem solving.

Outcomes Assessment

Grades are based on a point system. Each assignment is worth a given number of points and your final grade will be calculated by dividing total points earned by total points possible; then converted to a letter grade based on the scale below:

90 - 100%	85 - 89%	80 - 84%	75 - 79%	70 - 74%	65 - 69%	60 - 64%	< 60%
A	B+	B	C+	C	D+	D	F

If you are very close to the next higher grade level, the Instructor *may* take into consideration attendance, class participation, and/or other factors.

Assignments

Points (approx.)

Homework	10 @ 40-50 each (approx.)	500
Mid-Term		50
Android App Project		100
PowerPoint Presentation		100
Final Exam		50
Total Points Possible	(approx.)	800

→ Extra credit will be offered during this course – but do your best work the first time. There will be no make-up

assignments, except in extreme circumstances, at the Instructor's discretion.

Attendance Policy

Attendance will be taken every class. You are allowed two “free” absences during the semester. After that, (3) absences will lower the overall semester grade by 25 points. There are neither “excused” nor “unexcused” absences in this course; there is only a running count of the *number* of absences. The only exception will be if you are absent while officially representing the University (technology conference, varsity sports, ROTC, etc.). An absence the day before a spring/fall break starts or the first day back from a spring/fall break (this includes the first day of classes) is considered a “double cut” i.e. counts as two absences. *Every three tardiness counts as one absence.*

NOTE: Any time you are absent, it is **your** responsibility to find out what took place during your absence and make up *all* missed work *before* the next class meeting that you attend. Points will be deducted for all late assignments.

Dropping a Class

It is your responsibility to understand the University's procedure for dropping a class. For policies on dropping a class see <http://www1.indstate.edu/registrar/FAQs.html>. For drop deadlines see the Academic Calendar at <http://www1.indstate.edu/registrar/dates.html>.

Communication Devices

As a member of the learning community, each student has a responsibility to other students who are also members of the community. When cell phones or pagers ring and students respond in class or leave class to respond, it disrupts *everyone* in the class. If you carry a pager or cell phone, set it to the "vibrate" or "quiet" mode. If your device does not have either of these modes, then turn it off during class time. I will not compete with a beeping pager or ringing phone at any time during class. No telephone conversations will be tolerated in the classroom during class time.

Given the fact that these same communication devices are an integral part of the University's Rave Alert (formerly e2Campus) emergency notification system, an exception to this policy would occur when multiple devices activate simultaneously. If this occurs, students should consult their devices to determine if a university emergency exists. In testing situations, the use of the calculator function of a cell phone is not allowed. Wearing Bluetooth™ or other hands-free wireless headsets is not allowed during tests, nor is wired 'ear buds' (in-ear headphones).

In testing situations, the use of the calculator function of a cell phone is not allowed. Wearing Bluetooth™ or other hands-free wireless headsets is not allowed during tests, nor is wired 'ear buds' (in-ear headphones).

Laptop Usage

Laptop Required for Course: Regular Usage: For the purposes of this course, it will be assumed that you are in compliance with the mandatory laptop policy of the University. You will be expected to bring your laptop and be ready to use it for every class period. Usage of the laptop must conform to the provisions of this course as laid out in this syllabus as well as the Code of Student Conduct.

Academic Integrity and Originality (Plagiarism)

It is the student's responsibility to read and understand the ISU policy concerning plagiarism and cheating as articulated in the ISU Student Handbook. All students are expected to adhere to this policy, and any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy.

Non-Discrimination Policy

Indiana State University is an equal opportunity/affirmative action institution, and maintains a grievance procedure incorporating due process available to any person who believes he or she has been discriminated against. At all times, it is your right to address inquiries or concerns about

possible discrimination to the Office of Diversity and Affirmative Action (ODAA), Tirey Hall 136, 812-237-2877. You may also visit the ODAA web site at <http://www.indstate.edu/diversity>. Concerns about discrimination can also be brought directly to your instructor's attention, and/or to the attention of your instructor's Department Chair.

American Disabilities Act

“Indiana State University seeks to provide effective services and accommodations for qualified individuals with documented disabilities. If you need an accommodation because of a documented disability, you are required to register with Disability Support Services at the beginning of the semester. Contact the Director of Student Support Services. The telephone number is 237-2301 and the office is located in Gillum Hall, Room 202A. The Director will ensure that you receive all the additional help that Indiana State offers. If you will require assistance during an emergency evacuation, notify your instructor immediately.



Department of Electronics and Computer Engineering Technology

Spring 2016

ECT 272 – Advanced Computer Components

Instructor: Jared L. Wuerzburger
Class Time: Tuesday – 5PM- 830PM
Classroom: TC 305
Office: TC 301M
E-mail: Jared.Wuerzburger@indstate.edu

Course Description

ECT 272 – Advanced Computer Components. This three (3) credit hour course is a continuation of ECT 172 and is designed to further the student’s understating of the hardware and software (operating systems) that control today’s personal computers. The course provides technical information and hands-on experiences for a more in-depth look at variety of current and superseded Microsoft operating system software, their installation/upgrade, troubleshooting, and preventative maintenance; as well as continued coverage of hardware concepts and components. **Prerequisite:** ECT 172 Computer Hardware Components; or an A+ course from another institution; or *significant* PC experience (consent of Instructor required for the latter.)

Required Text and Course Materials

Meyers, Michael (2012). CompTIA A+ Certification All-in-One Exam Guide, 8th Edition
ISBN: 9780071795128

Educational Resources:

Today’s Meet: TodaysMeet gives everyone the floor and lets even the quietest students express themselves.

Course Organization and Methods

ECT 272 provides IT majors and others interested in PC hardware and O/S software with a lecture/hands-on approach to various topics including: 1) several Windows operating systems; 2) troubleshooting and preventative maintenance; and 3) various hardware/software concepts.

The course also provides graded tests that are consistent with the content and format of the CompTIA A+ Certification³ IT General Technician (220-801)⁴ exam under the 2011 Objectives. Course Organization and Methods, cont'd.

There is also a written homework assignment for every chapter assigned. The primary purpose of these assignments is to assure that the chapter is read ahead of time therefore *no late homework will be accepted.*

Text information, lecture, video, and supplemental materials will be utilized to provide theory; and in-class and outside (lab) activities will be employed to reinforce theory. Lab sessions will involve individual and group tasks to enhance the student's competencies with various hardware components and Microsoft operating systems.

Course Objectives

The student who successfully completes ECT 272 will have an understanding of the following hardware/software topics:

- Windows Vista, XP & 7
- Memory; Multimedia; Mass Storage Devices
- Installing & Supporting I/O Devices
- Troubleshooting hardware/software issues
- Security Essentials
- Networking Essentials
- Emerging IT

Outcomes Assessment

Grades are based on a point system. Each test is worth a given number of points and your final grade will be calculated by dividing total points earned by total points possible; then converted to a letter grade based on the scale below:

90 100%	-	85 - 89%	80 - 84%	75 - 79%	70 - 74%	65 - 69%	60 - 64%	< 60%
A		B+	B	C+	C	D+	D	F

If you are very close to the next higher grade level, the Instructor *may* take into consideration attendance, class participation, and/or other factors.

Assignments

Points (approx.)

Chapter Homework 16 @ 20-30 each (approx.) 320
 Chapter Exams 4 @ 40-60 each (approx.) 160

³ A+ 2009 Certification is a two-step process requiring passing scores on the CompTIA A+ Essentials (220-801) exam **and** CompTIA A+ Practical Application (220-802) exam. **Note:** Performance in this course *does not* assure, explicitly or implied, or directly correlate to success on the actual CompTIA A+ Certification test(s).

⁴ The CompTIA 220-801 exam is targeted for individuals who work or intend to work in a mobile or corporate technical environment with a high level of face-to-face client interaction. Job titles in some organizations which are descriptive of the role of this individual may be: Enterprise technician, IT Administrator, Field Service technician, PC technician, etc.

Mid-Term	50
Powerpoint Presentation	100
Final Exam	100
Labs	2 @ 25
Total Points Possible (approx.)	780

→ Extra credit will be offered during this course – but do your best work the first time. There will be no make-up tests, except in extreme circumstances, at the Instructor’s discretion.

Attendance Policy

Attendance will be taken every class. You are allowed two “free” absences during the semester. After that, (3) absences will lower the overall semester grade by one letter grade. There are neither “excused” nor “unexcused” absences in this course; there is only a running count of the *number* of absences. The only exception will be if you are absent while officially representing the University (technology conference, varsity sports, ROTC, etc.). An absence the day before a spring/fall break starts or the first day back from a spring/fall break (this includes the first day of classes) is considered a “double cut” i.e. counts as two absences. *Every three tardies counts as one absence.*

NOTE: Any time you are absent, it is **your** responsibility to find out what took place during your absence and make up *all* missed work *before* the next class meeting that you attend. Points will be deducted for all late assignments.

Dropping a Class

It is your responsibility to understand the University’s procedure for dropping a class. For policies on dropping a class see <http://www1.indstate.edu/registrar/FAQs.html>. For drop deadlines see the Academic Calendar at <http://www1.indstate.edu/registrar/dates.html>.

Communication Devices

As a member of the learning community, each student has a responsibility to other students who are also members of the community. When cell phones or pagers ring and students respond in class or leave class to respond, it disrupts *everyone* in the class. If you carry a pager or cell phone, set it to the “vibrate” or “quiet” mode. If your device does not have either of these modes, then turn it off during class time. I will not compete with a beeping pager or ringing phone at any time during class. No telephone conversations will be tolerated in the classroom during class time.

Given the fact that these same communication devices are an integral part of the University’s Rave Alert (formerly e2Campus) emergency notification system, an exception to this policy would occur when multiple devices activate simultaneously. If this occurs, students should consult their devices to determine if a university emergency exists. In testing situations, the use of the calculator function of a cell phone is not allowed. Wearing Bluetooth™ or other hands-free wireless headsets is not allowed during tests, nor is wired ‘ear buds’ (in-ear headphones).

In testing situations, the use of the calculator function of a cell phone is not allowed. Wearing Bluetooth™ or other hands-free wireless headsets is not allowed during tests, nor is wired ‘ear buds’ (in-ear headphones).

Laptop Usage

While the university has chosen to require laptops of its students beginning in 2007, the university also recognizes and respects the right of faculty to conduct their classes as they deem appropriate. In this course, the use of laptop computers – as well as tablet PCs, UPCs, PDAs, smart phones, or similar electronic devices – will be limited to note taking only. Playing computer games, surfing the Internet,

emailing, instant messaging, etc. will not be tolerated during class. There may also be occasions where laptop usage is prohibited.

Academic Integrity and Originality (Plagiarism)

It is the student’s responsibility to read and understand the ISU policy concerning plagiarism and cheating as articulated in the ISU Student Handbook. All students are expected to adhere to this policy, and any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy.

Non-Discrimination Policy

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American Disabilities Act

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Chapters 16 - 32 will be covered during the 16-week period. This schedule is Tentative.

Week of		Activity & Assignments Due	Homework
Jan	13	Introductions, Overview & Housekeeping Lecture / Lab 17	Read Chapter 17 Homework Due Sunday at Midnight
	20	Lecture / Lab 18	Read Chapter 18 Homework Due Sunday at Midnight
	27	Lecture / Lab 19	Read Chapter 19 Homework Due Sunday at Midnight
Feb	3	Lecture / Lab 20	Read Chapter 20 Homework Due Sunday at Midnight
	10	Review for Exam Exam over Chapters: 17,18,19,20	Review for Exam
	17	Lab Lecture / Lab 21	Read Chapter 21 Homework Due Sunday at Midnight
	24	Lecture / Lab 22	Read Chapter 22 Homework Due Sunday at

			Midnight
March	3	Lecture / Lab 23	Read Chapter 23 Homework Due Sunday at Midnight
	10	Lecture / Lab 24	Read Chapter 24 Homework Due Sunday at Midnight
	17	Spring Break	
	24	Midterm Exam over Chapter 21,22,23,24	LAB
	31	Lecture over Chapter 25	Read Chapter 25 Homework Due Sunday at Midnight
April	7	Lecture over Chapter 26	Read Chapter 26 Homework Due Sunday at Midnight
	14	Lecture over Chapter 27	Read Chapter 27 Homework Due Sunday at Midnight
	21	Lecture over Chapter 28	Read Chapter 28 Homework Due Sunday at Midnight
	28	Final Exam TBA Exam over 25,26,27,28,	



Department of Electronics and Computer Technology

SPRING 2016

ECT 275 – INTRODUCTION TO DIGITAL ANIMATION AND VISUAL EFFECTS TECHNOLOGY

Instructor: Edie L. Wittenmyer
Class Times: TBA
Classroom: Lecture/Lab TC304
Phone: Office (812) 237-3387 / (217) 251-3116
Office: TC 301E
E-mail: Edie.Wittenmyer@indstate.edu
Office Hours: TBD

Overview

This topic will be coursework in the Information Technology program of Electronics Computer Engineering Technology department. This three (3) credit hour course is designed to provide students with a complete understanding of the technological and creative aspects of software design development. The design can be utilized in the development of teaching modules and/or digital end products. The student will participate in a design team that allows for each project to be originated and completed. This is a valuable lesson in team building that can be applied to any other aspect of the technology and engineering industries for real-life careers.

Objectives

At the conclusion of this course the student will be able to:

- Define terminology used by animation and online visual effects communities
- Use terminology appropriate for communication in animation development industry
- Discuss/Explain how teaching modules and video games affect, cognitive development, behavior and motor skills
- Define/List different animation and visual effects genres
- Define what factors result in viewers complete involvement in the module or interest in the modules
- Debug techniques for errors in the final stages
- Utilize various computer tools for teaching and module programming and artistic creation
- Create/Incorporate animated objects, audio and music
- Discuss how animation and visual effects technology can be used in other industries
- Evaluate the attributes of module quality
- Create design documents, character sketches and storyboards for module build

Instructor and Communication

Your instructor for the course is Edie Wittenmyer: edie.wittenmyer@indstate.edu . If you send me an email, identify the course number and the purpose for the email in the subject line! Unprofessional emails will be returned to the sender.

Class Meetings, Attendance

This class will be delivered as a face-to-face classroom course. Attendance and participation is required and constitutes a component of your course grade.

Text Book/Device Requirements

There is no text book required for this course. All coursework and assignments will be delivered as handouts in the classroom.

Device requirements (Student): Laptop, Video Software Design (Download), MS Paint, MS PowerPoint and Animator (Download) NOTE: *The (Download) software will be provided during class by the Instructor.*

Course Deliverables

There will be classroom assignments due each week at the conclusion of each main topic (approximately one each week) – 14 total.

A semester project is required, consisting of research on an assigned topic. Students will work in assigned teams to develop an animation and visual effects design.

The final exam will consist of multiple choice questions.

Grades

Grades will be assigned, based on performance on the weekly quiz, attendance and participation, the discussion postings, the research project and the final exam. Grades will be based on a 400 total point score. Specifically:

Chapter quizzes	10 @	100 (10 points each)
Attendance & participation	32 @	32 (1 point each)
Project	2 @	200 points (100 points each)
Final exam	1 @	<u>100 points</u>
		432 points

The grade scale will be:

A: 92% - 100%	B+: 89% - 91%	B: 80% - 88%	C+: 77% - 79%
C: 70% - 76%	D+: 67% - 69%	D: 60% - 66%	F: 59% - Below

Attendance

Attendance will be taken every class. You are allowed two “free” absences during the semester. After that, three (3) points will be deducted from your overall points total for **each** absence after the first two. There are neither “excused” nor “unexcused” absences in this course; there is only a running count of the *number* of absences. The only exception will be if you are absent while officially representing the University (technology conference, varsity sports, ROTC, etc.). An absence the day before a vacation starts or the first day back from a vacation (this includes the

first day of classes) is considered a “double cut” i.e. counts as two absences. Every three tardiness counts as one absence.

NOTE: Any time you are absent, it is your responsibility to find out what took place during your absence and make up *all* missed work *before* the next class meeting that you attend. Students may be penalized for late assignments, at the instructor’s discretion.

Exams: Makeup exams will NOT be given unless in special circumstances. If for some reason you cannot attend class on a scheduled exam day, you should contact the instructor PRIOR to the exam stating the reason you cannot be in attendance. It will be the instructor’s discretion on whether or not a makeup exam will be given. A makeup exam will not be given if no communication was made with the instructor and the exam was missed.

Drop Class Policy

It is your responsibility to understand the University’s procedure for dropping a class. For policies on dropping a class see <http://www1.indstate.edu/registrar/FAQs.html>. For drop deadlines see the Academic Calendar at <http://www1.indstate.edu/registrar/dates.html>.

Communication Devices

As a member of the learning community, each student has a responsibility to other students who are also members of the community. When cell phones or pagers ring and students respond in class or leave class to respond, it disrupts *everyone* in the class. If you carry a pager or cell phone, set it to the “vibrate” or “quiet” mode. If your device does not have either of these modes, then turn it off during class time. I will not compete with a beeping pager or ringing phone at any time during class. No telephone conversations will be tolerated in the classroom during class time.

Given the fact that these same communication devices are an integral part of the University’s Rave Alert (formerly e2Campus) emergency notification system, an exception to this policy would occur when multiple devices activate simultaneously. If this occurs, students should consult their devices to determine if a university emergency exists. In testing situations, the use of the calculator function of a cell phone is not allowed. Wearing Bluetooth™ or other hands-free wireless headsets is not allowed during tests, nor is wired ‘ear buds’ (in-ear headphones).

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Laptop Usage

While the university has chosen to require laptops of its students beginning in 2007, the university also recognizes and respects the right of faculty to conduct their classes as they deem appropriate. In this course, the use of laptop computers – as well as tablet PCs, UPCs, PDAs, smart phones, or similar electronic devices – will be limited to note taking only. Playing computer games, surfing the Internet, emailing, instant messaging, etc. will not be tolerated during class. There may also be occasions where laptop usage is prohibited.

Academic Integrity and Originality (Plagiarism)

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Course Outline

<i>Week</i>	<i>Due</i>	<i>Title</i>
1		Course launch and overview
2	Wk3	Introduction to My Role on the Team - Chapter 1 Chpt1 quiz
3	Wk4	Computerized Entertainment & Classification - Chapter 2 Chpt2 quiz
4	Wk5	Evolution of the Animation module- Chapter 3 Chpt3 quiz Research teams and topics assigned
5	Wk6	Perspective, Scene Design & Basic Animation- Chapter 4 Chpt4 quiz
6	Wk7	Collision Theory & Logic- Chapter 5 Chpt5 quiz
7	Wk8	Visual Effects Systems, Personal Computers & Hardware- Chapter 6 Chpt6 quiz
8	Wk9	Play and Participate Culture- Chapter 7 Chpt7 quiz

- 9 Wk10 Reverse Engineering & Professional Reviews- Chapter 8
 Chtp8 quiz
 Team research project#1 presentations
- Wk11 Large Scale Design Process- Chapter 9
 Team research project#1 presentations - continued
- 10 Wk12 Large Scale Design Process- Chapter 9
 Chtp 9 quiz
- 11 Wk13 Global Economy & Supply Chain- Chapter 10
 Chtp10 quiz
- 12 Wk14 Capstone (Semester Projects)
 Design Submissions
- 13 Wk15 Capstone (Semester Projects)
 Design Planning
- 14 Wk16 Capstone (Semester Projects)
 Animation and Visual Effects Build & Tuning
 Evaluations
- 15 Course wrap up
 Team research project #2 presentations
 Final exam preparation
- Final exam TBA

ECT301-002 – Technical Data Management and Applications
Syllabus – Fall 2014
Department of Electronics and Computer Engineering Technology
College of Technology
Indiana State University

Class Schedule: TR 3:30 – 4:45PM
Location: TC304

Instructor: Dr. Patrick Appiah-Kubi
E-mail: patrick.appiah-kubi@indstate.edu
Phone: (812) 237- 3400
Office: John T Myers Technology Center 301K
Office hour: MW 2:00 pm -3:00pm, T 10:30am – 11:30am or by appointment

Course Objectives

This course introduces database architectures, capabilities, data structures, and typical applications at the factory and enterprise levels. Factory information systems, data filtering, data for quality analysis, and summary report generation are studied.

You can also expect to read between several pages of varied text each week, from online blogs to research papers to textbook chapters. You will also have a lot of tasks to complete that will help you apply the learned concepts. All of the reading and activities have been carefully selected to help ensure your growth as student in this course. (Please see the Course Schedule for more details on deadlines and deliverables.)

Text books

Used books are fine. The CD in the database book is not needed. The bookstore might not be the best source. Let me know if you have trouble finding a book.

Database Design for Mere Mortals 2nd ed; Hernandez, M.J.; Addison Wesley; ISBN 0-201-75284-0.

Deliverables

The deliverables listed below are expected from each student to successfully complete the course.

Project: Students will work on an assigned project. Project details will be provided.

Weekly Reflective Reports: Students will submit reflective reports that highlight key learning outcomes. Issues related to the activities of the week should be pointed out in the reports.

Assignments: A couple of assignments are expected to be completed by each student.

Exams: There will be 2 major exams in the course, a midterm and a final. However there will several pop quizzes during the semester to test students understanding on concepts covered in class.

Deadlines: There will be due dates for deliverables in Blackboard and their availability will close on published dates. Details of due dates is also available in the class schedule. Please take careful note of the due dates. Unless you notify me otherwise, if you miss a due date you will lose 50% of the possible credit for that assignment. You will however receive a grade of zero for any assignment that is not submitted three weeks after the due date.

<u>Outcomes Assessment</u>		<u>Points</u>
Semester Project		100
Attendance	20@10 points each	200
Weekly reflective reports	14@10 points each	140
Midterm		100
Final Exam		100
Assignments	4@50 points each	200
TOTAL		840

Final letter grades will be distributed in the following arrangement:

A	91%-100%	B	81%-85%	C	71%-75%	D	60%-65%
B+	86%-90%	C+	76%-80%	D+	66%-70%	F	0%-59%

Blackboard web site

All course materials, class schedule and the syllabus will be posted on the course Blackboard web site.

Classroom Lectures

Lectures will be given during class time and the corresponding PowerPoints will be posted on Blackboard. There will also be assignments during the semester that will be performed during class or be of the take home format.

Attendance Policy

The class meets 3:30-4:45pm, TR. Follow the schedule on the syllabus closely to know when class meets. You will have some time or deferred classes in order to work on your exams and design project. When class meets, you are expected to be present. A role is taken during each class meeting. No unexcused absences will be tolerated. In order for an absence to count as an excused absence, appropriate documentation must be provided. This means that a phone-call or email before the class does not by itself make an absence excused. Any unexcused absence will count towards your attendance grade.

Etiquettes

This is a learning environment and I expect everyone to be civil in the contributions. All opinions are welcomed and no one will be allowed to undermine someone's opinion during discussions.

Please observe the following etiquettes as well;

- ▶ Turn cell phones off.
- ▶ No use of cell phones and/or text messaging during class time.
- ▶ No food allowed in the classroom. Only bottled water is allowed.
- ▶ Classroom sessions are not for studying for other classes, doing homework, or

conducting other business. Sleeping should be done before, or after, but never during the classroom session. Students who engage in such behavior will be asked to leave class and considered absent.

Please click on the link to read more about etiquettes on the internet.

<http://www.education.com/reference/article/netiquette-rules-behavior-internet/>

Academic Integrity and Originality (Plagiarism)

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<http://www.indstate.edu/studentaffairs/Student%20Handbook.pdf>

Communication Policy

The preferred means of communication is via email. I respond to emails promptly (often within 24 hours) as I check my email on a regular basis. Please also use the office hours listed above to setup a blackboard collaborate with me. You are encouraged to email your peers or use the discussion board and course FAQ for clarifications.

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Student Expectations

My goal is for you to do well in this class and to develop the skills necessary to succeed in the workplace. However, you have the major responsibility for doing well. Achievement of course standards requires you to know what you need to do to improve your performance. You are expected to study carefully all reading material and the papers returned to you, to note evaluation comments made to the entire class regarding papers returned, and to participate in group activities. As the semester progresses, you should be able to implement several ideas to improve your performance on written or oral work for future papers. Also, you are expected to ask questions and /or schedule individual appointments to clarify evaluations or other aspects of the course that is not clear to you.

Professor Expectations

You can expect me to be fair (follow the rubric in my grading). I will return papers in a timely fashion and provide feedback so you can learn from your mistakes. I will be available for during office hours to help you.

ECT 301 Technical Data Management and Applications

Weekly Modules

Week 1

- Task 0 Review of Syllabus
- Task 1 Navigate course site
- Task 2 Self-introduction at the student lounge.
- Task 3 Get course book

Week 2

- Task 1 Chapter 1 synopsis
- Task 2 Review article:
<http://www.texas-quality.org/SiteImages/125/Reference%20Library/Knowledge%20Management.pdf>
- Task 3 Review File-base vs. DBMS document
- Task 4 Week 2 reflective journal

Week 3

- Task 1 Chapter 2 synopsis
- Task 2 Week 3 reflective journal
- Task 3 Review article: http://en.wikipedia.org/wiki/Database_design
- Task 4 Quiz 1

Week 4

- Task 1 Chapter 3 synopsis
- Task 2 Week 4 reflective journal
- Task 3 Review: <http://raima.com/database-terminology/>
- Task 4 Assignment 1

Week 5

- Task 1 Chapter 4 synopsis
- Task 2 Week 5 reflective journal
- Task 3 Review article: http://en.wikipedia.org/wiki/Database_design

Week 6

- Task 1 Chapter 5 & 6 synopsis
- Task 2 Week 6 reflective journal
- Task 3 Review: http://www.missionstatements.com/fortune_500_mission_statements.html
<https://www.missionstatements.com/>
- Task 4 Quiz 2

Week 7

- Task 1 Chapter 7 & 12 & 13 synopsis
- Task 2 Week 7 reflective journal
- Task 3 Review: http://en.wikipedia.org/wiki/Data_integrity
<http://office.microsoft.com/en-us/access-help/guide-to-table-relationships-HA010120534.aspx>
- Task 4 Midterm

Week 8

- Task 1 Chapter 14 synopsis
- Task 2 Week 8 reflective journal
- Task 3 Review:

3

Review:

<https://www.simple-talk.com/sql/database-administration/ten-common-database-design-mistakes/>

Task 4 Assignment 2

Week 9

Task 1 ERD

Task 2 Week 9 reflective journal

Task 3 Review: http://en.wikipedia.org/wiki/Entity%E2%80%93relationship_model

Task 4 Quiz 3

Week 10

Task 1 ERD Continued

Task 2 Week 10 reflective journal

Task 3 Watch Video (ERD Training)

Task 4 Discussion Board Activity 3

Week 11

Task 1 SQL

Task 2 Week 11 reflective journal

Task 3 Assignment 3

Task 4 Review: <http://en.wikipedia.org/wiki/SQL>
<http://www.w3schools.com/sql/>

Week 12

Task 1 SQL Activity

Task 2 Week 12 reflective journal

Task 3 Quiz 3

Task 4 Review: http://sqlzoo.net/wiki/Main_Page
<http://www.sqlcourse.com/index.html>
SQL Videos

Task 5 Project

Week 13

Task 1 Normalization

Task 2 Week 13 reflective journal

Task 3 Project

Task 3 Review article

Week 14

Task 1 Normalization Activity

Task 2 Assignment 4

Week 15

Fall / Thanksgiving Break 11/24 – 11/28

Week 16

Task 1 Final Project presentation

Task 2 Final Project document due

Week 17

Final Exam



Department of Electronics and Computer Engineering Technology

Spring 2016

ECT: 371 – Emerging Trends in IT

Instructor:	Jared L. Wuerzburger
Email:	Jared.Wuerzburger@indstate.edu
Blackboard site:	blackboard.indstate.edu
Day and Time:	Tuesday/Thursday: 12:30PM – 1:45PM

ECT 371 – Emerging Technologies. Information Technology is a rapidly changing industry. Technologists continue to develop new solutions to present difficulties by utilizing emerging tools, applications, and hardware technologies. This 3-hour course will provide students with exposure to new Information Technology through the deployment of process frameworks for understanding and identifying IT solutions to current and future problems.

Prerequisite: None.

Required Text and Course Materials

No paper text is required for this course:

Research will be completed on emerging technologies that will change from semester to semester. Materials presented in this course will be web-based, or found on the Blackboard website.

This course has been designed to promote Indiana State University's Open Education Initiative. As such the material presented and required in this course is free to use, share, and adapt and is published under the [Creative Commons License](#).

Course Organization and Methods

ECT - 371 - Emerging Technologies engages students in discussion, identification, adoption and implementation of evolving information technology. Topics will be assigned in class based on available case-studies provided in-part by Indiana State University's library and the Information Resources Management Association. The course includes lectures, videos, in-class discussions, presentations, guest speakers, student research, and a group project.

Discussion assignments will be conducted centered around the current emerging technology in discussion. The primary purpose of these assignments is to further the comprehension of research topics through the utilization of the software, hardware in questions. The course is designed around the reading and corresponding in-class discussion of cases. Thus students will be required to ensure that the case study chapter is read ahead of time and to enable further comprehension of weekly course objectives. Additionally, *no late homework will be accepted*.

Text information, lecture, video, and supplemental materials will be utilized to provide theory; and in-class and outside activities will be employed to reinforce theory. Activities will involve individual and group tasks to enhance the student's competencies with the identification and recognition of new important technologies.

Course Objectives

The student who successfully completes this course will be able to:

- Develop alternative solutions to case study problems per research and discussion.
- Construct experiment to test the solutions to case study problems.
- Critique solutions, which were implemented in the case study for moral, ethical, and productivity implications.
- Collect and organize data to support the implementation of proposed solution.

Outcomes Assessment

Grades are based on a point system. Each assignment is worth a given number of points and your final grade will be calculated by dividing total points earned by total points possible; then converted to a letter grade based on the scale below:

90 100%	-	85 - 89%	80 - 84%	75 - 79%	70 - 74%	65 - 69%	60 - 64%	< 60%
A		B+	B	C+	C	D+	D	F

If you are very close to the next higher grade level, the Instructor *may* take into consideration attendance, class participation, and/or other factors.

<u>Assignments</u>	<u>Points</u> (approx.)
Homework 10 @ 40-50 each (approx.)	500
Mid-Term	50
Emerging Technology Research Paper	100
PowerPoint Presentation	100
<u>Final Exam</u>	<u>50</u>
Total Points Possible (approx.)	800

→ Extra credit will be offered during this course – but do your best work the first time. There will be no make-up assignments, except in extreme circumstances, at the Instructor's discretion.

Attendance Policy

Attendance will be taken every class. You are allowed two “free” absences during the semester.

After that, (3) absences will lower the overall semester grade by 25 points. There are neither “excused” nor “unexcused” absences in this course; there is only a running count of the *number* of absences. The only exception will be if you are absent while officially representing the University (technology conference, varsity sports, ROTC, etc.). An absence the day before a spring/fall break starts or the first day back from a spring/fall break (this includes the first day of classes) is considered a “double cut” i.e. counts as two absences. *Every three tardies counts as one absence.*

NOTE: Any time you are absent, it is **your** responsibility to find out what took place during your absence and make up *all* missed work *before* the next class meeting that you attend. Points will be deducted for all late assignments.

Dropping a Class

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Communication Devices

As a member of the learning community, each student has a responsibility to other students who are also members of the community. When cell phones or pagers ring and students respond in class or leave class to respond, it disrupts *everyone* in the class. If you carry a pager or cell phone, set it to the “vibrate” or “quiet” mode. If your device does not have either of these modes, then turn it off during class time. I will not compete with a beeping pager or ringing phone at any time during class. No telephone conversations will be tolerated in the classroom during class time.

Given the fact that these same communication devices are an integral part of the University’s Rave Alert (formerly e2Campus) emergency notification system, an exception to this policy would occur when multiple devices activate simultaneously. If this occurs, students should consult their devices to determine if a university emergency exists. In testing situations, the use of the calculator function of a cell phone is not allowed. Wearing Bluetooth™ or other hands-free wireless headsets is not allowed during tests, nor is wired ‘ear buds’ (in-ear headphones).

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Laptop Usage

Laptop Required for Course: Regular Usage: For the purposes of this course, it will be assumed that you are in compliance with the mandatory laptop policy of the University. You will be expected to bring your laptop and be ready to use it for every class period. Usage of the laptop must conform to the provisions of this course as laid out in this syllabus as well as the Code of Student Conduct.

Academic Integrity and Originality (Plagiarism)

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cheating as articulated in the ISU Student Handbook. All students are expected to adhere to this policy, and any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy.

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Class Schedule – Spring 2016

Section 003:

Instructor: Jared Wuerzburger

This course will require each student to bring his or her computer and handheld tablet, phone or wearable device to each class meeting. Online and open source resources will be utilized to complete the weekly assignments and the listed course book is not required.

Week	Activity & Assignments Due	Homework
1	<u>Objectives:</u> Organizational Culture and the Implementation of a Student Management System. Video: Discussion:	Assigned in Class Read:
2	<u>Objectives:</u> Introduction of RFID Technology to Improve Livestock Subsidy Management. Video: Discussion:	Assigned in Class Read:
3	<u>Objectives:</u> Legal Consequences for a Failed ERP Implementation Video: Discussion:	Assigned in Class Read:

	Quiz	
4	<u>Objectives:</u> A crisis at Hafford Furniture: Cloud Computing Case Study Video: Discussion:	Assigned in Class Read:
5	<u>Objectives:</u> GPS: A Turn by Turn Case in Point. Video: Discussion:	Assigned in Class Reflections
6	<u>Objectives:</u> CCTV Surveillance and Intelligence Video: Discussion:	Assigned in Class Iteration:
7	<u>Objectives:</u> Location Aware Services in a Digital Ecosystem Video: Discussion:	Assigned in Class
8	<u>Objectives:</u> Road Safety utilizing monitoring systems and their implementation. Video: Discussion:	Assigned in Class
9	<u>Objectives:</u> Methodology and Software Components for E-Business Development and Implementation Video: Discussion:	Assigned in Class
10	<u>Objectives:</u> Inter-Sector Practice Reform for e-Governments Video: Discussion:	Assigned in Class
11	<u>Objectives:</u> Cyber-bullying: A Case Study Video: Discussion:	Continued Development of Final Project.
12	<u>Technology Evaluation Paper Assigned</u>	Continued Development of Final Project.
13	<u>Objectives:</u> Using technology to connect students with emotional disabilities to general education. Video: Discussion:	Continued Development of Final Project.

14	FALL BREAK!	Continued Development of Final Project.
15	Presentations of Final Evaluation Begin	Continued Development of Final Project.
16	Final Exam TBA	

ECT 373-002 Introduction to Data Communications and Networking Syllabus – Spring 2015

Department of Electronics and Computer Engineering Technology
College of Technology
Indiana State University

Class Schedule: TR 11:00 am – 12:15 pm, John T Myers Technology Center 308

Instructor: Dr. Patrick Appiah-Kubi
E-mail: patrick.appiah-kubi@indstate.edu
Phone: (812) 237- 3400
Office: John T Myers Technology Center 301K
Office hour: MW 1:00 pm -2:00pm, T 3:15pm – 4:15pm or by appointment

Course Description

This course introduces students to the fundamentals of telecommunications, data communications and networking from an IT perspective. Topics covered include: data, voice and video transmission; local and wide area networks; network topology models, communication protocols; and related topics.

As hybrid course, some of the workload will be completed via asynchronous (not at the same time) communication, however there will be class meetings at scheduled dates and times. Those meeting are mandatory and points will be awarded for attendance.

You can also expect to read between 20 - 60 pages of varied text each week, from online blogs to research papers to textbook chapters. You will also have a lot of tasks to complete that will help you apply the learned concepts. All of the reading and activities have been carefully selected to help ensure your growth as student in this course. (Please see the Course Schedule for more details on deadlines and deliverables.)

Course Objectives

Upon completion of this course, the student will:

- have an overview of essential data communications concepts
- have better understanding of data and telecommunication equipment and media
- be able to delineate the various communication protocols
- have better understanding of fundamental Internet concepts and services
- be familiar with basic local, wide area and distributed network concepts
- be introduced to network software
- have a basic understanding of network management issues

Required Text

Mike Meyers, CompTIA Network+, All-in-One Exam Guide, 5th Edition. ISBN 978-0-07-178921-9

Deliverables

Deliverables for this course will be in modules. Each module has a set of deliverables, that each student is expected to complete.

Assignments: A couple of assignments are expected to be completed by each student.

Weekly Reflective Reports: Students will submit reflective reports that highlight key learning outcomes. Issues related to the activities of the week should be pointed out in the reports.

Quizzes: A total of 2 quizzes will be administered in this class. Students are expected to complete all assigned quizzes.

Labs: Students will conduct real world lab exercises in networking.

Final Exam: There will be one final exam for this class.

Deadlines: There will be due dates for deliverables in Blackboard and their availability will close on published dates. Details of due dates is also available in the class schedule. Please take careful note of the due dates. Unless you notify me otherwise, if you miss a due you will lose 50% of the possible credit for that assignment. You will however receive a grade of zero for any assignment that is not submitted three weeks after the due date.

<u>Outcomes Assessment</u>	<u>Points</u>
Homework Assignments	200
Quiz 2 @ 100 points	200
Weekly Reflective journal 13@10	130
Final Exam	100
Labs 5 @ 30	150
Attendance 20 @ 10	200
TOTAL	980

Course Grading

A 91%-100% B 81%-85% C 71%-75% D 60%-65%
B+ 86%-90% C+ 76%-80% D+ 66%-70% F 0%-59%

If you are very close to the next higher grade, the instructor may take into consideration class participation, timeliness of assignments, and/or other factors.

Network+ Certification:

- Any Student takes the Network+ certification during the semester and passes will get an A in the class.

Blackboard web site

All course materials, class schedule and the syllabus will be posted on the course Blackboard web site.

Classroom Lectures

Lectures will be given during class time and the corresponding PowerPoints will be posted on Blackboard. There will also be assignments during the semester that will be performed during class or be of the take home format.

Attendance Policy

The class meets TR 11:00 am – 12:15 pm. Follow the schedule on the syllabus closely to know when class meets. You will have some time or deferred classes in order to work on your exams and labs. When class meets, you are expected to be present. A role is taken during each class meeting. No unexcused absences will be tolerated. In order for an absence to count as an excused

absence, appropriate documentation must be provided. This means that a phone-call or email before the class does not by itself make an absence excused. Any unexcused absence will count towards your attendance grade.

Etiquettes

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ECT 373-002 Intro. To Data Communication and Networks

Weekly Modules

Week 1(1/13 – 1/16)

- Task 0 Review of Syllabus
- Task 1 Navigate course site
- Task 2 Self-introduction at the student lounge.
- Task 3 Chapter 1 & 2 Reading Materials.

Week 2(1/19 – 1/23)

- Task 1 Chapters **2 synopsis** and weekly reflective journal 1

Week 3(1/26 – 1/30)

- Task 1 Chapter 3 & 4 Reading and weekly reflective journal 2
- Task 2 Homework Assignment 1

Week 4(2/2 – 2/6)

- Task 1 Chapter **3 synopsis** and weekly reflective journal 3
- Task 2 Lab 1

Week 5(2/9 – 2/13)

- Task 1 Chapter **4 synopsis** and weekly reflective journal 4

Week 6(2/16 – 2/20)

- Task 1 Chapter 5 & 6 Reading and weekly reflective journal 5
- Task 2 Lab 2
- Task 3 Quiz 1

Week 7(2/23 – 2/27)

- Task 1 Chapter **5 synopsis** and weekly reflective journal 6
- Task 2 Homework Assignment 2

Week 8(3/2 – 3/6)

- Task 1 Chapter **6 synopsis** and weekly reflective journal 7
- Task 2 Lab 3
- Task 3 Chapter 7 & 8 Reading

Week 9(3/9 – 3/13)

- Task 1 Chapter **7 synopsis** and weekly reflective journal 8
- Week 10(3/16 – 3/20)**
Spring Break 3/16 – 3/20
- Week 11(3/23 – 3/27)**
Task 1 Chapter **8 synopsis** and weekly reflective journal 9
Task 2 Homework Assignment 3
- Week 12(3/30 – 4/3)**
Task 1 Chapter**9 synopsis** and weekly reflective journal 10
Task 2 Lab 4
- Week 13(4/6 – 4/10)**
Task 1 Chapter **10 synopsis** and weekly reflective journal 11
Task 2 Quiz 2
- Week 14(4/13 – 4/17)**
Task 1 Chapter**11 synopsis** and weekly reflective journal 12
Task 2 Homework Assignment 4
- Week 15(4/20 – 4/24)**
Task 1 Chapter **12 synopsis** and weekly reflective journal 13
Task 2 Lab 5
- Week 16(4/27 – 5/1)**
Task 1 TBA
- Week 17**
Final Exam



Indiana State University

Department of Electronics and Computer Engineering Technology

Fall 2015

ECT 374 – Information System Security

Class Schedule:

Location:

Instructor: Dr. Patrick Appiah-Kubi

E-mail: patrick.appiah-kubi@indstate.edu

Phone: (812) 237- 3400

Office: John T Myers Technology Center 301K

Office hour: MW 1:00 pm -2:00pm, T 3:15pm – 4:15pm or by appointment

Prerequisite

CS 256

Overview

This course affords the learner an in-depth coverage of the risk and threat exposure that exists today to an organization's data, along with a structured way of addressing the safeguarding required for these critical electronic assets. The course provides a foundation for those responsible for protecting Information Technology (IT) network services, devices, traffic and data. Additionally, the course provides the broad-based knowledge necessary to prepare students for further study in other specialized IT security fields.

Objectives

At the conclusion of this course students will be able to:

- Identify security threats to network services, devices, traffic and data
- Understand the steps and procedures involved in hardening internal systems, services and inter-network devices
- Secure typical IT network communications
- Manage a Public Key Infrastructure (PKI)
- Employ and manage digital signature certificates
- Enforce an organizational security policy
- Understand the procedures involved in monitoring the security infrastructure of an IT system

Text Book and Lectures

The text book is titled *Security+ Guide to Network Security Fundamentals 4th Edition*, by Mark Ciampa, 2011, ISBN-10: 1111640122 | ISBN-13: 978-1111640125. The Ciampa book will be used to present the theoretical basis for our study and is required reading for the course.

Course Deliverables

Homework: There will be homework assignments at the conclusion of each main topic – 10 total.

Case study assignments: Cases will be posted on blackboard. Some will be real cases that you have to analyze. Some will also be policy writing. These case study assignments have deadlines and it is your responsibility to meet the deadline.

Exams: There will be 2 major exams in the course, a midterm and a final. However there will be several pop quizzes during the semester to test students understanding on concepts covered in class.

Grades

Grades will be assigned, based on performance on weekly quiz, the discussion postings, the tutorial and the final exam. Grades will be based on a 500 total point score. Specifically:

Homework	10 @ 20 points each
Case Study Assignments	2 @ 50 points each
Midterm	1 @ 100 points
Final exam timed	1 @ <u>100 points</u> 500 points

The grade scale will be:

A: 92% - 100%	B+: 89% - 91%	B: 80% - 88%	C+: 77% - 79%
C: 70% - 76%	D+: 67% - 69%	D: 60% - 66%	F: 59% - Below

Classroom Lectures

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Professor Expectations

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Course Outline

<i>Week</i>	<i>Date</i>	<i>Activities</i>
1	01/10	Introduction to Security - Chapter 1 Chpt1 assignment
2	01/17	Malware and Social Engineering Attacks – Chapter 2 Chpt2 assignment
3	01/24	Application and Network Attacks- Chapter 3 Chpt3 assignment Case 1 Due
4	01/31	Vulnerability Assessment and Mitigating Attacks- Chapter 4 Chpt4 assignment
5	02/07	Host, Application, and Data Security- Chapter 5 Chpt5 assignment
6	02/14	Network Security- Chapter 6 Chpt6 assignment Case 2 Due
7	02/21	Administering a Secure Network- Chapter 7 Chpt7 assignment
8	02/28	Wireless Network Security- Chapter 8 Chpt8 assignment Midterm Exam
9	03/07	Access Control Fundamentals- Chapter 9 Chpt9 assignment Case 3 Due
10		Spring break
11	03/21	Authentication and Account Management- Chapter 10 Chpt10 assignment
12	03/28	Basic Cryptography- Chapter 11 Chpt11 assignment Case 4 Due
13	04/04	Advanced Cryptography- Chapter 12 Chpt12 assignment
14	04/11	Business Continuity- Chapter 13 Chpt13 assignment Case 5 Due
15	04/18	Risk Mitigation- Chapter 14 Chpt14 assignment

Final exams: will be delivered during the exams week.

ECT 378: Enterprise IT Architecture
Syllabus – Spring 2016
Department of Electronics and Computer Engineering Technology
College of Technology
Indiana State University

Class Schedule:

Location:

Instructor: Dr. Patrick Appiah-Kubi

Email: patrick.appiah-kubi@indstate.edu

Phone: (812) 237-3400

Office: John T Myers Technology Center 301K

Office Hours: MW 1:00 pm -2:00pm, T 3:15pm – 4:15pm or by appointment

Prerequisite

CS 256

Course Description

This course is designed for undergraduate students to master the fundamentals of enterprise architecture concepts and principles. Students will be exposed to the narratives and the patterns of enterprise application architecture concepts.

Course Objectives

The objective of this course is to provide students with the fundamental understanding of enterprise architecture.

The things that students will be able to identify at the end of this course will be:

- Patterns such as layering, organization of domain logic, web presentation, session state, and distribution strategies.
- Organization of domain logic
- The different kinds of databases including relational databases, entity-relationship databases, and object-relational databases.
- The different kinds of patterns including domain logic patterns and data source architecture patterns.

Required Text

Martin Fowler, Patterns of Enterprise Application Architecture. 1st Edition. ISBN: 10: 0321127420

Deliverables

The deliverables listed below are expected from each student to successfully complete the course.

Chapter Summaries: To ensure that students will read the text and other reading materials, students are required to write summaries for each chapter. Details will be provided.

Semester Project: Students will work on an assigned project. Project details will be provided.

Exam: There will be four exams throughout the term. Details will be provided.

Deadlines: There will be due dates for deliverables in Blackboard and their availability will close on published dates. Details of due dates are also available in the class schedule. Please take careful note of the due dates. Unless you notify me otherwise, if you miss a due date you will lose 50% of the possible credit for that assignment. You will however receive a grade of zero for any assignment that is not submitted three weeks after the due date.

<u>Outcome Assessment</u>	<u>Points</u>
Attendance	10 @ 10
Chapter Summaries	6 @ 20 points
Final Project Paper	400
Exams	4@100
TOTAL	1020

Course Grading

A 91% - 100%	B 81% - 85%	C 71% - 75%	D 60% - 65%
B+ 86% - 90%	C+ 76% - 80%	D+ 66% - 70%	F 0% - 59%

If you are very close to the next higher grade, the instructor may take into consideration class participation, timeliness of assignments, and/or other factors.

Attendance Policy

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Course Calendar (Dates are subject to change)

Week	Date	Due Dates
1	1/13	Syllabus & Course Description Class meets
2	1/20	Group Selection Read Chapter 1 & 2
3	1/26	Project Proposal Due Summary of Chapter 1 & 2 Due Read Chapter 3 & 4

4	2/2	Read Chapter 3 & 4
5	2/9	Exam 1 Summary of Chapter 3 & 4 Due Read Chapter 6
6	2/16	Summary of Chapter 6 Due
7	2/23	Spring Break No Class Meeting
8	3/2	Progress Report 1 Due Read Chapter 7
9	3/9	Summary of Chapter 7 Due Read Chapter 8
10	3/16	Exam 2 Summary of Chapter 8 Due Read Chapter 9
11	3/23	Summary of Chapter 9
12	3/30	Summary of Chapter 9 Due Read Chapter 10
13	4/6	Progress Report 2 Due Discuss Chapter 10
14	4/13	Exam 3 Summary of Chapter 10 Due
15	4/20	Work on Project
16	4/27	Final Project Due Final Presentation
17	5/4 – 5/8	Final Exam

ECT 471 – Advanced Technical Data Management and Applications

Fall 2015

Department of Electronics and Computer Engineering Technology

College of Technology

Indiana State University

Class Schedule:

Location:

Instructor: Dr. Patrick Appiah-Kubi

E-mail: patrick.appiah-kubi@indstate.edu

Phone: (812) 237- 3400

Office: John T Myers Technology Center 301K

Office hour: MW 1:00 pm -2:00pm, T 3:15pm – 4:15pm or by appointment

Prerequisite

ECT 301

Course Objective

An overall focus in this course will be based on a practical approach to design, implementation, and management of database management systems. The general objectives of the course include: build theoretical foundation for database management systems, understand database management systems role in emerging applications, learn database modeling techniques, study different database models, study relational algebra, learn query writing using SQL, and database analysis and design.

Learning Outcomes

At the conclusion of this course students will be able to:

- Identify and differentiate among the database modeling techniques.
- Define and use relational algebra
- Develop queries using SQL.
- Analysis the database design process.
- Use UML, ERD and EERD.

Textbook

Thomas Connolly and Carolyn Begg. Database Systems- A practical approach to design, implementation and management. 5th Edition. Addison-Wesley.

Deliverables

The deliverables listed below are expected from each student to successfully complete the course.

Project: Students will work on an assigned project. Project details will be provided.

Weekly Reflective Reports: Students will submit reflective reports that highlight key learning outcomes. Issues related to the activities of the week should be pointed out in the reports.

Assignments: Four assignments are expected to be completed by each student.

Exams: There will be 2 major exams in the course, a midterm and a final. However there will several unannounced quizzes during the semester to test students understanding on concepts

covered in class.

Deadlines: There will be due dates for deliverables in Blackboard and their availability will close on published dates. Details of due dates is also available in the class schedule. Please take careful note of the due dates. Unless you notify me otherwise, if you miss a due date you will lose 50% of the possible credit for that assignment. You will however receive a grade of zero for any assignment that is not submitted three weeks after the due date.

<u>Outcomes Assessment</u>	<u>Points</u>
Semester Project	100
Attendance 20@10 points each	200
Weekly reflective reports 14@10 points each	140
Midterm	100
Final Exam	100
Assignments 4@50 points each	200
TOTAL (Undergraduate)	840

Final letter grades will be distributed in the following arrangement:

A	91%-100%	B	81%-85%	C	71%-75%	D	60%-65%
B+	86%-90%	C+	76%-80%	D+	66%-70%	F	0%-59%

Blackboard web site

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Classroom Lectures

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Week	Lecture & Activity	Assignments Due Dates
Week 1	Introductions, Overview & Housekeeping Review Database Architectures and Models	Project Team Formation
Week 2	Database Development Lifecycle ER Diagrams	
Week 3	ER Diagrams / EER Diagrams / UML	Proposal Due
Week 4	ERD/EERD to Relational Mapping	Homework 1
Week 5	Review Relational Model Relational Algebra	
Week 6	Relational Algebra	
Week 7	SQL: Data Manipulation	Homework 2
Week 8	SQL: Data Definition	
Week 9	Advanced SQL	Progress Report Due
Week 10	Review Normalization	Homework 3
Week 11	Advanced Normalization	
Week 12	Overview of Database Methodologies	Homework 4
Week 13	Security and Administration	
Week 14	Overview of Object-Oriented DBMS	
Week 15		Final Project Due

ECT 477: Culminating Experience in Information Technology
Syllabus – Spring 2016
Department of Electronics and Computer Engineering Technology
College of Technology
Indiana State University

Class Schedule: TBA.

Instructor: Dr. Patrick Appiah-Kubi

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Prerequisite

Junior or Senior Standing

Course Description

This course is designed for undergraduate students to perform a senior project. This project will be either a research project where the students will take the entire term to research an emerging technology or to research or expand on existing technologies or a system development project. The students will be, for the most part, working on this project on their own. The topics are created by the students and approved by the professor.

Course Objectives

The objective of this course is to help students develop individual research and problem solving skills leveraging their interest in technology. The students will learn how to do a project on their own as well as working on how to explain the project to others. Students must be able to clearly articulate what they did in their project.

Deliverables

The deliverables listed below are expected from each student to successfully complete the course.

Resume: Students will use this class to sharpen resume development skills. Details of the assignment will be provided.

Progress Report Assignments: There will be a couple of summary reports that the students will be required to complete.

Semester Project: Students will work on an approved project. Project details will be provided.

Deadlines: There will be due dates for deliverables in Blackboard and their availability will close on published dates. Details of due dates are also available in the class schedule. Please take careful note of the due dates. Unless you notify me otherwise, if you miss a due date you will lose 50% of the possible credit for that assignment. You will however receive a grade of zero for any assignment that is not submitted three weeks after the due date.

<u>Outcome Assessment</u>	<u>Points</u>
Resume	70
Project	600
Attendance 3@ 10 points	30
Progress Report 3@ 100 points	300
TOTAL	1000

Course Grading

A 91% - 100%	B 81% - 85%	C 71% - 75%	D 60% - 65%
B+ 86% - 90%	C+ 76% - 80%	D+ 66% - 70%	F 0% - 59%

If you are very close to the next higher grade, the instructor may take into consideration class participation, timeliness of assignments, and/or other factors.

Attendance Policy

The class meets TBA. Follow the schedule on the syllabus closely to know when class meets. You will have some time or deferred classes in order to work on your exams and design project. When class meets, you are expected to be present. A role is taken during each class meeting. No unexcused absences will be tolerated. In order for an absence to count as an excused absence, appropriate documentation must be provided. This means that a phone-call or email before the class does not by itself make an absence excused. Any unexcused absence will count towards your attendance grade.

Etiquettes

This is a learning environment and I expect everyone to be civil in the contributions. All opinions are welcomed and no one will be allowed to undermine someone's opinion during discussions.

Please observe the following etiquettes as well;

- ▶ Turn cell phones off.
- ▶ No use of cell phones and/or text messaging during class time.
- ▶ No food allowed in the classroom. Only bottled water is allowed.
- ▶ Classroom sessions are not for studying for other classes, doing homework, or conducting other business. Sleeping should be done before, or after, but never during the classroom session. Students who engage in such behavior will be asked to leave class and considered absent.

Please click on the link to read more about etiquettes on the internet.

<http://www.education.com/reference/article/netiquette-rules-behavior-internet/>

Academic Integrity and Originality (Plagiarism)

It is the student's responsibility to read and understand the ISU policy concerning plagiarism and cheating as articulated in the *ISU Student Handbook*. All students are expected to adhere to this policy, and any student participating in any form of academic dishonesty will be subject to

sanctions as described in this policy. Please review the policy via the link provided.

<http://www.indstate.edu/studentaffairs/Student%20Handbook.pdf>

Communication Policy

The preferred means of communication is via email. I respond to emails promptly (often within 24 hours) as I check my email on a regular basis. Please also use the office hours listed above to setup a blackboard collaborate with me. You are encouraged to email your peers or use the discussion board and course FAQ for clarifications.

American Disabilities Act Policy

Indiana State University seeks to provide effective services and accommodation for qualified individuals with documented disabilities. If you need an accommodation because of a documented disability, you are required to register with Disability Support Services at the beginning of the semester. Contact the Director of Student Support Services. The telephone number is 237-2301 and the office is located in Gillum Hall, Room 202A. The Director will ensure that you receive all the additional help that Indiana State offers. If you will require assistance during an emergency evacuation, notify your instructor immediately. Look for evacuation procedures posted in your classrooms. For more information click on the link provided. <http://www.indstate.edu/cfss/index.htm>

Student Expectations

My goal is for you to do well in this class and to develop the skills necessary to succeed in the workplace. However, you have the major responsibility for doing well. Achievement of course standards requires you to know what you need to do to improve your performance.

Professor Expectations

You can expect me to be fair. I will return papers in a timely fashion so you can learn from your mistakes. I will be available for during office hours to help you.

Course Calendar (Dates are subject to change)

Week	Date	Due Dates
1	1/13	Syllabus & Course Description Class meets
2	1/20	Nothing Due
3	1/26	Approval Paragraph Due Class Meets
4	2/2	Work on Project
5	2/9	Work on Project
6	2/16	Work on Project
7	2/23	Spring Break No Class Meeting
8	3/2	Progress Report 1 Due Class Meets

9	3/9	Work on Project
10	3/16	Work on Project
11	3/23	Progress Report 2 Due
12	3/30	Work on Project
13	4/6	Work on Project
14	4/13	Work on Project
15	4/20	Resume Due & Progress Report 3 Due Class Meets
16	4/27	Work on Project
17	5/4 – 5/8	Final Project Paper Due Final Presentations

Appendix B – Curriculum

Information Technology

Indiana State University - College of Technology

Electronics & Computer Engineering Technology Department

Information Technology (IT)

This major provides students with a real world, hands-on program that bridges the gap between computer scientists and general users. The Information Technology program is multidisciplinary, and involves the Departments of Mathematics and Computer Science, Electronics and Computer Engineering Technology and Management Information Systems. The IT B.S. degree major consists of a curriculum that includes 65 credits of coursework in computer science, electronics and computer technology, and management information systems. Students are encouraged to complete a minor in a related field to further build on the foundation established by the required coursework. Graduates in Information Technology will be prepared for entry-level positions in networking, database development and administration, web programming and development, applications development, digital communication, and digital multimedia.

What jobs are available?

IT systems manager, IT specialist, project manager, database system manager, IT technical support professional, Software support specialist, Web systems manager, IT technology manager, Network engineer, IT security specialist.

Who employs graduates with this major?

Essentially every hospital, commercial business, school, not-for-profit organization, government organization, manufacturing company, web-based business, sales company and computer equipment or related support company has computer systems that require IT professionals who can effectively manage the key data resources of the enterprise.

Questions? Need more Information? Want to visit us?

Please don't hesitate to contact us with questions. You will find much information on our web pages at <http://technology.indstate.edu/ecet/>. E-mail me at patrick.appiah-kubi@indstate.edu or our COT admissions coordinator Melissa Froderman at melissa.froderman@indstate.edu. We look forward to working with you to achieve your career goals! Great Careers start in the College of Technology and in the IT degree program.

INFORMATION TECHNOLOGY MAJOR
(Bachelor of Science Degree)

Indiana State University
College of Technology
ECET Department
Terre Haute, IN 47809

Student's Name _____

Advisor's Name _____

MAJOR COURSE REQUIREMENTS		FOUNDATIONAL STUDIES REQUIREMENTS	
<u>Required 65 Semester Hours</u>	<u>Sem. Grade</u>	<u>Sem.</u>	<u>Grade</u>
Basic Core			
ECT 160 (3) Fundamentals of Electrn	_____		
ECT 170 (2) Intro. to Information Tech	_____		
ECT 172 (3) Computer Hardware Compts	_____		
ECT 173 (3) Fund. Of Info. Tech	_____		
ECT 176 (3) Mobile Sys. Design Tech.	_____		
ECT 231 (3) Digital Computer Logic	_____		
ECT 272 (3) Computer Software Compts	_____		
ECT 275 (3) Digital Ani. & HCI Tech.	_____		
CS 151 (3) Intro to Computer Science	_____		
CS 170 (3) Web Programming	_____		
CS 256 (3) Princip. Structured Design	_____		
ECT 301 (3) Tech. Data Mgt.	_____		
ECT 371 (3) Emerging Trends in IT	_____		
ECT 373 (3) Intro. Data Comm. & Netw	_____		
ECT 374 (3) Info. System Security	_____		
ECT 375 (3) Adv. Digital Ani. & HCI Tech.	_____		
ECT 378 (3) Enterprise IT Architecture	_____		
MIS 301 (3) Systems Analysis for IT	_____		
ECT 437 (3) Computer Syst Management	_____		
ECT 471 (3) Adv. Tech. Data Mgt.	_____		
ECT 473 (3) Doc. And Policy for IT	_____		
ECT 477 (3) Culminating Exp. in IT	_____		
<i>A minor that complements and expands on the IT major requirements is recommended (but not required). Recommended minors include:</i>			
<i>Computer Science (CS)</i>			
<i>Management Information Systems (MIS)</i>			
<i>Computer Engineering Technology (CET)</i>			
<i>Automation & Control Engineering Technology (ACET)</i>			
<i>Electronics Engineering Technology (EET)</i>			
		Freshman Composition (6**)	
		ENG 101 and	_____
		ENG 105	_____
		or **(3 per SAT/ACT) ENG 107 or ENG 108	_____
		Junior Composition (3)	
		Recommended: ENG305T or HRD340	
		or BEIT 336 or ENG 305 or ENG 307	
		or ENG 308	_____
		Communication (3)	
		COMM 101 or 202 or 215 or 302	_____
		Quantitative Literacy (3)	
		MATH 102 or ECON 101 or FIN 108	
		or higher level math course per placement	_____
		Health and Wellness (3)	
		PE 101/101L	
		or AHS 111	_____
		Non-native Language (6)	
		or 4 semesters in HS w. C grade or >	
		or ESL completion	_____
		Science and Laboratory (3+1)	_____
		Social or Behavioral Sciences (SBS) (3)	_____
		Literary Studies (LS) (3)	_____
		Fine & Performing Arts (FPA) (3)	_____
		Historical Studies (HS) (3)	_____
		Global Persp. & Cultural Diver. (GPCD) (3)	_____
		Ethics & Soc. Resp. (ESR) (3)	_____
		Upper-Division Integrative Electives (UDIE)	
		(3)	_____
		(3)*	_____
		*Not required if ISU Minor or Certificate is completed	

Required credits in major – 65
Minimum total credits required to graduate - 120

Appendix C – Faculty Vitae

Curriculum Vitae

Dr. Patrick Appiah-Kubi
802 E 93rd Dr, #C
Indianapolis, IN 46240
Patrick.appiah-kubi@indstate.edu
Phone: (812) 223-2228

EDUCATION

Doctorate	Towson University, Towson, Maryland. December 2011. Major: Information Technology (Network and Security Concentration) Dissertation: Lean Secure Webmail Server on a bare PC.
Masters	Indiana State University, Terre Haute, Indiana. May 2005 Major: Electronics and Computer Technology Thesis: Preparation, Development and Evaluation of a Duplo Automated Assembly System.
Bachelors	Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. July 2002 Major: Computer Science Project: Automation of Nutritional Composition of Foods and their Medical Values for Food and Agriculture Organization

DEMOGRAPHIC

Race	Black African
Status	US Citizen

ACADEMIC EXPERIENCE

Aug. 2013- Present	Assistant Professor , Department of Electronics and Computer Engineering Technology, Indiana State University, Terre Haute, IN 47809.
Aug. 2010-July 2013	Lecturer , Computer and Information Science Department, Towson University, Towson, MD.
Aug. 2011-Present	Visiting Senior Lecturer , Faculty of Information and Communication Sciences and Technology Catholic University College, Fiapre-Sunyani, Ghana.
Aug. 2008-July 2013	Adjunct Faculty , Mathematics and Computer Science Department, Coppin State University Baltimore, MD
Jan. 2009-May 2010	Adjunct Faculty , Computer and Information Science Department, Towson University, Towson, MD.

Jan. 2009-Dec. 2010 **Adjunct Faculty**, Mathematics Department, Towson University
Towson, MD.

Aug. 2007-May 2009 **Teaching Assistant**, Computer and Information Science Department,
Towson University, Towson, MD.

Sep. 2003-May 2005 **Graduate Assistant**, Department of Electronics and Computer
Engineering Technology, Indiana State University, Terre Haute, IN 47809.

TEACHING, COURSE DEVELOPMENT AND STUDENT ADVISEMENT

Graduate Student Advisement

Typically serve on multiple Masters and PhD committees at Indiana State University

Chair/Advisor, PhD Committee for Mr. Dennis Park, Indiana State University, PhD in
Technology Management Program. Spring 2014 – Present

Co-Chair/Advisor, PhD Committee for Mr. Lawrence Andy Miller, Indiana State University,
PhD in Technology Management Program. Spring 2014 - Present

Member, PhD Committee for Mr. Greg Siegel, Indiana State University, PhD in Technology
Management Program. Spring 2014 – Present

Chair/Advisor, PhD Committee for Mr. Ralph Palmer, Indiana State University, PhD in
Technology Management Program. Fall 2014 – Present

Member, PhD Committee for Mr. Todd Koonts, Indiana State University, PhD in Technology
Management Program. Fall 2014 – Present

Member, PhD Committee for Mr. Michael Ramage, Indiana State University, PhD in
Technology Management Program. Fall 2014 – Present

Member, PhD Committee for Mr. Wajid Hassan, Indiana State University, PhD in Technology
Management Program. Fall 2014 – Present

Member, PhD Committee for Mr. Michael Dascanio, Indiana State University, PhD in
Technology Management Program. Spring 2015 – Present

Chair/Advisor, PhD Committee for Mr. Richard Anand, Indiana State University, PhD in
Technology Management Program. Fall 2014 – Present

Chair/Advisor, PhD Committee for Mr. Melvin Hayes, Indiana State University, PhD in
Technology Management Program. Summer 2015 – Present

Member, PhD Committee for Mr. Cormac Smith, Indiana State University, PhD in Technology
Management Program. Spring 2015 – Present

Member, PhD Committee for Ms. Rebecca Schmeller, Indiana State University, PhD in
Technology Management Program. Summer 2015 – Present

Chair/Advisor, PhD Committee for Mr. Hubert Williams, Indiana State University, PhD in
Technology Management Program. Spring 2015 – Present

Graduate Courses Taught (Indiana State University)

- Local Area Networks
- Information Systems Security
- Network Service Administration
- IT Strategies
- Database Management Systems

Undergraduate Courses Taught (Indiana State University)

- Fundamental information systems
- Computer component essentials
- Technical data management and applications
- Introduction to Data Communication and Networking
- Enterprise IT Architecture (Developed Summer 2014)
- Senior Project/Internship (Developed Summer 2014)
- Emerging Trends in IT (Developed Summer 2014)
- Documentation and Policy Standards for IT (Developed Summer 2014)
- Cybersecurity (Developed Summer 2014)
- Project Management

Undergraduate Courses Taught (Towson University)

- Computers and Creativity
- Information and technology for business
- Database Management Systems
- Computer and Enterprise Systems Architecture
- Fundamentals of Information Systems and Technology
- General Computer Science (C++ Fundamentals)
- Project Management
- Algebra for Applications
- Intermediate Algebra

Undergraduate Courses Taught (Via Online, Catholic University College, Ghana)

- Human Computer Interactions
- Web Programming
- Database Management Systems I & II
- Artificial Intelligence
- Systems Analysis and Design
- Microprocessor

Undergraduate Courses Taught (Coppin State University)

- Introductory Algebra
- Intermediate Algebra

ADMINISTRATIVE EXPERIENCE

Aug. 2013-Present IT Program Coordinator, Electronics and Computer Engineering Technology Department, College of Technology, Indiana State University. My responsibility is to lead the program in the right directions in terms of student advising, curriculum and course development, student projects and accreditation.

SERVICE

Indiana State University Service

Aug. 2014-Present	University Athletics Committee Member , Indiana State University.
Aug. 2014-Aug. 2015	Indiana State University Online Advisory Board Member , Indiana State University.
Aug. 2014-Aug. 2015	University Research Committee Member , Indiana State University.
Aug. 2014-Aug. 2015	Faculty Council Secretary , College of Technology.
Aug. 2013-Aug. 2015	Student Affairs Committee Member , College of Technology.
Apr. 2014-Jun. 2014	Interim PhD. Director Search Committee Member , College of Technology
Aug. 2013-Present	IT Program Abet Accreditation Committee Chair , Department of Electronics and Computer Engineering Technology.
Aug. 2013-Present	Personnel Committee Member , Department of Electronics and Computer Engineering Technology.
Aug. 2013-Present	Student Advisement , Department of Electronics and Computer Engineering Technology.

Towson University Service

Aug. 2010-Aug.2013	Committee member , Information Systems Program, Computer and Information Science Department.
Aug. 2010-Aug.2013	Committee member , Information Technology Program, Computer and Information Science Department.
Aug. 2010-Aug.2011	Committee member , Computer Science Program ABET accreditation assessment, Computer and Information Science Department.
Aug. 2010-Aug.2013	Student Advising , Computer and Information Science Department.
Aug. 2010-Aug.2011	Committee member , Curriculum design for Security Injection into core courses, Computer and Information Science Department.
Aug. 2010-Aug.2013	Personnel Committee Member , Computer and Information Science Department.

Catholic University College, Ghana Service

Aug. 2011-Present	Student Advising
Aug. 2011-Present	Council Member , International Collaborations and University Advancement
Aug. 2011-Present	Principal Advisor , Computer Science Curriculum Development

RESEARCH INTEREST

- Bare Machine Computing Web-based Email System and Email System
- Bare Machine Computing Split Protocols and Cluster Computing
- Communications Network Performance wireless/wired, Management, protocols system and information security
- Project Management
- Biometric and E-governance

- Usability and Assistive Technology
- High Performance Computing
- Cloud and Pervasive Computing
- Distributed Database systems

AWARDS AND HONORS

Aug. 2009- May 2010	CGSR Graduate Research Fellowship, Towson University
Aug. 2007-May 2009	Graduate Student Scholarship, Towson University
Aug. 2003-May 2005	Graduate Student Scholarship, Indiana State University

PROFESSIONAL AFFILIATIONS

- National Society of Black Engineers
- Association of Computing Machinery
- Institute of Electrical and Electronic Engineers
- Project Management Institute
- Institute for Systems and Technologies of Information, Control and Communication

PUBLICATIONS

Journal Publications

1. B. S. Rawal, R. K. Karne, A. L. Wijesinha, **P. Appiah-Kubi** and S. Liang. "Applications of Split Protocol Paradigm". International journal of computers and their applications, IJCA. June 2014.
2. R. K. Karne, S. Liang, A. L. Wijesinha and **P. Appiah-Kubi**. "A Bare PC Mass Storage USB Driver". International journal of computers and their applications, IJCA. March 2013.
3. A. Tsetse, A. Wijesinha, R. Karne, A. Loukili and **P. Appiah-Kubi**. "An Experimental Evaluation of IP4-IPV6 IVI Translation". ACM Applied Computing Review Journal, ARC 2013. March 2013.

Conference Proceedings

1. **P. Appiah-Kubi**, R. K. Karne and B. S. Rawal. "A Curriculum on Future Information Technology". The 6th International Conference on Computer Supported Education (CSEDU-2014), April 2014.
2. U. Okafor, R. K. Karne, A. L. Wijesinha and **P. Appiah-Kubi**. "A Methodology to Transform an OS-based Application to a Bare Machine Application". The 12th IEEE International Conference on Ubiquitous Computing and Communications (IUCC-2013), July 2013.
3. U. Okafor, R. K. Karne, A. L. Wijesinha and **P. Appiah-Kubi**. "Eliminating the Operating System via the Bare Machine Computing Paradigm". The Fifth International Conference on Future Computational Technologies and Applications. Future Computing 2013, May 2013.

4. A. Peter, R. K. Karne, A. L. Wijesinha and **P. Appiah-Kubi**. “Transforming a Bare PC Application to Run on an ARM Device”. IEEE SoutheastCon 2013, April 2013.
5. A. Loukili, A. Wijesinha, R. Karne, A. Tsetse and **P. Appiah-Kubi**. “Performance of an IPv6 Web Server under Congestion”. 12th International Conference on Networks, ICN 2013, January, 2013.
6. A. Peters, R.K. Karne, A. L. Wijesinha and **P. Appiah-Kubi**. “The Design and Implementation of Bare PC Graphics”. The Seventh International Multi-Conference on Computing in the Global Information Technology, ICCGI 2012, June 2012. (**Best Paper Award**).
7. **P. Appiah-Kubi**, R.K. Karne and A.L. Wijesinha. “A Bare PC TLS Webmail Server”. International Conference on Computing, Networking and Communication, ICNC- WSV, January 2012.
8. **P. Appiah-Kubi**, R.K. Karne and A.L. Wijesinha. “A Performance Study of Conventional and Bare PC Webmail Servers”. 7th International Conference on Networking and Services, ICNS, May 2011.
9. **P. Appiah-Kubi**, R.K. Karne, and A.L. Wijesinha. “The Design and Performance of a bare PC Webmail Server”. 12th IEEE International Symposium on Advances of High Performance Computing and Networking, AHPCN-HPCC, September 2010.
10. G. Ford, R.K. Karne, A.L. Wijesinha, and **P. Appiah-Kubi**. “The performance of a Bare Machine email server”. 21st International Symposium on Computing Architecture and High Performance Computing, IEEE SBAC-PAD, October 2009.
11. G. Ford, R.K. Karne, A.L. Wijesinha, and **P. Appiah-Kubi**. “The design and implementation of a Bare PC email server”. 33rd IEEE International Computer and Applications Conference, COMPSAC09, July 2009.

GRANT ACTIVITIES

Co-Principal Investigator, Summer Mobile Programming Boot Camp, May 2014-July 2015; funded for \$19,000. Working in collaboration with Jared Wuerzburger, Edie Wittenmyer and Dr. Joe Ashby.

Principal Investigator, Focus Indiana Employer Field Trip Grant, October 22, 2014; funded for \$552.

Co-Principal Investigator, Indiana State University’s Center for Distributed Control Systems and CyberCorp Nets. Working in collaboration with Dr. William Clyburn and Dr. Joe Ashby; not funded

Principal Investigator, Building linkage between ISU and Catholic University College, Fiapre in Ghana to recruit international students and to establish academic collaboration in terms of research and exchange scholars; funded for \$2500.

PROFESSIONAL ACTIVITIES

Advisory Boards

- Advisory Board Member, 2nd International Conference on Emerging Trends in Computer Science and Information Technology, ICETCSIT 2014, Faridabad, India

Professional Training

- Online Instructor Certificate Course, Indiana State University, summer 2014
- Microcontroller Distance Training Workshop, NSF TUES Type 2 Project, summer 2014, Wayne State University, Detroit, Michigan.

Program Committees and Reviews

- Serve as Technical Program Committee Member, ICNS 2014, Chamonix, France
- Served as Technical Program Committee Member, ICNS 2013, Lisbon, Portugal
- Served as Reviewer for ACM RACS 2012
- Serve as Reviewer for IJCA, International journal of computers and their applications
- Served as Technical Program Committee Member, ICNS 2012, St. Maarten, Netherlands

Sessions Chaired

- Chaired Session on Information Technologies Supporting Learning at the 6th International Conference on Computer Supported Education, CSEDU 2014, Barcelona, Spain.
- Chaired Session on Signal Processing and Security in Communications at the International Conference on Computing, Networking and Communications, ICNC 2012, Hawaii, USA

Presentations

- **P. Appiah-Kubi**, R. K. Karne and B. S. Rawal. “A Curriculum on Future Information Technology”. The 6th International Conference on Computer Supported Education (CSEDU-2014), April 2014.
- **P. Appiah-kubi**, R.K. Karne and A.L. Wijesinha. “A Bare PC TLS Webmail Server”. International Conference on Computing, Networking and Communication, ICNC- WSV, January 2012.
- **P. Appiah-kubi**, R.K. Karne and A.L. Wijesinha. “A Performance Study of Conventional and Bare PC Webmail Servers”. 7th International Conference on Networking and Services, ICNS, May 2011.

PROFESSIONAL TRAINING

Summer 2014	Online Instructor Certificate Course, Indiana State University
Summer 2014	Microcontroller Distance Training Workshop, NSF TUES Type 2 Project, Wayne State University, Detroit, Michigan

INDUSTRY EXPERIENCE

Jan. 2007- May 2010	Systems Engineer/IT Consultant , MVS Consulting Inc., Washington DC. <ul style="list-style-type: none"> • Prepared proposals for contract bidding. • Lead the installation of network printers for the metropolitan police in Washington DC • Liaised with the District of Columbia Government to prepare a new IT policy for employees in the district
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- Project Leader for the DC Department of Health Wired/Wireless Network Design and Support team during the 2009 Immunization project
- Supervised the team that sanitized old computers for the department of human services in Washington DC by wiping off the hard drive with WipeDrive 3.0
- Lead contracting engineer for Prince George's County systems redesign
- Supervised the DC Mental health department Computer system upgrade.
- Supervised the DC Public Schools systems upgrade
- Prepared reports and contract bills
- Lead consultant for the Baltimore county government network upgrade.
- Prepared progress report on every contract the company executed for its clients.
- Project member on the DC fire department network project. The project included feasibility study and upgrading the fire department's network infrastructure and making it more proactive to respond to 911 calls promptly
- Managed VPN and Watch guard Firewall
- Administered and Configured the Novell Netware on workstations
- Installed and managed Cisco Routers/Switches
- Wrote monthly reports on the performance of the network and made recommendations for new technologies
- PC troubleshooting and repairs.
- Created PC system images using Norton ghost and transfer it to other systems
- Installed and configured Windows and Linux Servers

Jan. 2006-Dec. 2006

Manufacturing Technician, Kelly Engineering Services, Contracted to Intel Corporation, Hudson, Massachusetts

- Initialized and verified fresh silicon scribes on the OCR tools using computer-imaging systems. Verified silicon wafers that were needed to be processed into the production line using work stream
- Performed daily preventive maintenance on wafer handling tools in work stream
- Entered results on particle check in SPC++ Statistical Software and analyzed the graphical output of the particle check
- Coordinated the flow of test wafers within the factory
- Packaged and shipped test and production wafers to other Intel sites for further analysis
- Received and processed production wafers into the production line
- Check for distortions on wafer boxes using AUGUST imaging system and performed statistical analysis on the results using SPC++

- Performed troubleshooting of computers that control the production tools
- Nov. 2002-July 2003 **Network Administrator**, Bsystems Limited, Accra, Ghana
- Supported and Monitored a Windows 2000 Network with 3 servers and 50 workstations
 - Managed VPN and Watch guard Firewall
 - Administered and Configured the Novell Netware on all workstations
 - Installed new Software, Hardware and Cisco Routers/Switches to enhance network performance
 - Wrote monthly reports on the performance of the network and made recommendations new technologies
 - Installed and added new printers and scanners to the network
- Aug. 2002-Oct. 2002 **Exchange Student**, IMA Laboratory, Hamburg University, Germany
- Participated in research work on Robotics and Computer Vision using C++
 - Familiarized myself with UNIX and LINUX
- May 1999-July 2002 **Systems Administrator**, Cutting Edge Solutions, Accra, Ghana
- Performed Data Recovery and Retrieval for clients
 - Setup, configured and Supported Windows NT/2000 Server networks
 - Maintained the company's database
 - Setup and repaired network Printers
 - Performed PC hardware repairs, troubleshooting and testing
 - Assisted end users with Windows XP issues and login issues
 - Trained end users in the use of Windows 2000/ XP and Microsoft Office suits (Word, Excel, PowerPoint, Outlook and Access)
 - Installed new Software packages on workstations. Trained end users on the new software packages

REFERENCES

Dr. Ramesh Karne rkarne@towson.edu
 Dr. Alexander Wijesinha awijesinha@towson.edu
 Dr. Chao Lu clu@towson.edu
 Dr. Joe Ashby jeo.ashby@indstate.edu

Dr. Joe E. Ashby
Indiana State University College of Technology
Myers Technology Center Rm TC301

Career Objectives

Continue work in higher education or related capacity in an engineering technology setting. Remain current in the fields of industrial automation, project management, manufacturing, mechatronics and process control technology. Variety and travel desired.

In Brief

Completing 12 years as a professor and including 5 years as department chair at Indiana State University, Electronics and Computer Engineering Technology (ECET) Department. Entered the education field after 26 years in the Industrial Automation and Control Systems Integration field. Specific experience in the Steel, Paper, Plastics, Power Generation, Machine Tool and Automotive power-train industries. Background includes work as a maintenance supervisor, plant project engineer, construction engineer, teacher, owner of a systems integration business, and automation project engineer for a major automation OEM.

Experience

Indiana State University, College of Technology

- Chair Electronics and Computer Engineering Technology department – 2010 to present
- Tenured Associate professor Electronics and Computer Technology department – 2010 to present
- Interim Director of Student Services, College of Technology – August 2012 to July 2014

Automotive Industry (Rockwell Automation, Allen-Bradley) - 6 years

- Working as Sr. Project Engineer on CNC machine tool and general motion control system retrofits in the automotive industry. Project activity represented \$500K hardware, \$600K engineering.
- Worked as consultant to OEM machine builders on a green-field automotive transmission plant design and start-up.
- Extensive experience with Allen-Bradley products including CNC, general motion control, AC drives, AC servo drives, PLC's, MMI, DeviceNet, PC based soft logic control, PC based CNC and Rockwell Software.

Power Generation (JE Ashby Automation Consulting) - 2 years aggregate

- Accomplished control system and instrumentation upgrades on rail car dumping and coal handling systems, boiler soot blowers, Flue Gas De-sulfurization (FGD) control system upgrade (\$85K engineering), boiler feedwater, and wastewater treatment plant systems at Hoosier Energy Merom.

Machine Tool Industry (JE Ashby Automation Consulting) - 3 years aggregate

- Worked on control system retrofit projects involving a wide variety of machine tools including vertical and horizontal lathes, machining centers, tool changers, large gantry type milling and turning machines, and grinders.

- Subcontracted electrical and controls portion of a \$1.2M machine tool retrofit, carrying project from functional specification through start-up. Hired and supervised field electricians and mechanics (8 employees at peak).

Plastics Industry (Hercules, Inc. – now Taghleef Ind.) - 7 years

- Executed automation projects involving extrusion, co-extrusion, extrusion melt and web temperature control, web handling, winding, slitting, blown and tenter thin film. Projects ranged from \$30K to \$150K.

Paper Industry (Weston Paper, Terre Haute Mill Division) - 4 years

- Performed maintenance supervision and project work involving wood and recycled paper pulping, refining, Fourdrinier paper machine, web handling, slitting, rewinding and plant power distribution.

Steel Industry (US Steel - USX, Gary Works) - 4 years

- Worked in Hot Rolling, Pickling, Sheet Mill and Tin Mill divisions as turn supervisor and plant project engineer on maintenance and automation projects involving flat rolled steel products.

Education

Nova Southeastern University, Ft Lauderdale, Florida. Computer Science Department, PhD in Computing Technology in Education, December 2009.

Indiana State University, Terre Haute, Indiana. MS degree, Electronics and Computer Technology, December 2001.

Indiana State University, Terre Haute, Indiana. BS degree, Electronics and Computer Technology, December 1974.

Vincennes University, Vincennes, Indiana. Completed a 2-year EE transfer program, May 1972.

Professional

ISA Certified Automation Professional (CAP) since November 2005 – Certification No. 40062

Senior member ISA, IEEE, ASEE & ATMAE

Member of American Council on Education (ACE) military college credit evaluation teams, 2009-present

EDIE L. WITTENMYER

Electronics & Computer Engineering Technology Department

812-237-3387

John T. Myers Technology Center
Indiana State University

email: Edie.Wittenmyer@indstate.edu

SUMMARY:

An instructor for College of Technology at the university and former senior applications analyst within the Information Technology/Automation group at a pharmaceutical facility who is innovative, motivated and results-oriented with a track record of success and commitment to student/customer satisfaction.

EDUCATION:

M. S. Electronic Computer Technology

Indiana State University Terre Haute, IN

B. S. Applied Computer Technology

Indiana State University Terre Haute, IN

A. S. Automation Electronics

Commercial Trades Institute Chicago, IL

ACADEMIC APPOINTMENT:

Indiana State University – College of Technology

3-year Contract Faculty (ECET)

2013- 2015 - Instructor (Spring/Fall)

- Electronic Fundamentals [2 Sections]
Instructor (ECT-160)
- Industrial Computer Management [2 Sections]
Instructor (ECT-437/537)
- Digital Animation & Visual Effects Technology
Instructor (ECT-490A)
- Advanced Computer Components
Instructor (ECT – 372)
- Dress Design: Flat Pattern
Instructor (TAM-411)
- Dress Design: Accessories
Instructor (TAM-497)
- Machine Embroidery/Business Start-up
Instructor (TAM-497)

- Textiles 1
Instructor (TAM-217)
- Clothing 1
Instructor (TAM-111)
- Perspectives of Dress
Instructor (TAM-214)
- Advanced Clothing Construction
Instructor (TAM-211)
- Quantitative Analysis of Merchandising
Instructor (TAM-313)

Indiana State University – College of Technology
3-year Contract Faculty (ECET)

2014 - (Summer)

- Industrial Computer Management
Instructor (ECT-437)

Indiana State University – College of Technology
Special Purpose Faculty [Multi-year contract] (ECET-HRD/PT)

2012- 2013 - Instructor (Spring/Fall)

- Electronic Fundamentals
Instructor (ECT-160) [Section 001/Section 401]
- Computer Components.
Instructor (ECT - 172)
- Database Management
Instructor (ECT-301)
- Advanced Computer Components
Instructor (ECT - 372)
- Clothing 1
Instructor (TAM-111)
- Textiles 1
Instructor (TAM-217)

Indiana State University – College of Technology
[1-year contract] (ECET-HRD/PT) [Fall/Spring]

2011

- Computer Database Management
Instructor (ECT-301)
- Digital Pulse Circuits

- Instructor (ECT-343)
- Computer Components.
Instructor (ECT-172)
- Advanced Computer Components .
Instructor (ECT-372)
- Perspectives of Dress 1
Instructor (FCS-214)
- Textiles 1
Instructor (FCS-217)
- Clothing 1
Instructor (FCS-111)

2011

- Digital Pulse Circuits
Instructor (ECT-343 - Spring)
- Advanced Computer Components
Instructor (ECT-372 - Spring)
- Clothing 1
Instructor (FCS-111 - Spring)
- Textiles 1
Instructor (FCS-217 - Spring)

*Indiana State University – College of Technology
2007- 2010*

Automation Module Developer/Programmer

- Refine curriculum unit topics and content descriptions. Develop online curriculum modules for National Science Foundation project: AutomationTEK utilized for learning through access to remote lab instructions and simulations. Simulations will incorporate Programmable Logic Controller, Programmable Automation Controller, Robotics and Process Control System instruments along with Quality Control, AutoCad and Computer Integrated Manufacturing.

2010 – (Fall/Spring)

- Computer Services & Repair (A+ Certification Preparation).
Instructor (ECT-172)
- Introduction to Information Technology.
Instructor (ECT-170)
- Advanced Computer Components .
Instructor (ECT-372)
- Textiles 1
Instructor (FCS-217)

2009 – (Fall/Spring)

Introduction to Information Technology.

Instructor (ECT-170)

- Computer Services and Repair.

Instructor (ECT-172)

- Textiles 1

Instructor (FCS-217)

2008 - Instructor (ECT-160 - Fall)

- Basic Electricity and Introduction to Electronics.

UNIVERSITY CERTIFICATION/TRAINING:

ONLINE INSTRUCTOR CERTIFICATION COURSE, Summer 2014, created course

ECT-173 Fundamentals of Information Technology

MySam (DegreeWorks) for Student 4-year Program Major plans, (May 2014)

Faculty Center of Teaching Excellence – 2014 Mondays in May

UNIVERSITY SERVICES:

- Academic Affairs Committee member: 2013 – Present
- New Student Orientation Advisor: 2012 – Present
- Sycamore Preview Representative for College of Technology, ECET/HRDPT
- Faculty search committee member: Dean, College of Technology; Associate Dean of Student Affairs, College of Technology; Associate Dean of Curriculum and Outreach, College of Technology; Associate Professor, Textiles Apparel Merchandising, College of Technology; Assistant Professor & IT Program Director, College of Technology

AWARDS:

2014 – UAF Hackathon – Four IT undergraduate students was awarded the certificate of participation by Microsoft Corporation and United Athletes Foundation

2014 – Center for Community Engagement and Experiential Learning Grant – TAM Summer Workshop

2013 – Center for Community Engagement and Experiential Learning Grant – TAM Summer Workshop

2013 – TAM 111 Freshman students [15] (spring semester) won the Natril Gear Wallet Contest. This award was given by the owner of the company, April Reinhard, from Fort Wayne, Indiana

2011 – ISU Experiential Learning and Community Engagement/Lilly Endowment

2010 – National Association of Professional Women, Woman of the Year, 2010

MEMBERSHIP OF ASSOCIATIONS:

Epsilon Pi Tau – The International Honor Society for Professions in Technology
Beta Sigma Phi – Sorority Chapter, PSI IOTA
National Association of Professional Women

PROFESSIONAL EXPERIENCE:

- Over 22 years of experience with information technology, computer/applications analyst and infrastructure management in a Pharmaceutical facility.
- Over 20 years of project management and team development for manufacturing and packaging production software applications including: SQL and Oracle databases, HMI/SCADA systems, PLC, data acquisition, Crystal Reports, recipe management and electronic work instruction systems.
- Authored, developed and executed full validation packages for equipment processes and computer applications/systems. Validation packages followed FDA Regulations 21 CFR Part 11 and GAMP4 methodology.
- Training instructor developing and delivering interactive training software and computer classroom environment along with web-based helpdesk for automation and production software applications.
- Expert technical writer in development of an array of technical documents, including: production floor user guides, system operation manuals, design and functional specifications, qualification protocols and software checklists.

Pfizer, Inc., Terre Haute, IN

1984 – 2007

Sr. Applications Analyst

- Implement, support and administrate MES and information software applications: Pharm2 (Electronic Batch Operating Instructions), QIS (Quality Information System), Crystal Reports and PDOCS (Document Management for Standard Operating Procedures). Also, support for HMI/SCADA and PLC applications.
- DBA for Pharm2, QIS, PDOCS and Intellution Production databases. Maintain software, hardware and complete documentation records for system change control of all validated Automated systems.
- Maintain software, hardware and complete documentation records for system change control of all validated Automated systems for PLC ladder logic (utilize standards: GAMP 4 and 21 CFR Part 11).
- Author/Implement validation documents such as, Installation, Operation and Performance qualifications. Implement programming techniques for manufacturing/packaging departments.
- Conduct/instruct training sessions and workshops on application software.
- Implement programming techniques for manufacturing/packaging departments.

- Directed teams of departmental colleagues, external vendors and contractors for state-of-the-art technology equipment implementation for plant operations.
- Designed the Change Control methodology and procedure for system changes with compliance with cGMP.
- Assisted in the direction of projects for process control improvements and revisions.
- Implement AutoCad concepts into the documentation records.

TRW, Inc., Marshall, IL *1983 – 1984*

Documentation Coordinator/Drafting Supervisor

LakeLand College, Mattoon, IL *1982 – 1983*

Electronic Technical Writer/Supervisor

COMMUNITY PROFESSIONAL EXPERIENCE:

White Stallion Creations, Marshall, IL *2001 – Present*

Owner

- Embroidery shop and responsible for daily operation of artwork, embroidery design and computerized equipment.
- Managerial and supervisory responsibilities for staff and part-time employees

Marshall Main Street Program, Marshall, IL *2004 – 2007*

Vice President/President

- Guiding the non-for-profit organization of which members are made up of business, community, and civic leaders whose purpose is to help us carry out our mission and vision.
- Research and prepare grant applications for additional local program funding along with the creation of event and fundraising projects.
- Managerial and supervisory responsibilities for staff, part-time employees and volunteers.

Tennessee Walking Horse Breeders & Exhibitors Association, Lewisburg, TN *2004 – 2006*

Executive Board Vice President, Horse Shows

PUBLICATIONS:

Wittenmyer, Edie (1997). *The Equestrian Devotional*. Washington: Winepress Publishing.

Wittenmyer, Edie (1997). *The Equestrian Journal*. Washington: Winepress Publishing.

Electronics and Computer
Technology Department
College of Technology
Indiana State University
Terre Haute, IN 47807
(812) 237339 (O)
Yuetong.lin@indstate.edu
Yuetong Lin, Ph. D

Education

Ph. D, Systems and Industrial Engineering with EE minor, University of Arizona. 05/2005
M. S., Industrial Engineering, University of Arizona. 05/2003
M. Eng., Computer Engineering, Northeastern University, China. 04/1998
Bachelor of Engineering, Telecommunication Engineering, Northeastern University, China.
07/1995

Appointments

Associate Professor, Electronics and Computer Technology Department, Indiana State
University, 08/2011 ~ Present
Assistant Professor, Electronics and Computer Technology Department, Indiana State
University, 08/2005 ~ 07/2011
Visiting Assistant Professor, Electrical and Computer Engineering Department,
University of Louisiana, Spring 2003 – Spring 2004
Software Engineer, Beijing Huakong Technology Co. Ltd, China, 1997 – 1998
Software Engineer (Part-Time), Wuxi Xixing Iron and Steel Co. Ltd, China, 1995– 1996

Selected Publications

Book Chapter:

1. Y. Lin and F.-Y. Wang, “Modular Wavelet Networks”, *Advances in Computational Intelligence, Series in Intelligent Control and Intelligent Automation, Vol. 5*, World Scientific, 2006
2. Fei-Yue Wang, Yuetong Lin, and James B. Pu, “Linguistic Dynamic Systems and Computing with Words for Modeling and Simulation of Complex Systems”, *Advances in the Theory of Modeling and Simulations*, Springer-Verlag, 2000

Journal Articles:

1. Y. T. Lin, F.-Y. Wang, P. B. Mirchandani, L. Wu, Z. X. Wang, C. Yeo, M. Do, “Implementing Adaptive Driving Systems for Intelligent Vehicles using Neuro-Fuzzy Networks,” *Transportation Research Record*, pp. 98-105, September 2001.
2. Y. T. Lin, F.-Y. Wang, J. Xiao, and Z. X. Wang, “An Intelligent Control System for Intelligent Vehicle: Algorithms and Experiments”, *Automatica*, Vol. 27, No. 4, pp. 556-567, 2001.
3. P. Chen, T. Toyota, Y. Lin, and Fei-Yue Wang, “Failure Diagnosis of Machinery by Self-Reorganization of Symptom Parameters in Time Domain Using Genetic Algorithms,” *International Journal of Intelligent Control Systems*, Vol. 3, No. 4, pp. 571-586, December, 1999

Conference Papers:

1. Y. Lin, F.-Y. Wang, and Y. Gao, "A Modular Hybrid Networks for Fuzzy Logic Control Systems", Proceedings of 2005 IEEE International Conference on Networking, Sensing, and Control, Tucson, Arizona, Mar. 2005, pp. 671-676.
2. Y. Lin and F.-Y. Wang, "Predicting Chaotic Time series Using Adaptive Wavelet-Fuzzy Inference Systems", Proceedings of 2005 IEEE Intelligent Vehicles Symposium, Las Vegas, Nevada, June 2005, pp. 888-893.
3. Fei-Yue Wang, Yuetong Lin, and James B. Pu, "Linguistic Dynamic Systems and Computing with Words for Complex Systems", Proceedings of 2000 IEEE International Conference on Systems, Man, and Cybernetics, Nashville, Tennessee, USA
4. Fei-Yue Wang, Yuetong Lin, Qinglong Wu, Peter M. Fu, and Chris Yeo, "Architecture and Implementation of Intelligent Control Systems for Smart Consumer Appliances via Internet," Proceedings of 2000 IEEE International Conference on Systems, Man, and Cybernetics, Nashville, Tennessee, USA
5. F.Y. Wang, Y.T. Lin, X.C. Huang, Z.X. Wang, S. Jian and Q.L. Wu, "Smart Control for Smart Consumer Appliances: A Neuro-Fuzzy-Based Approach," Proceedings of International Appliance Technical Conference, Columbus, Ohio, USA, March 25-28, 2001

Synergistic Activities

1. "The Study of Distributed Wavelet Fuzzy Networks Using Java Objected-Oriented Neural Engine", Promising Scholar Award, Indiana State University, 2006.
2. "Incorporating Multisim Simulation into Introductory Circuit Courses", Information Technology Innovation Mini-grant, Indiana State University, 2006.
3. "Implementing Neural Networks with FPGA", Information Technology Research Mini-grant, Indiana State University, 2007.
4. "OSGi-based Integrated Home Server and Intelligent Home Control Systems", Kelon Group, 2001.
5. "Global Telematics Systems for Automotive Positioning, Communication and Services", Business Plan for NorStar Information Technology, Inc., 2001.

Professional Activities

1. Student Activities Chair, 2007 IEEE International Conference on Vehicular Electronics and Safety, Beijing, China
2. Publication Chair, 2007 IEEE/INFORMS International Conference on Service Operation and Logistics, and Informatics, Philadelphia, Pennsylvania.
3. Finance Chair, 2005 IEEE International Conference on Networking, Sensing and Control, Tucson, Arizona
4. Publication Chair, 2005 IEEE Intelligent Vehicles Symposium, Las Vegas, Nevada
5. Publication Co-Chair, 2003 IEEE 6th International Conference on Intelligent Transportation Systems, Shanghai, China.
6. "Vehicle with Intelligent Systems for Transportation Automation", sponsored by Arizona Department of Transportation.
7. "Web-based Audio Video Educational System: An Open and Integrated Platform for Online Laboratory Experiments, Computer Simulation, and Course Instruction using Internet", sponsored by NSF.

Xiaolong Li, Ph.D.

Electronics and Computer Engineering Technology
College of Technology
Indiana State University
(812)-237-3451
Email: Xiaolong.Li @indstate.edu

Education

Ph D, University of Cincinnati, 2006.

Major: Electrical and Computer Engineering

Dissertation Title: Performance Analysis of Mobile Ad Hoc Networks

MS, Huazhong University of Science & Technology, 2002.

Major: Electrical Engineering

Dissertation Title: Study and Implementation of Streaming Media Transmission Technology over the Internet

BS, Huazhong University of Science & Technology, 1999.

Major: Electrical Engineering

Dissertation Title: Weak Target Detection based on Correlation Analysis

Professional Experience

1. August, 14 – present, Associate Professor, Department of Electronics and Computer Engineering Technology
2. August, 08 – present, Assistant Professor, Department of Electronics and Computer Engineering Technology, Indiana State University, IN
3. August, 06 – May, 08, Assistant Professor, Department of Industrial and Engineering Technology, Morehead State University, KY
4. September, 03 – June, 06, Research Assistant, Department of Electrical and Computer Engineering, University of Cincinnati, OH
5. September, 00 – June, 02, Research Assistant, Department of Electronics and Information Engineering, Huazhong University of Science & Technology, China

Publications Journal Articles

- Li, Xiaolong and Qing-An Zeng, “Performance Analysis of the IEEE 802.11e with TCP ACK Prioritization,” *To appear in the Special Issue on Performance Modelling and Evaluation of Telecommunication Systems, Telecommunication Systems, Springer, 2009.*
- Li, Xiaolong and Ranga, Uma Kanth, “Developing a Preferable Monitoring System for Vehicle Parking,” *Journal of Technology Interface, 2009.*
- Li, Xiaolong and Zeng, Qing-An, “Modeling and Analysis of Link Stability in Mobile Ad hoc Networks,” *International Journal of Ad Hoc & Sensor Networks, Vol. 3, No. 2-3, pp. 237-254, 2007.*
- Li, Xiaolong, Panja, Biswajit, and Zargari, Ahmad, “Modeling and Performance Analysis of Mobile Ad hoc Networks,” *Journal of the Technology Interface, Fall Issue, 2007*
- Li, Xiaolong and Zeng, Qing-An, “Performance Analysis of IEEE 802.11 MAC Protocol over WLANs with Capture Effect,” *Information Processing Society of Japan, pp. 545 – 551, November, 2005.*

Conference Proceedings

- Li, Xiaolong and Mohammed, Jaby, "A New Approach to Teaching Wireless Communications with MATLAB and OPNET," National Association of Industrial Technology, Nashville, TN, November, 2008.
- Thangaraj, Aruna, Zeng, Qing-An and Li, Xiaolong, "Performance Analysis of the IEEE 802.11e with TCP ACK Prioritization", Proceedings of 17th International Conference on Computer, Communications and Networks (ICCCN 08), St. Thomas, US Virgin Islands, August 3-7, 2008.
- Li, Xiaolong, "Simulink Based Simulation of Quadrature Amplitude Modulation (QAM) System," IAJC – IJME International Conference on Engineering and Technology, Nashville, TN, November 17 - 19, 2008.
- Mohammed, Jaby and Li, Xiaolong, "Departmental Survival through Collaborative Industrial Partnership", Proceedings of the 2008 ASEE Annual Conference, Pittsburg, PA, June 22-25, 2008.
- Li, Xiaolong and Zeng, Qing-An, "Influence of Bit Error Rate on the Performance of IEEE 802.11 MAC Protocol", the proceedings of the IEEE Wireless Communications and Networking Conference 2007 (WCNC'07), Hong Kong, China, March 11-15, 2007.
- Li, Xiaolong and Zeng, Qing-An, "Influence of Time-varying Channel on the Performance of IEEE 802.11 MAC Protocols," IEEE International Conference on Computer Communications and Networks (ICCCN), Arlington, Virginia, October 9-11, 2006.
- Li, Xiaolong and Zeng, Qing-An, "Capture Effect in the IEEE 802.11 WLANs with Rayleigh Fading, Shadowing, and Path Loss," Proceedings of the Second IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob06), Montreal, Canada, June 19-21, 2006.
- Li, Xiaolong and Zeng, Qing-An, "Performance Analysis of IEEE 802.11 MAC Protocols over WLANs with Capture Effect," Proceedings of the Second International Conference on Mobile Computing and Ubiquitous Networking (ICMU 2005), April 13-15, 2005.
- Li, Xiaolong and Zeng, Qing-An, " Modeling and Analysis of Multi-hop Wireless and Mobile Ad Hoc Networks using the IEEE 802.11 DCF Protocols," Proceedings of the 2004 International Conference on Wireless Networks (ICWN'04), Las Vegas, Nevada, USA, June 21-24, 2004.
- Li, Xiaolong and Zeng, Qing-An, "Modeling and Analysis of Link Stability in Wireless Mobile Ad Hoc Networks," Proceedings of the 2004 International Workshop on Mobile Ad Hoc Networks and Interoperability Issues (MANETII'04), Las Vegas, Nevada, USA, June 21-24, 2004.
- Li, Xiaolong, Agrawal, Darma, and Zeng, Qing-An, "Impact of Mobility on the Performance of Wireless Mobile Ad Hoc Networks," Proceedings of the 3rd IEEE Annual Wireless Telecommunications Symposium (WTS 2004), California State Polytechnic University, Pomona, California, USA, May 14-15, 2004.

Book Chapter

- Li, Xiaolong and Zeng, Qing-An, "Impact of Mobility on the Performance of Mobile Ad Hoc Networks," Performance Analysis of Mobile and Ad Hoc Networks, published by NOVA Publishers, Editors: Chansu Yu, Chita R. Das, and Yi Pan, ISBN: 1-60021-277-8, 2006

JARED L. WUERZBURGER

Terre Haute, IN 47804 - jwuerz@gmail.com – Jared.Wuerzburger@indstate.edu
jaredwuerzburger.info

EDUCATION

Indiana State University - Terre Haute, IN

Doctorate in Curriculum, Instruction, and Media Technology Aug 2013 – Present
Expected Graduation: Dec 2016

Masters Degree in Electronics and Computer Technology January 2012 – June 2013

Bachelor’s Degree in Information Technology January 2010 – December 2011
GPA 3.94

Black Hawk College - Moline, IL August 2005 – May 2007
Associates Degree in Liberal Arts

WORK EXPERIENCE

Indiana State University, Terre Haute, Indiana, USA

Full-Time Lecturer August 2012 – Present

- Instructed and created class material for the following courses:
- ECT: 490D: Development Projects **Topics: Advanced Mobile Applications Programing**
- Information Technology Curriculum Development: Research on Future Developments in Tech
- Special Projects: Leading joint venture between OIT and COT to provide students with internship experiences in Information Technology positions on campus.
- ECT 490D: Android App Inventor - **Topics: Android Mobile Applications Programing**
- ECT 172: Computer Components Essentials Intro to A+ Cert - **Topics: Hardware/Software**
- ECT 301: Technical Data Management and Applications - **Topics: Data Management Systems**
- ECT 372: Advanced Computer Components: Advanced A+ - **Topics: IT Practices / Networking**
- ECT 372H: Advanced Computer Components: Honors Coursework - **Topics: A+ Exam Prep**
- ECT 490: Topics in Electronics and Computer Technology – **Computer Systems Security**

Student Advisor

- Academic advising of transfer students, international students, and new incoming freshmen.

Ivy Tech Corporate College, Terre Haute, Indiana, USA January 2013 – May 2014

Adjunct Faculty

- Instructed and created course material for the following courses:

- INDT 100: Computer Fundamentals for Technology and Technology Project Management
- INDT 150: Computer Hardware and Networking Components

Sycamore Technology Solutions - ISU, Terre Haute, IN

April 2010 – December 2011

Information Technology Project Manager

- Provided technical support, web development, and server administration for local non-profit organizations and clients including United Way
- Supplied regular maintenance to client computer systems including virus and spyware protection and creating redundancy plans
- Repaired hardware and software malfunctions
- Applied web and graphic design for clients including custom HTML and PHP forms
- Worked with programming language including HTML, PHP, Python, C++, JavaScript, Assembly
- Implemented networking systems and development including wire running and server creation
- Managed student employees and oversaw team project operations and project development
- Communicated team goals and objectives with upper management and university professionals within the ISU Information Technology department

CERTIFICATIONS / AFFILIATIONS / AWARDS

COMPTIA A+ Certification, International Society of Automation, Institute of Electrical and Electronics Engineers, Golden Key International Honor Society, Outstanding Junior Award from ISU Alumni Association



RELATED SKILLS

- Advanced knowledge of various computer operating systems, applications, and hardware including Windows, Mac, and Linux distribution experience, programming experience.
- Advanced understanding of electronic device interfaces and audio technology.
- Superior problem solving skills
- Audio / Video production experience both personal and professional
- Taken numerous sound design and producing courses during college study.
- Musician/ Singer-Songwriter – Voice/Guitar/Bass/Drums/Violin/Piano/Harmonica

Appendix D – Equipment

Major pieces and sets of laboratory equipment used in the delivery and support of the IT BS degree program include:

(36) Lot of Pcs, PC hardware and PC Operating System software for various hardware platforms and configurations to support: ECT 172 Computer Hardware Components and ECT 372 Computer Software Components. The intent is to expose the students to legacy systems as well as the latest versions, configurations and technologies of PC hardware and software as is available. As a result, the inventory in the labs supporting these courses remains very fluid.

(18) Lot of digital electronic routers, switches and associated hardware and software, along with PCs used in the delivery of ECT 373 Networking course.

(15) Lot of Fluke digital multi-meters, B&K Precision DC bench top power supplies, circuit prototype boards, resistors, capacitors, inductors and connection materials and leads to support the lab work in ECT160 Fundamentals of Electronics course.

(10) Lot of Android Google Nexus series tablet computers with power supplies to support ECT490D Mobile Computing Applications and Mobile Computing Projects courses. Open source software and programming tools are used in these courses.

(Personal laptops and computing devices) With the advent of the freshman student laptop programs and the proliferation of mobile computing devices, students are encouraged to bring their own computing devices (BYOD) for use in classroom work wherever applicable.

Appendix E – Institutional Summary

The Institution

Indiana State University is located in Terre Haute, Indiana, serving approximately 12,448 graduate and undergraduate students. The university is a doctoral research university, combining a tradition of strong undergraduate and graduate education with a focus on community and public service. We integrate teaching, research, and creative activity in an engaging, challenging, and supportive learning environment to prepare productive citizens for Indiana and the world.

Address: Indiana State University 200 North 7th Street Terre Haute, IN 47809

President: Dr. Daniel J. Bradley

Type of Control

Indiana State University (ISU) is a state university.

History of Institution

Taken from <http://www1.indstate.edu/archives/history/essay/essay.html>

From Normal School to University

The Beginning: Indiana State University was created by House Bill 119 (December 20, 1865), in which the General Assembly of the State of Indiana established “a State Normal School, the object of which shall be the preparation of teachers for teaching in the common schools of Indiana.” Tuition was to be free to residents of Indiana and admission to “the privileges of instruction in the Normal School” were conditioned upon requirements which included sixteen years of age for females, and eighteen for males; good health; and, satisfactory evidence of undoubted moral character.

The Board of the Normal School was authorized to advertise throughout the State of Indiana for donations of land, money, and buildings as a site for the new school. Terre Haute was the only community in the state to make such an offer of money and land. The State Normal School was constructed on donated ground, which is now the present day site of the Quadrangle. On January 6, 1870 the partially constructed and poorly equipped Indiana State Normal School building was opened to students. On this day, President William Jones greeted 23 students and a faculty comprised of three assistants. Later in the year the student body increased to 40 and three additional faculty were hired.

During the early years of operation, the majority of the students attending the Indiana State Normal School had only completed elementary school with perhaps a couple of years of high school. Very few were high school graduates. The Normal School and its course of instruction were characterized by strict discipline and classroom recitations requiring analysis of principles and an abundance of mental exercise. While this level of instruction would characterize the

curriculum of the Normal School for decades, the institution met the requirements of its mission to the state of Indiana with remarkable success. By 1880, the State Superintendent of Public Instruction would note that wherever he went in the state, "I find that Normal graduates are doing the very best kind of work and I think that to their efforts is due in a large measure the rapid advancement which our schools have made during the past few years". Graduates of the Normal School would be teaching in public schools and sister normal institutions throughout the United States and as far away as Argentina, Uruguay, Paraguay, and the Philippine Islands by the end of the century.

On April 8, 1888, the Indiana State Normal School was completely destroyed by fire. The event was described as "the most unfortunate single catastrophe that could happen to Terre Haute". Thanks to the resolve of President William Wood Parsons, students of the school missed only one day of classes. The City of Terre Haute rallied to support the school by providing temporary quarters in the community and appropriating money for the immediate rebuilding of the school. Instruction resumed in a new Normal School building built on the same site in the fall of 1888. In addition to this catastrophe, the Normal School weathered several crises and controversies during these formative years; facing such challenges as the resignation of one-half the faculty in a dispute with the Board of trustees in 1881, and the cancellation of the 1893 Commencement as the result of a student led protest by the Senior Class.

The late nineteenth century also witnessed the emergence to several student-oriented activities that survive to this day. In November of 1895 students produced the first issue of the Normal School Advance. Over the years this publication developed into a yearbook and newspaper format. In the 1920's the yearbook was named "The Sycamore" and the newspaper was named the "Indiana Statesman." During the winter term of 1893-1894 the students promoted intramural and intercollegiate athletic competitions for men and women by forming an Athletic Association. In 1896 the women of the Normal School formed the Women's League in order to enhance social and cultural functions. This league provided the foundation upon which the Greek sorority system developed.

Master Plan I: In 1893, and later in 1903, the state authorized the first expansions of the Normal School. An addition (North Hall) was placed on the north side of the main building to house science laboratories, the school's first library, and two gymnasiums for men and women. A Training School was later built to the south and east. All structures were architecturally compatible and similar in appearance. They were all located on the site of the present day Quadrangle.

Indiana State developed a curriculum that enabled it to emerge into the twentieth century, and was recognized as one of the premier normal schools involved in teacher training in the United States. In several areas this level of excellence was apparent and readily supported by the State of Indiana. Indiana State was a pioneer in the training of teachers in the field of Industrial Arts, and in 1915 constructed a large building to house this and the Home Economics programs. The State Normal Library was constantly rated as the second largest teachers college library in the United States (behind Columbia University) and was housed in a magnificent structure which was described as one of the most magnificent library buildings in the mid-west. In the decade prior to and immediately following World War I the Indiana State Normal School prospered. The successful development of the institution led to calls from around the state of Indiana for the

creation of another institution to train teachers. Rather than create a new school, the Indiana State Normal School was authorized to open a branch campus in Muncie, Indiana. The Indiana State Normal School- Eastern Division opened in the 1918.

It was not until the year 1907 that the State of Indiana required a high school diploma of all teachers licensed to teach in Indiana. In response to this initiative, high school graduation was made a requirement for admission to the Normal School, and a four-year College Course was established. The first bachelor's degrees were awarded in June 1908. The first North Central Association accreditation of the Normal School was awarded in 1915. During the period from 1907-1924, a large part of the curriculum in the elementary teacher training program was of sub-collegiate quality, and often not accepted for transfer by other colleges and universities as college level work. The academic structure of Normal School was reorganized to form 13 departments in 1923. In the following year 1924, all course offered were elevated on a college level. In 1927, a Graduate School was created at the Normal School to administer the programs of students pursuing graduate study in education. The first master's degrees were awarded in 1928.

Through the decade of the 1920's, the task of elevating the academic curriculum of the institution, as well as the scholarly credentials of the faculty, was undertaken in order to meet the requirements of accreditation. In 1929, the name of the institution was changed to Indiana State Teachers College. In 1930, the institution was admitted to the American Association of Teachers Colleges and was accredited by the North Central Association of Colleges and Secondary Schools. The decades of the 1930s were a difficult time for academic institutions. The depression of that decade coupled with the threat of global war had a limiting effect on enrollments. The academic reputation of the institution as a teachers college was secure but the physical plant had suffered years of neglect. The college was located in the heart of a thriving commercial district, but lacked a cohesiveness which identified it as a college community. It is fortunate that federal funding from PWA and WPA programs were available to colleges and universities who were in desperate need of assistance.

Master Plan II: By the end of the 1930's, a building program had resulted in the construction of a Laboratory School. A state of the art model in teacher training facilities which was one of the largest and best equipped such facilities in the nation. A new Student Union Building, and the Fine Arts and Commerce building were nearing completion, and students enjoyed the benefits of campus residence in two dormitories (Women's Residence Hall and Parsons Hall for men) which provided room and board for a cost of \$ 90.00 per quarter. Eagle and Mulberry Streets, through the heart of the campus, were closed and a pedestrian Quadrangle was developed to form an open green space around which the campus could grow.

The years during World War II were difficult for the university as men and women left school to join the military service or work in war-industry related occupations. The V-5 and V-12 Naval training units located at Indiana State helped maintain enrollment levels and the financial security of the institution.

In 1940, a bachelor's degree was made a requirement of all teachers licenses issued in Indiana. As this requirement took effect, the students of Indiana State Teachers College were graduated with a bachelor's degree and the final lingering vestiges of the Old Normal School course of

study were eliminated from the curriculum. As Indiana State celebrated its 75th anniversary in 1945, President Ralph Tiley could note with pride that throughout its history as a Normal School and Teachers College, Indiana State had been recognized as one of the outstanding teacher training institutions in the United States. Many graduates of the institution have taught in Indiana public schools and assumed positions of leadership in Indiana education. Practically every school district in the state of Indiana has felt the influence of Indiana State teachers.

Within a decade, President Raleigh Holmstedt was able to note that while the preparation of teachers remained the principal function of the Teachers College, the graduate curriculum at Indiana State was designed primarily for teachers and school administrators, “strong undergraduate program permitted an increasing proportion of its graduates to prepare for other professions and vocation.” By 1958, nearly one-third of the graduates of Indiana State entered professions and vocations other than teaching. The post-war period witnessed a profound trauma in American education. Returning veterans took advantage of educational opportunities offered to them under the G.I. Bill of Rights and returned to pursue complete college degrees. Enrollment in 1945 was 788 and in 1947, this number increased to 2555. In subsequent years their children, the “baby-boomers”, flooded primary and secondary schools throughout the country and finally entered colleges and universities in the late 1950s and 1960s. This staggering increase in the number of students effected Indiana State in two ways; first, teachers had to be trained to fill the elementary and secondary school classrooms being built all over the state; and second, college enrollments soared as the “baby-boomers,” entered higher education. At Indiana State, enrollment in 1959 was 5,189 and by 1968 was 12,892 at the Terre Haute campus with a total of 16,532 in all programs of both the Terre Haute and Evansville campuses.

The growth of the academic curriculum doubled with the tremendous increases in enrollment produced a period of explosion unparalleled in institutional history. In the decade from 1959 to 1969 a total of 15 residence halls would also be constructed on the campus. The Married Student Housing Complex would be completed and plans were made for the construction of Lincoln Quad. During the decade, the academic curriculum and administration were reorganized to form the College of Arts and Sciences (1962), the School of Education (1960), the School of Graduate Studies (1961), the School of Nursing (1962), the School of Business (1964), the School of Health Education and Recreation (1965), and the School of Technology (1968). In 1965 Indiana State University started its own doctoral study program with a Ph.D. degree in elementary education and guidance-psychological services. In the same year, Indiana State established an Evansville campus (ISUE) and enrolled its first class in September of that year. In 1985 this Evansville branch campus became the University of Southern Indiana and joined Ball State University as an outstanding institution of higher education originally founded by Indiana State University.

The peak of campus growth and enrollments occurred in the early 1970s. By September 1971, there were 806 members of the faculty at Indiana State University and an enrollment of 18,898 students served on the Terre Haute campus, the Evansville campus, and by off campus extension programs. Faced with the explosion in the number of students and faculty required to teach them, facilities were developed in every available structure in or near the campus, plans were made for new construction, and the boundaries of the campus were pushed outward into the surrounding communities in all directions.

Indiana State University now offers students more than 175 undergraduate programs of study and selected study to the doctoral level. National accreditation for professional programs has been attained in all academic units of the University.

Master Plan III: Indiana State University developed a plan in 1985 that was designed to realize a long held dream of creating a cohesive pedestrian campus by closing several streets through the center of the campus and building pedestrian plazas and walkways to connect various areas of the campus. A new Hulman Memorial Student Union, Dede Plaza, and the Sycamore Walkway highlight the transformation.

Student Body

Indiana State is a diverse campus, with a total of 69 countries represented. However the main population is the domestic students coming from Indiana and surrounding states. Our students are active participants in learning, inside and outside the classroom.

Regional or Institutional Accreditation

ISU is accredited by the North Central Association (NCA). ISU was last reviewed in 2010. The next accreditation comprehensive evaluation will occur in 2020-2021.

Personnel and Policies

The promotion and tenure system

The ISU policies, guided by AAUP Policy Documents and Reports, for Faculty appointment, promotion, and tenure are outlined in the university Handbook and posted at <http://www.indstate.edu/adminaff/policyindex.htm>. Following these policies each academic unit (department or college) has a specific set of criteria for promotion and tenure. In the College of Technology, there exists a promotion and tenure document approved by the college faculty, Dean, and university senate. This document is used in reviewing the promotion and tenure within the College of Technology. The document states: “The purpose of promotion is to recognize the achievement in the broad areas of teaching, scholarly activity, service, and academic credentials. At the heart of promotion is the demonstration of increased leadership, ability, and value to the department, College, university, and profession. Tenure confers permanent faculty membership. Tenure is recognition that the faculty member has sustained and will continue a high level of teaching, scholarly activity, and service. Evaluation of faculty provides information to make the following types of decisions: promotion, tenure, faculty self-assessment and continual enhancement, recognition and reward, and salary adjustments. Faculty at the upper ranks (Associate Professor and Professor) should serve as mentors for junior faculty through their accomplishments and example.”

For the promotion or promotion and tenure, a faculty member submits his/her dossier to the department along with the university specific form. The document goes through the following stages in sequence: department personnel committee, department chair, college committee, college dean, university vice president for academic affairs, university president, and board of trustees. There exists a promotion and tenure oversight committee at the university level where a faculty member can appeal the decision.

The process used to determine faculty salaries

A faculty position request is initiated by an academic department based on the staffing plan and need. The request is reviewed and approved by the Dean, Provost, and President. This request contains salary information as well as trying to adjust the salary of the previous search in the department with the current market. For example in the ECET department, the starting salary of a new assistant professor is in the range of \$70,000. When an offer is made, the candidate can negotiate with the Dean around this figure. Note that those who were hired before, their salaries may be lower than this. Once a faculty member has joined the university, the salary is increased generally by 2 to 5%. At the time of promotion, the university increases the salary by 10% of your base salary from assistant to associate professor rank. Sometime at the time of promotion, the Dean (specially, professional college Dean) may recommend an additional increment for market adjustment, which may or may not be approved by the Provost office depending on the university budget.

Faculty benefits

The ISU faculty benefits are posted at <http://www.indstate.edu/humres/staff-benefits/>. The benefits include retirement and health (medical, prescription drug, and dental) plans. Vision plan is optional. Flexible Spending Account, tuition fee waiver, life insurance, disability, and express health benefits are also provided.

Education Unit

There are six colleges and one school that comprise the educational units at Indiana State University, namely: The College of Arts and Sciences, Scott College of Business, Bayh College of Education, College of Nursing, Health and Human Services, College of Technology, University College and a school of Graduate Studies. The College of Technology (COT) offers accredited programs at the baccalaureate, master, and doctoral levels. Programs are accredited by the ABET, The Association of Technology, Management, and Applied Engineering (ATMAE, formerly NAIT), The American Council on Construction Education (ACCE) and the National Council for Accreditation of Teacher Education (NCATE/CTTE).

The COT offers 22 undergraduate programs and 4 graduate programs, organized in five departments including: Applied Engineering & Technology Management, Aviation Technology, Built Environment, Electronics & Computer Engineering Technology (ECET) and Human Resource Development & Performance Technologies. At the fall 2014 reference point, the College of Technology had 75 faculty members, 14 staff members, 1752 undergraduate students, and 363 graduate students. The COT also houses the Air Force Reserve Officer Training Corps and the Technology Services Center that sponsors projects with businesses and industries throughout the region.

Credit Unit

One semester credit normally represents one class hour or three laboratory hours per week.

One academic year (fall and spring semesters) normally represents at least 28 weeks of classes, exclusive of final examinations.

Academic Supporting Units

- ECT courses like ECT 160, ECT 170, etc. are offered by the ECET department.
- Department of Mathematics and Computer Science (Chair: Dr. Liz Brown, Professor): CS 151, CS 256, CS 170, MATH 102
- Department of Chemistry and Physics (Chair: Dr. Eric Glendening, Professor): PHYS 105 & 105L, CHEM 100 & 100L
- Department of English (Chair: Dr. Robert Perrin, Professor): ENG 101, ENG 105, ENG 107, ENG 305T
- Department of Communication (Chair: Dr. Mary L. Kahl, Professor): COMM 101
- Department of Physical Education (Chair: Dr. Don Rogers, Professor): PE 101 & 101L
- Department of Languages, Literatures, and Linguistics (Chair: Dr. Ann Rider, Professor): Foreign Languages
- Department of History (Chair: Dr. Christopher Olsen, Associate Professor), Historical Studies
- University College, Student Affairs, Career Center, Financial Aid, Registrar, Tutoring Services, Student Counseling Center and Disability Support Center are other academic support units at Indiana State University.

Table D-1. Program Enrollment and Degree Data

BS Information Technology

	Academic Year		Enrollment Year					Total Undergrad	Total Grad	Degrees Awarded			
			1st	2nd	3rd	4 th	5 th			Associates	Bachelors	Masters	Doctorates
Current Year	2014	FT	42	63	36	47	5	193					
		PT								57			
1	2013	FT	45	46	46	49	1	187					
		PT								34			
2	2012	FT	46	36	32	41	9	164					
		PT								26			
3	2011	FT	37	35	19	43	3	137					
		PT								31			
4	2010	FT	33	25	18	30	2	108					
		PT								19			

Give official fall term enrollment figures (head count) for the current and preceding four academic years and undergraduate and graduate degrees conferred during each of those years. The "current" year means the academic year preceding the on-site visit.

FT--full time
PT--part time

**Table D-2a. Personnel
Information Technology (Lead Faculty)**

Year¹: Fall 2014

	HEAD COUNT		FTE ²
	FT	PT	
Administrative ² (Department chair)	FT		0.2
Faculty (tenure-track) ³	FT		1.5
Other Faculty (excluding student Assistants)	FT		3.0
Student Teaching Assistants ⁴		PT	0.5
Technicians/Specialists			
Office/Clerical Employees	FT		0
Others ⁵ (Adjuncts)			

Report data for the program being evaluated.

1. Data on this table should be for the fall term immediately preceding the visit. Updated tables for the fall term when the ABET team is visiting are to be prepared and presented to the team when they arrive.
2. Persons holding joint administrative/faculty positions or other combined assignments should be allocated to each category according to the fraction of the appointment assigned to that category.
3. For faculty members, 1 FTE equals what your institution defines as a full-time load
4. For student teaching assistants, 1 FTE equals 20 hours per week of work (or service). For undergraduate and graduate students, 1 FTE equals 15 semester credit-hours (or 24 quarter credit-hours) per term of institutional course work, meaning all courses — science, humanities and social sciences, etc.
5. Specify any other category considered appropriate, or leave blank.

**Table D-2b. Personnel
ECET Department Faculty (Total)**

Year¹: Fall 2014

	HEAD COUNT		FTE ²
	FT	PT	
Administrative ² (Department chair)	FT		0.5
Faculty (tenure-track) ³	FT		6.5
Other Faculty (excluding student Assistants)	FT		5.0
Student Teaching Assistants ⁴		PT	0.4
Technicians/Specialists			
Office/Clerical Employees	FT		0
Others ⁵ (Adjuncts)		PT	1.5

Report data for the program being evaluated.

1. Data on this table should be for the fall term immediately preceding the visit. Updated tables for the fall term when the ABET team is visiting are to be prepared and presented to the team when they arrive.
2. Persons holding joint administrative/faculty positions or other combined assignments should be allocated to each category according to the fraction of the appointment assigned to that category.
3. For faculty members, 1 FTE equals what your institution defines as a full-time load
4. For student teaching assistants, 1 FTE equals 20 hours per week of work (or service). For undergraduate and graduate students, 1 FTE equals 15 semester credit-hours (or 24 quarter credit-hours) per term of institutional course work, meaning all courses — science, humanities and social sciences, etc.
5. Specify any other category considered appropriate, or leave blank.

Signature Attesting to Compliance

By signing below, I attest to the following:

That _____ (*Name of the program(s)*) has conducted an honest assessment of compliance and has provided a complete and accurate disclosure of timely information regarding compliance with ABET's *Criteria for Accrediting Computing Programs* to include the General Criteria and any applicable Program Criteria, and the *ABET Accreditation Policy and Procedure Manual*.

Dean's Name (As indicated on the RFE)

Signature

Date