Student Handbook

DEPARTMENT OF INFORMATION STUDIES

Fall 2016

CHICAGO STATE UNIVERSITY | 9501 S. KING DRIVE, ED 208, CHICAGO, ILLINPIS 60628

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Welcome

Welcome to Information Studies. This department houses several graduate programs related to applied information and communications management and technology. We offer several graduate programs that prepare individuals for work in the information professions: the Master of Science in Library and Information Science, the Master of Science in Technology and performance Improvement Studies, Post-baccalaureate Certificate in Archives and Records Management, Post-baccalaureate Certificate in Telecommunications Management, Library Information Specialist Endorsement for licensed teachers, and the Education Technology Specialist Endorsement for licensed teachers. There are two undergraduate minor concentrations – the Information Technology minor and the interdisciplinary Security and Intelligence minor.

The programs in Information Studies are ideal for working professionals who want to make a career change. The programs are offered in the online course delivery format which afford flexibility in scheduling. The graduate programs can be completed by individuals who have earned an accredited bachelor's degree in virtually any field.

Information Studies

What is information studies?

Information Studies is an emerging field concerned with the interrelationships among people, their information and communication needs, and technology. Information Studies addresses the creation, organization, representation, access, dissemination, preservation, and management of information and the information technologies that enable its communication and utilization. It is concerned with leveraging information and technology to improve the performance and effectiveness of individuals, groups, organizations and society. It addresses the ethical, political, social, cultural and economic dimensions of information access and use. It employs scientific, technological and humanistic approaches to inquiry.

Our department provides a variety of programs in Information Studies with an emphasis on applied information technology, library and information science, media, telecommunications management, computer networking and human performance technology.

Department Objectives

There are three major department objectives:

1. Recruit and retain a diverse student body by maintaining a flexible and supportive learning environment.
2. Graduate information professionals who demonstrate leadership, especially in urban and multicultural communities.
3. Advance and contribute to the field of Information Studies through research, consulting, and continuing education efforts of students, graduates, and faculty.

Distance Learning in Information Studies

What is distance learning?

Distance learning is "any educational or learning process or system in which the teacher and instructor are separated geographically or in time from his or her students; or in which students are separated from other students or educational resources. Contemporary distance learning is effected through the implementation of computer and electronics technology to connect teacher and student in either real or delayed time or on an as-needed basis."[1]

In what formats are distance learning courses offered?

Distance learning courses are offered in two formats at Chicago State. There are "Web" courses and "Hybrid" course.

A **"web" course** "is conducted entirely over the web through the use of a course management system. Instructors and students are required to actively use the course management system in order to complete the various components of the course. These courses can be in the following modalities:(a) Asynchronous – where students are not required to be available at a specific time on a regular basis or, (b) Synchronous – the classes meet through Elluminate or similar software at regularly scheduled times; however the student does not come to campus." *CSU Contract*, p. 164

A **"hybrid" course** "include a significant amount of electronic materials/activities provided online through the course management system. Class sessions include a limited number of scheduled sessions on campus, as well as a significant number of sessions comprised of online activities and interaction with no requirement to physically be on campus. Students are required to actively use the course management system in order to complete the various components of the course." *CSU Contract*, p. 164

The course management system used at CSU is Moodle (http://csumoodle.remote-learner.net/).

[1] Retrieved from http://www.cdlponline.org/index.cfm?fuseaction=whatis&pg=2

What do we expect from students in distance learning programs?

The courses within the Department of Information Studies' degree programs and certificates are primarily offered as online, Internet-based courses. This format allows students to complete their coursework from anywhere at any time as long as they have access to the Internet. However, while flexible in how students schedule their own work, assignments and activities have specific due dates and expectations. In addition, some faculty will require students to be online at specific times to interact as a class.

Online courses are not easier than traditional, face-to-face courses. In fact, many students find online courses require more time and effort, as far more reading and writing is typically required. Therefore, these courses are geared towards graduate students who are able to take responsibility for their own learning, are comfortable using a computer and necessary technologies, and are able to communicate effectively through writing.

To be successful, it is expected students will log into the course frequently (at least two to three times per week) and be active in their participation. Students who fail to access and/or participate in the course may be administratively withdrawn from the course. Any issues impacting a student's ability to access the course or complete his/her assignment should be reported as soon as possible to the instructor, who will provide options on how to proceed and/or avenues for support.

Am I ready for distance learning at CSU?

To find out your readiness for distance learning, please take the SmarterMeasure Online Readiness Assessment (http://csu.readi.info/).

"SmarterMeasure is a tool which helps you determine your level of readiness for taking online or technology rich courses. On the next few web pages you will be asked questions on topics in the areas of how well you can use a computer; how motivated, organized, and self-directed you are; how you prefer to learn new information; and you will even be able to measure your on-screen reading rate and recall." (http://csu.readi.info/).

Faculty and Staff

Information Studies Faculty

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AcademicLibraries,MulticulturalResourcesandServices,Referenceand Public Services,ChildrenandYouthServices, Collection Management, Knowledge Management

Information Studies Staff

Ms. Desiree Montgomery - Program Assistant and Coordinator, Pearson Vue Testing Center

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dmontg20@csu.edu

Ms. Barbara Belisle - Licensure Officer, College of Education

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bbelisle@csu.edu

Getting Help

Here are offices where students commonly go to get assistance:

Information Studies Department
ED 208
773-995-2598
773-821-2203 (fax)

Dean's Office of the College of Education
ED 320
773-995-3988

IT Helpdesk
773-995-3963
bhelp@csu.edu
1st floor New Academic Library

Moodle Help
Center for Teaching and Research Excellence (CTRE)
773-995-2960
elearning@csu.edu
Library (Room 318)

Registrar
(773) 995-2517
ADM 128
CSU-Registrar@csu.edu

Financial Aid
(773) 995-2304
ADM 207
csu-finaid@csu.edu

Bursar
(773) 995-2470
ADM 212
bursar@csu.edu

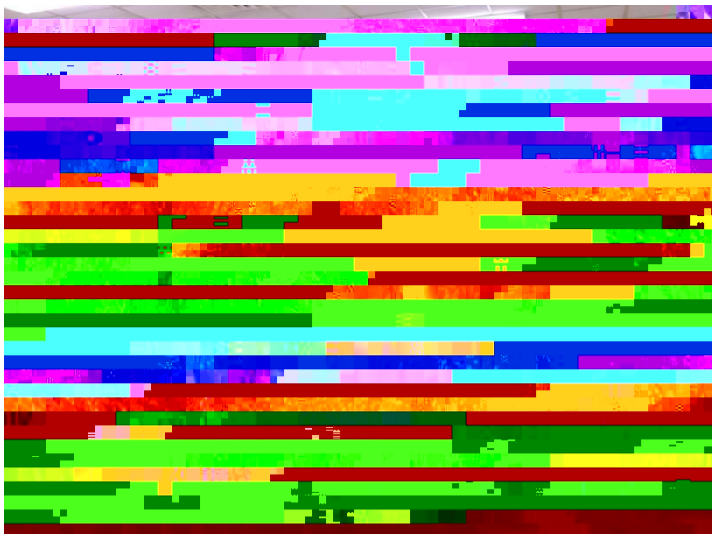
Classrooms and Labs

Information Studies maintains several instructional classrooms.

ED 204 Lab

15 iMacs

Mac OS X; Microsoft Office 2008 for iMacs



ED 109 Networking Lab

21 PCs

OS 7 Professional, Microsoft Office 2007; networking software

LIS Lab (in ED 204)

3 PCs
2 scanners (HP ScanJet 5590, HP ScanJet N6310)
1 network printer/scanner (Brother MFC-6490CW)

Voyager and SPSS software

Other devices related to digitization are stored in IS Department office (AGPtek converter to convert cassette tape to CD & MP3 digital audio materials, Magnavox DVD/VHS Recorder to Convert VHS to Digital DVD)

Centers

Pearson Vue Testing Center

The Information Studies Department hosts Chicago State University's authorized Pearson VUE Test Center. Our Test Center offers a wide variety of computer-based exams offered by Pearson and is open to the public.

To sign up for an exam, please use the Pearson VUE website:
http://home.pearsonvue.com/test-taker.aspx

CISCO Academy

Cisco® Networking Academy® is an innovative global education initiative that delivers information and communication technology skills to help meet this growing demand while improving career and educational opportunities for students around the world.

The Information Studies Department at Chicago State University was approved as a Local CISCO Networking Academy by CISCO Systems, Inc. in 2001. Since 2002, the department has offered computer networking courses. While the academy is housed in the College of Education, the curriculum is designed for both teachers and for those who wish to pursue careers in business and industry.

The computer networking curriculum is comprised of a sequence of four courses. Upon completion of the four-course sequence, trainees qualify to sit for the CISCO Certified Networking Associate (CCNA) examination.

CCNA certification denotes a foundation in, and apprentice knowledge of networking. CCNA certified professionals install, configure, and operate local area networks, wide area networks, and dial access services for small networks.

Course	Course Description	Term
TPS 4070/TPS 5070	**Informatics Essentials:** Key concepts on managing and maintain computers; technical skills; prepares students to take the A+ Certification. **Prerequisite:** None	Spring
TPS 4510/TPS 5510	**Network Fundamentals:** Key fundamental networking concepts and technologies. **Prerequisite:** None	Fall
TPS 4520/TPS 5520	**Network Configuration II: Routing Protocols and Concepts**. This course is to develop an understanding of how a router learns about remote net-works and determines the best path to those networks. This course includes both static routing and dynamic routing proto-cols. **Prerequisite:** TPS 4510/ TPS 5510	Spring
TPS 4530/TPS 5530	**Network Practicum I: LAN Switching and Wireless.** The goal is to develop an under- standing of how switches are interconnected and configured to provide network access to LAN users. This course also teaches how to integrate wire- less devices into a LAN. **Prerequisite:** TPS 4520/ TPS 5520	Summer I
TPS 4540/TPS 5540	**Network practicum II: Accessing the WAN.** This course describes key WAN technology concepts. Also, teaches you how to select the appropriate WAN technology to meet different enterprise business requirements. **Prerequisite:** TPS 4530/ TPS 5530	Summer II

Center for Information and Security Education and Research (CINSER)

The Center for Information and Security Education and Research (CINSER) is an interdisciplinary unit that has a mission to prepare Chicago State University students for employment and career opportunities in intelligence and national security agencies as well as in the private sector, to conduct research and to engage in community outreach. CINSER is an Intelligence Community Center of Academic Excellence (IC CAE). The IC CAE program "was congressionally mandated with the mission to increase intelligence community job applicants who are multi-disciplinary, as well as culturally and ethnically diverse." The staff of CINSER believes that safety and security at the individual, community, national and international level can be enhanced through the promotion of global understanding.

CINSER hosts an undergraduate minor concentration in Security and Intelligence Studies that is open to all undergraduate majors at Chicago State. CINSER hosts a series of educational opportunities for the university campus and broader surrounding community to learn about safety, security and intelligence. CINSER hosts a webinar series for professional development in intelligence.

For more information about CINSER, please visit www.cinser.net

Information Studies Programs

The Department has two master's degree programs and a number of certificates and endorsements. The programs and certificates in Information Studies are in two program areas:

- Library and Information Science
    - M.S. in Library and Information Science
    - School Information Specialist Endorsement for Licensed Teachers (non-degree)
    - Archives and Records Management Post-Baccalaureate Certificate (non-degree)

- Technology and Performance Improvement Studies
    - M.S. in Technology and Performance Improvement Studies
    - Telecommunications Management Post-Baccalaureate Certificate (non-degree)
    - Information Technology Undergraduate Minor/Certificate
    - Education Technology Specialist Post-Baccalaureate Certificate for Licensed Teachers (non-degree)

Curriculum Structure for LIS and TPIS Degree Programs

The degree programs have the following basic structure:

1. Core Required Courses - courses that all students in the degree program are required to take; these courses form the foundation of the discipline

2. Specialization Courses – courses that provide a specialization within the discipline

3. Final Thesis/Project – original research or

4. Capstone Portfolio – a professional portfolio that demonstrates the knowledge and skills gained

Library and Information Science

The Master of Science degree in Library and Information Science (MSLIS) prepares professionalsto design and manage library and information services in a variety of settings. The program isdesigned to reflect an urban focus with the following specializations:

1) School libraries(licensure or endorsement to become a School Library Information Specialist, 2) archives andrecord management,
3) Academic libraries, and
4) Public libraries.

Library and Information Science Degree - Specific Requirements (35 – 44 Credit Hours)

Required Courses (15 Credit Hours)
The following five required courses are to be taken at the beginning of the student's master's program.

- LIS 5050 Foundations of the Information Professions
- LIS 5060 Organization of Information
- LIS 5070 Introduction to Reference Services
- LIS 5080 Information Technology for Library and Information Agencies
- LIS 5090 Research Methods in Library and Information Science

Directed Elective Courses (15 – 43 Credit Hours – Choose One Specialization)
Students will select one of the following specializations and complete the sequence of courses listed:

School Libraries

- Professional Education Coursework Sequence (approx. 18 credit hours) – FOR OPTION 3 CANDIDATES ONLY
- LIS 5710 Literature and Services for Children
- LIS 5720 Literature and Services for Young Adults
- LIS 5520 Cataloging and Classification
- LIS 5120 Administration of Media Centers
- LIS 5130 Curriculum in the Media Center
- LIS 5180 /LIMS 5005: Clinical Experiences in School Library Media Centers
- LIS 5185 /LIMS 5992: Certification Exam Review
- LIS 5190 /LIMS 5004: Student Teaching and Seminar (FOR OPTON 3 CANDIDATES ONLY)

Archives and Records Management

- LIS 5200 Archives and Records Administration
- LIS 5970 Field Practicum
- Four electives selected with an advisor (2 may be taken outside of the department)

Academic Libraries

- LIS 5300 The Academic Library
- LIS 5390 Management and Organization of Libraries
- LIS 5510 Database Design for Information Storage and Retrieval
- LIS 5970 Field Practicum
- Two electives selected with an advisor

Public Libraries

- LIS 5350 The Public Library
- LIS 5390 Management and Organization of Libraries
- LIS 5510 Database Design for Information Storage and Retrieval
- LIS 5970 Field Practicum
- Two electives selected with an advisor

Concluding Courses (4 to 7 Credit Hours)

The following three concluding courses are to be taken at the end of the student's master's program:

- LIS 5980 Thesis / Project (At least 3 credit hours)
- LIS 5990 MSLIS Capstone (1 credit hour)

A note about specialized accreditation for the M.S. LIS program: Chicago State University's Library and Information Science program has been granted candidacy status by the Committee on Accreditation of the American Library Association. Candidacy status is an indication that the Department of Information Studies' Library and Information Science program has voluntarily committed to participate in the ALA accreditation process and is actively seeking accreditation. Candidacy does not indicate that the program is accredited nor does it guarantee eventual accreditation of the program by ALA.

School Library Media Specialization

Completing an option within the School Library Information Specialist concentration will prepare you for a career in school librarianship. The competencies you develop in the program will enable you to develop and administer school library media services in a multicultural and technological society.

Admission requirements to the program vary depending on your background. If you do not already have a State of Illinois Professional Educator License, you must apply for admission to the College of Education and complete the professional education and general education sequence necessary for initial teacher licensure. Licensed teachers may apply for regular graduate admission.

The department currently offers three pathways to becoming a Library Information Specialist recognized by the state of Illinois to work in school libraries.

Option 1. MSLIS for Licensed Teachers. Current holders of an Illinois Professional Educator License with a teaching endorsement can earn an MSLIS with a Library Information Specialist endorsement valid for grades K -12 through our school library specialization of the MSLIS degree program.

Option 2. Endorsement Only (Non-Degree) for Licensed Teachers. Current holders of an Illinois Professional Educator License with a teaching endorsement can earn the Library Information Specialist Endorsement through our school library endorsement-only sequence. This is a non-Master's degree option that allows you to teach in a school library for the grade range currently on your license.

Option 3. MSLIS for Non-Teachers (Initial Licensure). Applicants without an Illinois Professional Educator License can earn their Illinois Professional Educator License with a Library Information Specialist Endorsement through our MSLIS concentration in School Libraries. This requires an additional

professional education sequence including student teaching. To receive licensure from the state of Illinois and to complete the program under this option, you must also pass the State of Illinois Test of Academic Proficiency (TAP), Library Information Specialist content area exam, and Assessment of Professional Teaching (Special K-12).

The School Library Information Specialist concentration meets the standards of the Illinois State Board of Education (ISBE).

Option 1. MSLIS for Licensed Teachers

- You are required to submit proof of a passing score report on the Test of Academic Proficiency (TAP) or the Illinois Certification test of Basic Skills taken any time since 1987.
- You are required to possess a valid Professional Educator License with teaching endorsement
- Students must complete LIS 5180 Clinical Experiences in School Library Media Centers regardless of prior experience. A minimum of 100 field hours total must be completed; 50 hours must be in an elementary setting and 50 must be in a secondary setting.

Required Courses (15 credit hours)	
LIS 5050 Foundations of the Information Professions	3 cred. hrs.
LIS 5060 Organization of Information	3 cred. hrs.
LIS 5070 Introduction to Reference Services	3 cred. hrs.
LIS 5080 Information Technology for Library and Information Agencies	3 cred. hrs.
LIS 5090 Research Methods	3 cred. hrs.
Specialization Courses (minimum 16 credit hours)	
LIS 5710 Literature and Services for Children	3 cred. hrs.
LIS 5720 Literature and Services for Young Adults	3 cred. hrs.
LIS 5520 Cataloging and Classification	3 cred. hrs.
LIS 5120 Administration of Media Centers	3 cred. hrs.
LIS 5130 The Curriculum and the Media Center	3 cred. hrs.
LIS 5180 Clinical Experiences in School Library Media Centers	1 - 2 cred. hrs.
LIS 5185 Exam Review Course (not counted towards degree)	1 cred. hr.
Concluding Courses (4 - 7 credit hours)	
LIS 5980 Thesis Project	3 - 6 cred. hrs.
LIS 5990 Capstone Portfolio	1 cred. hr.

Option 2. Endorsement Only (Non-Degree) for Licensed Teachers.

RECOMMENDED COURSE SEQUENCE

LIS 5050 FOUNDATIONS OF THE INFORMATION PROFESSIONS	3 cred. hrs.

LIS 5080 INFORMATION TECHNOLOGY FOR LIBRARIES AND INFORMATION AGENCIES	3 cred. hrs.
LIS 5520 CATALOGING AND CLASSIFICATION	3 cred. hrs.
LIS 5070 INTRODUCTION TO REFERENCE SERVICES	3 cred. hrs.
LIS 5130 CURRICULUM AND THE MEDIA CENTER	3 cred. hrs.
LIS 5710 LITERATURE AND SERVICES FOR CHILDREN	3 cred. hrs.
LIS 5120 ADMINISTRATION OF MEDIA CENTERS	3 cred. hrs.
LIS 5720 LITERATURE AND SERVICES FOR YOUNG ADULTS	3 cred. hrs.
LIS 5185 LICENSURE EXAM REVIEW (NOT COUNTED TOWARDS COURSEWORK)	1 cred. hr.
THE FOLLOWING COURSES ARE REQUIRED FOR STUDENTS WHO PLAN ON WORKING IN A BUILDING THAT INCLUDES GRADES 5-8 AND WHO DO NOT ALREADY HAVE A MIDDLE SCHOOL ENDORSEMENT.	
ELCF 4440 PHILOSOPHY, CURRICULUM, AND INSTRUCTIONAL METHODS FOR THE MIDDLE SCHOOL	3 cred. hrs.
PSYC 4210 ADOLESCENT PSYCHOLOGY	3 cred. hrs.

Option 3. MSLIS for Non-Teachers (Initial Licensure)

Candidates seeking initial teacher licensure must satisfy all of the following requirements:

- Passing score on the test of Academic Proficiency (TAP) or equivalent requirement, Library Information Specialist content area exam, and Assessment of Professional Teaching (Special K-12)
- Students must also complete a minimum of 100 field observation hours; 50 hours must be in an elementary setting and 50 must be in a secondary setting. These hours may be completed in LIS 5180 Clinical Experiences in School Library Media Centers

General Education Requirement (33 -36 credit hours)
Three credit hours in each: composition, oral communication, college level mathematics, biological science and physical science (at least one science course must include a laboratory)
Nine credit hours from at least two disciplines in the humanities: fine arts (art, music, theater) , foreign language, literature, and philosophy
Nine credit hours in the following social sciences: US history or American national government; child and adolescent psychology; and one course from history, geography, economics, political science, anthropology, psychology, or sociology.
Professional Education Requirement (24 credit hours)
ED 1520 (2 cred. hrs), ED 2000 (3 cred. hrs), ED 5500 (2 cred. hrs.), PSYC 2020 (3 cred. hrs), SED 5301 (2 cred. hrs.), SED 5303 (2 cred. hrs.), and READ 5280/5290 (3 cred. hrs.)

LIS 5190 Student Teaching (6 credit hours)	
MSLIS Program and Specialization Course Requirements (minimum 36 credit hours)	
LIS 5050 Foundations of the Information Professions	3 cred. hrs.
LIS 5060 Organization of Information	3 cred. hrs.
LIS 5070 Introduction to Reference Services	3 cred. hrs.
LIS 5080 Information technology for Library and Information Agencies	3 cred. hrs.
LIS 5090 Research methods in Library and Information Science	3 cred. hrs.
LIS 5710 Literature and Services for Children	3 cred. hrs.
LIS 5720 Literature and Services for Young Adults	3 cred. hrs.
LIS 5520 Cataloging and Classification	3 cred. hrs.
LIS 5120 Administration of Media Centers	3 cred. hrs.
LIS 5130 Curriculum and the Media Center	3 cred. hrs.
LIS 5980 Thesis/Project	3 - 6 cred. hrs.
LIS 5180 Clinical Experiences in School Library Media Center	1 - 2 cred. hrs.
LIS 5185 Exam Review (not counted towards degree)	1 cred. hr.
LIS 5990 MSLIS Capstone Course	1 cred. hr.

Non-Degree Endorsement in School Library Media for Certified Teachers (24 Credit Hours)

Students who are already have an Illinois Professional Educator License (PEL) with teaching endorsement and would liketo add an endorsement for School Library Media / Library Information Specialist can take thefollowing suggested sequence of courses to satisfy the State of Illinois credit hourrequirements.

- LIS 5050 Foundations of the Information Professions
- LIS 5070Introduction to Reference Services
- LIS 5080 Information Technology for Library and Information Agencies
- LIS 5710 Literature and Services for Children
- LIS 5720 Literature and Services for Young Adults
- LIS 5520 Cataloging and Classification
- LIS 5120Administration of Media Centers
- LIS 5130 Curriculum in the Media Center
- LIS 5185Certification Exam Review

Students who will work in a building that includes grades 5, 6, 7, and/or 8 and who do notalready have a middle school endorsement must complete two additional courses, ELCF 5440and PSYC 4210, for a middle school endorsement.

The School Library Information Specialist concentration meets the standards of the Illinois State Board of Education (ISBE).

Certificate in Archives and Records Management (18 Credit Hours)

The post-baccalaureate Certificate in Archives and Records Management (ARM) serves studentswith undergraduate degrees in history or other disciplines. The ARM program is designed forstudents who wish to pursue careers in archives, records management, and in libraries withspecial collections units that include archives and records management divisions. ARM also provides professional development opportunities for support staff in Chicagoland archives andspecial collections units who need a credential in the field. Some of the credit hours earned inthis certificate may also be applied to the Master of Arts in History and the Master of Science inLibrary Science.

Required Courses (12 Credit Hours)

- LIS 5200 Archives and Records Administration
- LIS 5220 Electronic Records Management
- HIST 5312 Oral History Theory and Practice
- HIST 5352 The Chicago Experience

Two Elective Courses (6 Credit Hours)

- LIS 5570 Digitization and Digital Repositories
- LIS 5240 Curatorship of Historical Collections
- LIS 5970 Field Practicum
- HIST 5400 Historical Methods
- Another course approved by the department

A note about specialized accreditation for the M.S. LIS program: Chicago State University's Library and Information Science program has been granted candidacy status by the Committee on Accreditation of the American Library Association. Candidacy status is an indication that the Department of Information Studies' Library and Information Science program has voluntarily committed to participate in the ALA accreditation process and is actively seeking accreditation. Candidacy does not indicate that the program is accredited nor does it guarantee eventual accreditation of the program by ALA.

Technology and Performance Improvement Studies

The Department of Information Studies offers a Master of Science in Education degree inTechnology and Performance Improvement Studies. The purpose of the degree inTechnology and Performance Improvement Studies is to prepare professionals tosystematically evaluate situations and implement appropriate solutions in order toimprove performance at the level of the worker, work, workplace, or world. The programputs heavy emphasis on the integration of the theories and practices in the areas ofhuman performance technology (HPT), information and communications technology (ICT),and quality management and is aligned with the published standards of the InternationalSociety for Performance Improvement (ISPI). The program prepares students for positionssuch as managers and directors of information technology, performance improvementspecialists, educational technologists, trainers, eLearning specialists, consultants, networkadministrators, systems analysts, and a variety of other professions.

Students are also prepared to sit for external certifications from ISPI, CISCO, CompTIA,and the American Society of Quality.

The program consists of 33 credit hours. Each student is required to take six requiredcourses, four elective courses, complete the thesis/project requirements, and submit anelectronic portfolio.

Elective courses can be selected from any of the following areas, allowing each studentto create a program that meets their individual needs and professional goals.

- Performance Management
- Instructional Technology
- Training and Development
- Telecommunications
- Interdisciplinary Options

TPIS Specific Requirements (33 credit hours)
Required Courses (15 hours)

- TPS 5050 – Professional Practice and Portfolio I
- TPS 5060 – Fundamentals of Performance Improvement
- TPS 5070 – Informatics Essentials
- TPS 5080 – Quality Systems and Methods
- TPS 5090 – Research Methods in Technology and Performance Improvement
- TPS 5990 – Professional Practice and Portfolio II

Thesis/Project Requirements (6 hours)

- TPS 5980 – Thesis / Project

Students have the option to complete a thesis that requires 6 credit hours of TPS 5980 **or** complete a project that requires 3 credit hours of TPS 5980 and an additional threecredit hour elective course relating to the topic of their project.

Elective Course Options (12 hours)

- TPS 5010 – Ethics and Issues with Technology

- TPS 5110 – Project Management (Pending)
- TPS 5120 – Change Management (Pending)
- TPS 5130 – Performance Consulting (Pending)
- TPS 5210 – eLearning Strategies and Techniques
- TPS 5220 – Internet Publishing for Information Specialists
- TPS 5230 – Multimedia Production
- TPS 5240 – Advanced Multimedia Production
- TPS 5300 – Fundamentals of Instructional Design
- TPS 5310 – Development of Instructional Materials
- TPS 5500 – Computer Systems Technologies
- TPS 5510 – Networking Fundamentals
- TPS 5520 – Network Configuration II
- TPS 5530 – Network Practicum I
- TPS 5540 – Network Practicum II
- TPS 5550 – Network Administration Technologies
- TPS 5610 – Wireless Network Security and Design
- TPS 5620 – Cloud Computing and Virtualization
- TPS 5630 – Database Systems and Technologies
- TPS 5920 – Survey Research Methods
- CMAT 5310 – Dynamics of Persuasion
- CMAT 5304 – Organizational Communication
- CMAT 5315 – Advanced Speech
- ED 5312 – Teaching with Technology
- ELCF 5720 – Integrating Technology into the Curriculum
- ELCF 5900 – The Adult Learner
- ELCF 5410 – Proposal Development for Government and Private Funding
- ELCF 5130 – Human Relations and Leadership
- LIS 5060 – Organization of Information
- LIS 5640 – Human Information Behavior
- PSYC 5190 – Fundamentals of Statistical Methods
- PSYC 5830 – Advanced Educational Psychology
- Another course with approval of advisor

Certificate/Endorsement in Education Technology Specialist (24 hours)

The post-baccalaureate certificate in Education Technology Specialist for licensed teachers consists of eight requiredcourses at minimum. The certificate targets interested students who already have an Illinoisteaching certificate and are looking for endorsement as technology specialists. Students whopass the Illinois Technology Specialist (178) test and complete all required certificate course willobtain the CSU certificate and will be eligible to obtain the Technology Specialist endorsementfrom the State of Illinois.

The certificate is an excellent option for professionals teaching computer science and/or thoseserving as district technology experts for hardware and networking. It will be delivered to acohort in a combination of hybrid and online formats.

Students may pursue the certificate separately or as part of the Master of Science inTechnology and Education or Master of Science in Library and Information Science. Courses willbe planned for students to complete the requirements within one academic year.

Pre-requisites for admission:

- Possess a valid Illinois teaching certificate
- Basic technology literacy skills
- Consultation with program advisor to select appropriate course options
- Certificate Requirements:
- A minimum of eight courses
- Pass the Illinois Technology (178) test
- Maintain a minimum of B grade average in program courses with a maximum of two C
- grades.
- For those seeking middle-school endorsements, complete six credit hours ofprofessional education coursework (ED 5444 and PSYC 5210) in the middle schoolcurriculum. This requirement is waived for those already endorsed for middle school orthose who have completed the coursework.

Education Technology Specialist Required Coursework (24 credit hours)

-
- ED 5312 – Teaching with Technology (3 hours)
- TPS 5070 Informatics Essentials OR TPS 5500 Computer SystemsTechnologies (3 hours)
- TPS 5510Networking Fundamentals for Information Specialists (3 hours)
- TPS 5210eLearning Strategies (3 hours)
- TED 5495 Curriculum Development in Technology and Education (3 hours)
- TPS 5010Ethics for Technology Education Teachers (3 hours)
- TPS 5080Quality Methods for Instructional Technology (3 hours)
- TPS 5310Development of Teaching Aids (3 hours)

Certificate in Telecommunications Management (21 credit hours)

Telecommunication is a field that studies communications over distance using technological means. The purpose of the Telecommunications Management Post-Baccalaureate Certificate (TMC) is to provide an opportunity for students to gain knowledge and hands-on training in the area of Telecommunications. This certificate targets students who already have a bachelor's degree and an interest in exploring information and communications technology (ICT) career options.

Certificate completers will be prepared to apply for careers with software and Internet publishing companies, wireless communication providers, and businesses with ICT needs. This certificate is designed to prepare students for at least three industrial certification exams: A+, CCNA, Network+, Security+, and CWSP Wireless.

This certificate is associated with the Masters of Science in Technology and Performance Improvement Studies. Students interested in learning more about the field, may be interested in transferring to the Master's degree once the certificate is completed.

The post-baccalaureate Telecommunications Certificate program consists of five requiredcourses plus two elective courses. The concentration of the certificate is on network computingcourses. The certificate is designed to prepare students to test for at least three of the highlyrespected industrial certification examinations. These certificates are 1) A+, Cisco CertifiedNetwork Associate (CCNA), and either Network + or Wireless.

Telecommunications Management Certificate Requirements

- Complete all five required courses.
- Complete two elective courses from the associated list.
- Register for the Cisco Certified Network Associate (CCNA) examination within twomonths after finishing all four CCNA courses.
- Obtain the A+ Certificate within two months from finishing the A+ course.
- Obtain either Network+ or Certified Wireless Security Professional (CWSP).

Required Courses (15 Credit Hours)

- TPS 5510 Networking Fundamentals for Information Specialists
- TPS 5070 Informatics Essentials or TPS 5500/IT 5220: Computer SystemsTechnologies
- TPS 5520 Network Configuration II
- TPS 5530 Network Practicum I
- TPS 5540 Network Practicum II

Two Elective Courses (6 Credit Hours)

- TPS 5520 Network Administration Technologies
- TPS 5610 Wireless Networks Security and Design
- TPS 5220 Internet Publishing for Information Specialists
- TPS 5630 Database Systems and Technologies
- Any directed elective graduate course approved by advisor

Information Technology Certificate (Minor Concentration)

The purpose of the Information Technology Certificate (ITC) is to provide an opportunity for university undergraduate students to obtain a minor in area of information and communications technology (ICT). ITC students gain knowledge and hands-on training in the area of ICT through required courses in computer networking and informatics essentials and elective course(s) in wireless, security, and cloud computing.

This certificate offers students the opportunity to be introduced to ICT hands-on experience ICT. This, in turn, expands the employment horizon to include ICT career options. Certificate completers should be ready to apply for careers with software and Internet publishing companies, wireless communication providers, and businesses with ICT needs. This certificate is designed to prepare students to test for at least three industrial certification exams: A+, CCNA, Network+, Security+, and CWSP Wireless.

Curriculum Sequence (18 credit hours)
Core Courses:

- TPS 3500 Computer Systems Technologies
- TPS 4510 Networking Fundamentals
- TPS 4520 Network Configuration II
- TPS 4530 Network Practicum I
- TPS 4540 Network Practicum II

Elective Courses (Pick 1):

- TPS 4610 Wireless Networks
- TPS 4550 Network Administration Technologies
- TPS 4620 Cloud Computing and Virtualization
- TPS 4960 Special Topics: Network Security

Security and Intelligence Studies (SIS) Minor (24 credit hours)

The SIS minor is a 24-credit hour program consisting of three core courses (9 credit hours), four concentration-option courses (12 credit hours), and an internship (3 credit hours). The minor four concentration options are: Language+, Cybersecurity+, Geospatial Intelligence+, and Information Analytics+. Three of the options (Cybersecurity+, Geospatial Intelligence+, and Information Analytics+) can be completed completely online. The forth option (Languages+) is a combination of online and campus-based courses.

Students who select the Language+ option are required to take 6 credit hours of a foreign language (Arabic, Hausa, Kiswahili, or a foreign language deemed critical by the US intelligence community and approved by the CSU's IC CAE) at CSU and 6 credit hours of language-culture-immersion sequence courses taken abroad in a host country of the CINSER's Study Abroad program. Students who are native in one of the languages which are sponsored by CINSER can test out of one or both of the introductory language courses offered at CSU. The CINSER's Study Abroad program will involve an intensive 4-8 weeks of curricular and co-curricular activities are equivalent to two courses. The program is expected to immerse our students into the language/culture of the host country.

Students are required to complete the course work for the minor (24 credit hours) in two years. No more than one C grade is allowed in courses required for the minor and a D course grade must be repeated.

The minor is open to undergraduate students in good academic standing enrolled in a major field of study at CSU. Students must have successfully completed CSUs' qualifying examinations in English composition and Reading. Cumulative GPA of a 3.0 or higher is required for admission.

Security and Intelligence Studies (SIS) Minor
24 credit hours total required

Core Courses (9 credit hours)

- SIS 4050
- SIS 4060
- SIS 4070

Concentration Options (12 credit hours) - Choose One Option

Option 1- Language+

12 credit hours of a foreign language and cultural immersion experience (Arabic, Hausa, Kiswahili, or a foreign language approved by the CSU's IC CAE): 6 credit hours taken at CSU and 6 hours taken abroad as language-cultural-immersion sequence courses (Pass or Fail). Students who select not to participate in the Study Abroad program should choose 6 credit hours of two approved courses from the following options (2, 3, or 4).

Option 2 – Cybersecurity+
TPS 3500: Informatics Essentials

TPS 4600: Applied Cybersecurity
TPS 4605: Applied Ethical Hacking
1 course from Option 3 (Geospatial Intelligence+) or Option 4 (Information Analytics+)

Option 3 – Geospatial Intelligence+
GEOG 4805: GIS for Homeland Security
GEOG 4820: Environmental Remote Sensing
GEOG 4840: Advanced Remote Sensing
1 course from Option 2 (Cybersecurity+) or Option 4 (Information Analytics+)

Option 4 – Information Analytics+
LIS 4510: Database Design for Information Storage and Retrieval
LIS 4580: Introduction to Information Analytics
LIS 4590: Introduction to Information Visualization
1 course from Option 2 (Cybersecurity+) or Option 3 (Geospatial Intelligence+)

Required Internship (3 credit hours)

Policies and Student Code of Conduct

Institutional policies can be found at many levels. There are a few, basic policies at the program level, more extensive policies at the college level and highly extensive policies at the university level. Students are require to become aware of and to observe all university policies. You can locate policies in the following locations:

University Level Policies and Code of Conduct

Graduate University Academic Regulations are found on the university website - https://www.csu.edu/catalogs/graduate/Academic_Regulations.htm. Important policies on this site include the grading system, a definition of the unit of credit, the minimum grade point average, repeated courses policy, academic requirements for the master's degree, graduate advising, the time limit policy, absences, course withdrawal policies, student conduct policies, policies on the release of information, plagiarism, and student grievances.

Additional University graduate policies can be found in the *2016-2017 Graduate and Professional Studies Catalog* which is located here: https://www.csu.edu/catalogs/documents/Graduate_Catalog2016-17.pdf.

The Office of Student Affairs also maintains several student policies - https://www.csu.edu/dosa/dean/students/studentpolicies.htm. Import ant policies on this site include the anti-hazing policy, the sexual harassment and sexual misconduct policy, the drug and alcohol policy, the conceal and carry policy, the campus violence prevention policy, the student employee handbook and the student code of conduct.

The Student Code of Conduct can be found here: https://www.csu.edu/judicialaffairs/documents/Judicial_Hearing_Sexual_Assault_Procedures.pdf

The University Office of Records and Registration also has policies - http://www.csu.edu/recordsandregistration/policiesregulations.htm. Important policies include the FERPA compliance policy, the policy on military mobilization, the leave of absence policy, and policies related to Title IV.

College and Program Policies

College of Education (COE) policies can be found on COE's website - http://www.csu.edu/collegeofeducation/policies/. Important policies on this site include the abilities services policy, academic standing policy, accountability policy, the policy on background checks, the children in the classroom policy, the COE admissions policy the dress code policy, the edTPA policy, the electronic devices in the classroom policy, the email usage policy, the grievance policy and procedure, the laptop policy, the LiveText policy, the professional code of conduct policy, the admission to student teaching policy and the turnitin usage policy.

The College of Education Student Professional Code of Conduct is available here: https://www.csu.edu/collegeofeducation/policies/codeofconduct.htm

Course level policies are found on individual class syllabi. Course level policies include each faculty member's policy on late work, grading and incompletes.

Assessment

Each program at the university undergoes an annual assessment process. This assessment process evaluates how well the program accomplishes its program objectives and how well student meet their program's learning objectives. Assessments for each program occur according to a documented assessment plan for that program. Copies of each program assessment plan can be requested from the department.

Library and Information Science Program Objectives and Student Learning Outcomes

The program objectives for the Library and Information science program and its associated certificates and endorsements are as follows:

Program Objective 1 - Manage recordable information and knowledge.

Program Objective 2- Provide information and instructional services to address the diverse needs of users.

Program Objective 3 - Integrate and use current research to advance the LIS professions.

Program Objective 4 - Employ information technologies to enhance services.

Program Objective 5 - Provide specialized LIS services.

These objectives are met in part through the attainment of student learning outcomes. The student learning outcomes (SL) for the LIS program is as follows:

SL1 - Describe the social, political, ethical, cultural, economic and legal aspects of information creation, access, and use.

SL2 - Demonstrate the knowledge necessary to sustain the cycle of recordable information and knowledge in society.

SL3 - Assess user information needs in order to determine what is needed to improve service for constituents.

SL4 - Develop and implement information and instructional services to address specific needs.

SL5 - Demonstrate leadership in the provision of information and instructional services.

SL6 - Leverage the evolving body of knowledge from relevant fields to guide decisions and practices.

SL7 - Conduct original research that advances the field's knowledgebase and candidate's professional knowledge.

SL8 - Evaluate situations to determine the best technical solution.

SL9 - Effectively utilize technology to add value to the field.

SL10 - Assess how changing technologies impact the field.

SL11 - Demonstrate the knowledge and skills required to perform within his/her specific specialization.

For copies of the program assessment report and a summary of the achievement of student learning, please contact the program.

Technology and Performance Improvement Studies Program Objectives and Student Learning Outcomes

The program objectives for the Technology and Performance Improvement Studies program and its associated certificates and endorsement are as follows:

1. Recruit and retain a diverse student body by maintaining a flexible and supportive learning environment.
2. Graduate information professionals who demonstrate leadership in IS services, especially in urban and multicultural communities.
3. Advance and contribute to the field of IS through research, consulting, and continuing education efforts of students, graduates, and faculty.

The student learning outcomes (SLOs) are as follows:

SLO 1: Analyze the Environment	Students correctly identify the performance gap and their cause(s).
SLO 2: Design a Solution	Students design solutions utilizing appropriate technologies and strategies which addresses the identified performance gap
SLO 3: Implement Solution	Students develop materials necessary to implement a sustainable solution.
SLO 4: Evaluate Results of Solution	Students accurately evaluate the results of the solution.
SLO 5: Manage Change	Students capably manage the change process through the provision of consulting skills, systems thinking, and a focus on the end results.
SLO 6: Partner Effectively	Students effectively partner with group members and clients.
SLO 7: Present a Professional Presence	Students conduct themselves professionally (verbally, in writing, in demeanor, and presence)
SLO 8: Ground Decisions in Research	Students effectively utilize prior research and evidence as the foundation for proposed solutions.
SLO 9: Manage Information Technology	Students effectively troubleshoot, integrate and utilize technology in various environments.

For copies of the program assessment report and a summary of the achievement of student learning, please contact the program.

Course Listings

Library Information Science (LIS) Courses

LIS 1100 LITERACY AND LEARNING IN THE 21ST CENTURY (3)Using 21st century literacy and learning skills, students will collaboratively investigate,analyze, and propose potential solutions for problems facing our students, campus, andcommunity. This is a writing intensive course.Prerequisites: Completion of ENG 1230/1240, ENG 1270/1280 or consent of department.

LIS 4000 WORKSHOP ON LIBRARY MEDIA PROBLEMS (1-3)In-service course for teachers, librarians, media specialists, and administrators. Includesrecent trends and practices in library media centers. Not applicablefor master's degree sequence. May be repeated for a maximum of nine credit hours.Prerequisite: Consent of the department.

LIS 4020 MULTICULTURAL MATERIALS (3)A literature based approach to multicultural education using children's materials to depictexperiences that are common to all, relating the things that make each group special andexploring the effects of racism on an individuals.

LIS 4030 LIBRARY MATERIALS AND READING GUIDANCE FOR ELEMENTARY AND SECONDARYTEACHERS (3)focuses on children's and young adult materials-stories, poems, nonfiction, films,recordings, and their use in classrooms. Includes an examination of multicultural materials.

LIS 4510 DATABASE DESIGN FOR INFORMATION STORAGE AND RETRIEVAL (3)Provides introduction to database structure and design used in information storage andretrieval systems. Includes: components of a database, database system set up, structure andfunctions of relational databases, design of simple database and a relational database.Prerequisite(s): None

LIS 4580 INTRODUCTION TO INFORMATION ANALYTICS (3) introductory course and information analytics. Fundamental concepts and developinginference using standard analytic techniques. Application of descriptive analytics includingdata mining. Introduction to predictive analysis analytics including clustering, social networkanalysis, correlations, association rules in regression. Use of analytic technologies and applications. Prerequisite(s): None

LIS 4590 INTRODUCTION TO INFORMATION VISUALIZATION (3):Introductory course in data visualization. Essential principles and theories of visualization.Knowledge discovery and use of visual representation to describe, explore and effectivelycommunicate meaning and complex data sets. Use visualization technologies.Prerequisite(s): None

LIS 5000 MEDIA RESOURCES FOR TEACHERS (2)Audiovisual production and equipment operation; materials utilization for classroomteachers.

LIS 5050 FOUNDATIONS OF THE INFORMATION PROFESSIONS (3)Creation, dissemination, and diffusion of knowledge systems in society, and the related rolesand functions of information professionals and their institutions: libraries, archives, andmuseums among others. Provides a historical review of their organizational contexts, andthe philosophical and ethical values and problems which define LIS as a field of study.Besides beginning their socialization to the LIS professions, this course also introducesstudents

to graduate education, and CSU's MLS program.Prerequisites: Admission to the Graduate School and COE.

LIS 5060 ORGANIZATION OF INFORMATION (3)The concepts and methods for describing and organizing information and documents of alltypes and formats for identification and retrieval. Includes an examination and practice withstandard organizational tools such as classification systems, subject headings, MARC records,metadata, and others. Also covers indexing languages, vocabulary management andthesauri systems; human and machine techniques; and rationals for decisions about theorganization of materials in various contexts.

LIS 5070 INTRODUCTION TO REFERENCE SERVICES (3)Print and electronic information sources and services used to connect library users to theinformation they seek. Current principles and practices of reference service amongdifferent types of libraries and information centers, including school, academic, public, andspecial libraries are explored. Fifteen clock hours per term.

LIS 5080 INFORMATION TECHNOLOGY FOR LIBRARY AND INFORMATION AGENCIES (3)Introduction to key concepts of information technology as they pertain to instruction andinformation processing and management in library and information agencies. Emergingtechnologies such as mobile, social and digital media and their applications in formal andinformal education and information services. Practice exercises will include planning,implementation and evaluation of diverse service models. Cannot receive credit for MS5050: AV Technology in Libraries.

LIS 5090 RESEARCH METHODS IN LIBRARY AND INFORMATION SCIENCE (3)Research methods and their applications in Library and Information Science. Theoreticalprinciples and practical procedures for planning, designing, conducting, analyzing, andevaluating research using qualitative, quantitative and mixed methods are introduced.Students produce a research proposal, and also learn to be informed consumers and criticsof published Library and Information Science research.Prerequisites: LIS 5050

LIS 5095 LIBRARY LITERATURE AND RESEARCH (1)Evaluation of recent literature and research in the field of library and information science.Identification of needed literature to address specific research questions.Prerequisite: LIS 5090

LIS 5110 COMMUNICATIONS AND MEDIA CENTERS (3)History, theories and processes of communication and mass media as related to mediacenters.

LIS 5120 ADMINISTRATION OF MEDIA CENTERS (3)Survey of the problems in the management of media programs including formal methods ofplanning for resource based teaching. Methods of management and administration withemphasis on organizing staffing, financing, and use of evaluation standards. Designed toassist the student in developing an understanding of the application of management andadministrative philosophies in all kinds of libraries including those for patrons with specialneeds. Fifteen clock hours of field experience per term.

LIS 5130 THE CURRICULUM AND THE MEDIA CENTER (3)Study and evaluation of the library resource center and the library information specialist inmeeting curriculum needs.

LIS 5170 METHODS OF INSTRUCTION FOR SCHOOL LIBRARIANS (3)Provides candidates an authentic learning experience in a school library setting under thedirect supervision of a licensed school librarian and trained as a supervising teacher forschool librarian candidates. In placement sites approved by the

College of Education,candidates will be able to demonstrate their ability to develop teaching skills and strategiesfor improving K-12 academic performance using edTPA standards. Initial teaching licensurecandidates will actively engage in the development, delivery, and assessment of instructionaland administrative activities which support curricula and student achievement and mustcomplete 75 field hours.Prerequisites: LIS 5120 AND LIS 5130.

LIS 5180 PRACTICUM IN PRIMARY & SECONDARY SCHOOL LIBRARY MEDIA CENTERS (1-2)Appropriate clinical experience in elementary and secondary library media centers. Fortyfive to one hundred clock hours of field experience per term.

LIS 5185 LIBRARY INFORMATION SPECIALIST CERTIFICATION REVIEW (1)Preparation and practice for the Illinois State Library Information Specialist and theAssessment of Professional Teaching certification examinations for K-12 teachers.Prerequisites: Completion of all core courses in the School Library Information Specialistendorsement or MSLS program; enrollment required in semester before application forcertification (endorsement students) or graduation (MSLS students).

LIS 5190 STUDENT TEACHING AND SEMINAR (6)Off-campus placement in both an elementary and secondary school in the library mediacenter with both university and cooperating school supervision. Five full days for eightweeks at each level of instruction. Includes a seminar for the sixteen weeks.Prerequisite: Admission to the College of Education; completion of all coursework in theapproved program; and a passing score on the subject matter/content area certification testwithin the last five years.

LIS 5200 ARCHIVES AND RECORDS ADMINISTRATION (3)Evolution of the recordkeeping professions and development of theories, principles andmethods for identifying and administering records and recordkeeping systems. Emphasizesthe history and changing concept of a record and recordkeeping systems, due to changingtechnology and standards for intellectual asset management and organizationaleffectiveness. Outlines responsibilities of archivists and records managers in libraries,archives, museums and special collections in private, public and non-profit environments.

LIS 5210 ARRANGEMENT AND DESCRIPTION IN ARCHIVES (3)Development of the intellectual framework and critical evaluation skills necessary for thearrangement and description of archival collections.Prerequisites: LIS 5200 or LIMS 5021

LIS 5220 ELECTRONIC RECORDS MANAGEMENT (3)Introduction to electronic record keeping and preservation for purposes of organizationaleffectiveness, documentation and memory, and institutional accountability. Provides aholistic approach from records definitions and formats, to computerized informationsystems (hardware and software), and long-term preservation; with special attention tosocio-technical solutions, as well as behavioral, organizational and professional implicationsfor best practices in creating creditable management operations with sustainableinformation bases.Prerequisites: LIS 5050 or 5520 or 5600 and ED 5999/499.

LIS 5240 CURATORSHIP OF HISTORICAL COLLECTIONS (3)Administration course applied to curatorship of historical collections in archives, museums,and libraries and other cultural and information environments. Focuses on acquisitions in theantiquarian market, management of collections, readers services, and public events,especially exhibits. Includes a laboratory component of planning, designing,

mounting andevaluating an exhibit as a class project.Prerequisites: LIS 5050 or 5520 or 5600 and ED 5999/499.

LIS 5250 BIBLIO-FORENSICS (3)Introduction to diplomatics (Form criticism in formal communications and informationconveyance), Codicology (Manuscript Codex format analytics, including the basics ofPaleography), and Analytical Bibliography (printed books, including Typography). Coverstechniques in textual criticism and editing, historical research in primary sources, manuscriptcuratorship and rare book librarianship, advanced cataloging and preservation,documentation and formal communication studies. Includes documentary forensics forauthentication and appraisal, forgery detection in criminal science, and foundations forconservation and preservation.Prerequisites: LIS 5050 or 5520 or 5600 and ED 5999/499.

LIS 5260 HISTORY OF RECORDED INFORMATION AND TECHNOLOGIES (3)Research seminar on the history of recorded information and technologies, primarily in theWest but with some global context, writing, manuscripts, books, printing, multi-media,communications, electronic media, systems and networks from the alphabet to the Web. Anhistorical survey is provided, with opportunity for in-depth research using primary sources.The focus is on information resources, cultural artifacts, media, publishing and transmission,and historic and modern communications from the physical to the electronic and virtual.Prerequisites: LIS 5050, 5060, 5090 and 5640.

LIS 5270 HISTORY OF ARCHIVES, LIBRARIES AND MUSEUMS (3)Research seminar on the history of recorded information and technologies, primarily in theWest but with some global context, writing, manuscripts, books, printing, multi-media,communications, electronic media, systems and networks from the alphabet to the Web. Anhistorical survey is provided, with opportunity for in-depth research using primary sources.The focus is on information resources, cultural artifacts, media, publishing and transmission,and historic and modern communications from the physical to the electronic and virtual,while a companion course focuses on their organizational and institutional counterparts, archives, libraries, museums and information centers.

LIS 5300 THE ACADEMIC LIBRARY (3) The principles and practices for academic libraries in higher education and academicresearch institutions. An introduction to the organization, management functions,operations, technology applications and information services.

LIS 5350 THE PUBLIC LIBRARY (3)Examination of the role of the public library in society. Topics include public library history,current trends, organization and management, the role of the library board of trustees,funding sources including local, state and federal government, an assessment of publiclibrary clientele diversity, and a review of types of information resources, services andprogramming provided in public libraries.

LIS 5390 MANAGEMENT AND ORGANIZATION (3)A study of the organization and management of all types of libraries with emphasis on therole of the library/information professional as manager, the principles of planning,organizational change, decision making, and evaluation of current issues in personnel issuesand financial management.

LIS 5500 INFORMATION STORAGE AND RETRIEVAL (3)Theories, principles and practices of information storage and retrieval systems, especiallycomputer and information technology-based systems.

LIS 5510 DATABASE DESIGN FOR INFORMATION STORAGE AND RETRIEVAL (3)Introduction of database structure and design for information storage and retrieval systemsused by library and information services.Prerequisites: LIS 5060/LIMS 5320 and LIS 5070/LIMS 5360.

LIS 5520 CATALOGING AND CLASSIFICATION (3)Introduction to principles and methods of descriptive cataloging, subject headingsdetermination and classification focused primarily on monographs. Practical applications ofAnglo-American Cataloging Rules II, Dewey Decimal and Library of Congress ClassificationSystems, Sears and Library of Congress Subject Headings List; and basics of online cataloging.Ten clock hours of field experience per term.

LIS 5530 METADATA AND CATALOGING (3)Theories, principles, standards, historical development and practices of metadata ondescriptive cataloging of information resources. Includes brief traditional cataloging with anemphasis on metadata for organizing and describing various information resources in paper,electronic and digital formats. Includes 1 lab hour per week.Prerequisites: LIS 5060 or LIMS 5320

LIS 5540 COLLECTION DEVELOPMENT (3) An introduction to basic principles, practices, problems, and resources needed for selectionand acquisition of library information materials.

LIS 5560 LIBRARY AUTOMATION (3)Theoretical overview of library automation with a focus on major library automation systemssuch as Integrated Library Management System (ILS) and Online Public Access Cataloging(OPAC). Hands-on practical working exercises on client software which illustrate howinformation technology is applied to automate library operations such as library materialsacquisition, circulation, cataloging, reference services, and information literacy instruction.Also covers planning, implementing and evaluating library automation projects.Prerequisites: LIS 5050 or 5520 or 5600 and ED 5999/499.

LIS 5570 DIGITIZATION AND DIGITAL REPOSITORIES (3)Introduction to the design and management of a digital repository system for archives,material preservation, and repository management. Commonly used hardware andsoftware, and the transition from paper to electronic records and conversion processes suchas, scanning, digitizing, filing, data warehousing, and metadata.Prerequisites: LIS 5050 or 5520 or 5600 and ED 5999/499 or permission of the department.

LIS 5575 DIGITAL LIBRARY (3)Introduction to the principles, architecture, and practices of digital libraries. Includesdesign, management and delivery of digital information and services as well as metadatastandards.

LIS 5580 MEASUREMENT AND EVALUATION FOR LIBRARY AND INFORMATION SCIENCE (3)Theoretical knowledge and practical skills necessary to measure and evaluate library andinformation services.Prerequisites: LIS 5090/LIMS 5310 and LIS 5390/5280.

LIS 5585 INTRODUCTION TO INFORMATION ANALYTICS (3)Introductory course in information analytics. Fundamental concepts in developinginference using standard analytic techniques. Application of descriptive analytics includingdata mining. Introduction to predictive analytics including clustering, social networkanalysis, correlations, association rules and regression. Use of analytic technologies andapplications.

LIS 5590 INTRODUCTION TO INFORMATION VISUALIZATION (3): Introduction course and data visualization. Essential principles and theories of visualization.Knowledge discovery and use of visual

representation to describe it, explore and effectivelycommunicate meaning and complex data sets. Use of visualization technologies.Prerequisite(s): None

LIS 5600 REFERENCE SOURCES AND METHODS (3)Examination of reference resources and the reference process. Focuses on the disciplinaryliterature of social studies, humanities, and sciences.Prerequisite: LIS 5070

LIS 5610 THE LIBRARY IN SOCIETY (3)Study of the foundations of library and information sciences including an examination ofhistorical and current issues related to the role of libraries in society; and a review ofchanging trends.

LIS 5640 HUMAN INFORMATION BEHAVIOR (3)Examines human behavior as evidence of needs which require the seeking, searching, usingand valuing of information for decision making, planning and problem solving. Seeks todescribe and understand a variety of information processes drawing on relevant theoriesand models of cognitive and social psychology. Discusses implications for effectivediagnosis of needs and the design of user-centered information services.Prerequisites: LIS 5050 or consent of the department.

LIS 5670 INFORMATION LITERACY INSTRUCTION (3)Application of theories and models of instructional design, learning, pedagogy andassessment to the challenges of teaching in the information professions. Case studies of avariety of instructional situations in face and online distance learning in one-on-onereference instruction, staff development workshops, Information Literacy tutorials andonline workbook formats. Students will learn to apply a systematic process of assessinglearning needs, and designing, teaching and assessing outcomes of instructional modules ina variety of formats.Prerequisites: LIS 5050 and 5070 or consent of the department.

LIS 5700 HISTORY OF LITERATURE FOR CHILDREN AND YOUNG ADULTS (3)In-depth examination of the history of literature for children and young adults from the15th to the 20th century. Research the origin of nursery rhymes, fables, fairy tales, folktales,myths, legends, and tall tales from various countries.

LIS 5710 LITERATURE AND INFORMATION SERVICES FOR YOUNG ADULT (3)Study of literature, traditional and modern, from a young adult's point of view. Emphasis on the selection on the selection and evaluation of literature and resources for use by and withindividuals between the ages of 13 - 22. Ten observation hours are required.

LIS 5720 LITERATURE AND INFORMATION SERVICES FOR CHILDREN (3)Study of literature, traditional and modern, for children. Emphasis is on the selection andevaluation of literature and resources for use by and which individuals between the ages of3-12. Ten observation hours required.

LIS 5750 SEMINAR IN MULTICULTURAL MATERIALS (3)Collection development and use of multicultural materials. Types of multicultural materials,general and specific reference sources for children and adults.

LIS 5770 STORYTELLING AND FOLK LITERATURE (3)Materials, techniques, and practices in adapting folk and fairy tales, myths, legends, epics,picture books, realistic literature, historical literature to enhance storytelling presentationsin a school curriculum and non-school setting.

LIS 5900 SEMINAR IN TRENDS AND PROBLEMS IN LIBRARIANSHIP (3)Problems, issues, and trends (historical and current) in libraries and librarianship. Topics varyaccording to interests and needs of students.

LIS 5910 SEMINAR IN INTERNATIONAL AND COMPARATIVE LIBRARIANSHIP (3)Discussion of issues related to the professions in library and information science in the United States and other countries based upon lectures and readings. In-depth research andwriting involved.

LIS 5920 SURVEY OF TECHNOLOGY FOR LIBRARIES (3)An introduction to the use and the production of different media materials for thelibrary/media center, including new technologies. (Ten clock hours of field experience perterm.)

LIS 5950 INDEPENDENT STUDY (1-3)Independent study of an aspect of media or librarianship of interest to the student. (May berepeated with different content.)Prerequisite: Consent of the department.

LIS 5970 FIELD PRACTICUM /FIELD (3)Supervised experience in library media centers with appropriate written reports. Nine clockhours of field experience per term. May be repeated in a different setting.Prerequisite: Completion of twenty-eight credit hours in master's degree program andconsent of the department.

LIS 5980 SEMINAR IN RESEARCH (3)Guidance in researching and writing thesis and special reports related to librarianship. Hoursarranged.Prerequisites: LIS 5090

LIS 5990 MSLS CAPSTONE (1)Provides opportunities for students to reflect on, and "show case" their portfolio, theoutcome of the knowledge, skills, professional values and dispositions learned during theirMSLS program. Students use this opportunity to demonstrate mastery of all MSLS ProgramObjectives and Learning Outcomes.Prerequisites: Consent of department.

Security and Intelligence Studies (SIS)

SIS 4050 THE INTELLIGENCE COMMUNITY (3) History and evolution of the field of intelligence; functions capabilities, and organizational structures of U.S. and foreign intelligence agencies and their role in national security decision making; planning processes and strategies used by intelligence agencies to establish priorities and allocate resources to achieve their goals; appraisal of intelligence community activities.

SIS 4060 COLLECTION AND USE OF INTELLIGENCE INFORMATION (3) Various methods used by the intelligence community for collecting, processing, validating, and exploiting human and technical information for developing intelligence products; challenges and opportunities in coordinating information collection for intelligence; issues in information and intelligence sharing; future technologies and their potential impacts on collecting, sharing, and using intelligence information.

SIS 4070 INTELLIGENCE ANALYSIS (3) The intelligence process/cycle with emphasis on the role of intelligence analysis; critical thinking and conceptual competencies for intelligence analyst; analytic

standards and structured analytic techniques; hypothesis generation and data analysis and modeling; hypothesis testing; analytic writing and briefing.

SIS 4990 INTERNSHIP IN INTELLIGENCE (3) Minimum of 100 hours working in an intelligence agency or on an intelligence project in order to demonstrate intelligence knowledge, skills and abilities in a non-academic setting. The outcome of this experience will culminate in a portfolio outlining the student's knowledge and expertise relating to the field of Intelligence. Pre-requisites: SIS 4050, 4060 & 4070.

SIS 5050 THE INTELLIGENCE COMMUNITY (3) History and evolution of the field of intelligence; functions capabilities, and organizational structures of U.S. and foreign intelligence agencies and their role in national security decision making; planning processes and strategies used by intelligence agencies to establish priorities and allocate resources to achieve their goals; appraisal of intelligence community activities.

SIS 5060 COLLECTION AND USE OF INTELLIGENCE INFORMATION (3) Various methods used by the intelligence community for collecting, processing, validating, and exploiting human and technical information for developing intelligence products; challenges and opportunities in coordinating information collection for intelligence; issues in information and intelligence sharing; future technologies and their potential impacts on collecting, sharing, and using intelligence information.

SIS 5070 INTELLIGENCE ANALYSIS (3) The intelligence process/cycle with emphasis on the role of intelligence analysis; critical thinking and conceptual competencies for intelligence analyst; analytic standards and structured analytic techniques; hypothesis generation and data analysis and modeling; hypothesis testing; analytic writing and briefing.

SIS 5990 INTERNSHIP IN INTELLIGENCE (3) Minimum of 100 hours working in an intelligence agency or on an intelligence project in order to demonstrate intelligence knowledge, skills and abilities in a non-academic setting. The outcome of this experience will culminate in a portfolio outlining the student's knowledge and expertise relating to the field of Intelligence. Pre-requisites: SIS 5050, 5060 & 5070.

Technology and Performance Improvement Studies (TPS)

TPS 3500 COMPUTER SYSTEMS TECHNOLOGIES (3) Introduction to computer hardware and knowledge of computer hardware and software various troubleshooting techniques and hands-on real-world experience. Study of microprocessors as well as their architecture, hardware design and hardware/software interrelations are used to solve case studies with practical applications. Obtain knowledge of computer operating systems, install, manage, maintain, and troubleshoot software problems through real-world, hands-on assignments with various operating systems. Course content is enough to take the A+ Certificate Exam. Credit will not be given for both TPS 5500/IT 5220 and TPS 3500/IT 3220 or IT 2220.

TPS 4010 ETHICS AND ISSUES WITH TECHNOLOGY (3) Theoretical concepts and examination of ethics, morality, legal, social and management issues involved in the use of technology and information.

TPS 4110 PROJECT MANAGEMENT (3) This course develops a foundation of knowledge, concepts, and skills needed to successfully manage projects across industries, including planning, scheduling, controlling, resource allocation, and relationship management.

TPS 4210 E-LEARNING STRATEGIES AND TECHNIQUES (3) Strategies, tools, and techniques for designing and delivering instruction using eLearning technologies.

TPS 4300 FUNDAMENTALS OF INSTRUCTIONAL DESIGN (3) An introduction to contemporary processes and procedures in the design, validation and management of instruction.

TPS 4510 NETWORK CONFIGURATION I (3) Key concepts in building and configuring network devices. Course covers role played by each interconnected device. Course designed for those who deliver instruction. Additional course fee.

TPS 4520 NETWORK CONFIGURATION II FOR EDUCATORS (3) Techniques of managing, documenting and configuring interconnected networks and securing information about various network devices. Course designed for those who deliver instruction. Prerequisites: TPS 4510 or IT 2233/233

TPS 4530 NETWORKING PRACTICUM I FOR EDUCATORS (3) Practical applications in designing and configuring Local Area Networks (LAN); major project required. Course designed for those who deliver instruction. Prerequisites: TPS 4520 or IT 4333/333

TPS 4540 NETWORKING PRACTICUM II FOR EDUCATORS (3) Practical applications in designing and configuring Wide Area Networks (WAN); major project required. Course designed for those who deliver instruction. Prerequisites: TPS 4510 or IT 2233/233 and TPS 4520 or IT 4333/333

TPS 4550 NETWORK ADMINISTRATION TECHNOLOGIES (3) The purpose and types of communication technologies that link people, products, and resources via electronic means; the benefits that each networking technology offers education, business and government organizations; and administration and implementation issues. This course prepares students for the (Network +) industrial certificate.

TPS 4600 APPLIED CYBER SECURITY (3) Covers applied cybersecurity techniques and tools in the following areas: attacks and mitigation, security applications, risk assessment, disaster recovery and incident response, mobile devices security, and vulnerability assessment. Hands-on activities and labs. Case studies on intelligence and cybersecurity. Prepares for Security+ and the EC-Council Certified Ethical Hacker (CEH) certification exams. Credit will not be given for both TPA 4600 and TPS 5600. Prerequisites: TPS 3500

TPS 4605 APPLIED ETHICAL HACKING (3) Covers techniques for hacking applications, websites, database, hosts, and networks. This includes foot-printing, reconnaissance, scanning, enumeration, malware, social engineering, and sniffing. Tools for security hacking, penetration testing, and traffic analysis. Hands-on actives and labs. Case studies on intelligence and cybersecurity. Prepares for Security+ and the EC-Council Certified Ethical Hacker (CEH) certification exams. Credit will not be given for both TPA 4605 and TPS 5605. Prerequisites: TPS 4600

TPS 4610 WIRELESS NETWORKS SECURITY AND DESIGN (3) Necessary knowledge on wireless networks types and technologies, configuration procedures, threats, and security algorithms and protocols. Necessary skills needed to understand the challenges of implementing wireless networks in home and work environments. Credit will not be given for both TPS 4610 or IT 4350 and TPS 5610 or IT 5350.

TPS 4620 CLOUD COMPUTING AND VIRTUALIZATION (3) Provides an overview for the fundamentals of cloud computing and virtualization and describes the delivery model of IT resources including applications, computing and storage. Course covers how cloud computing services releases consumers

from owning the physical resources and paying for unused services. The concepts of Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS) are covered. Course is supported by hands-on labs which satisfy the VMware Certified Professional (VCP) certification. Prerequisite: Knowledge of IT is recommended.

TPS 4960 SPECIAL TOPICS (6) In depth study of specific topics related to the field of technology and performance improvement. May be repeated as topics change for a maximum of six (6) hours. Prerequisite(s): Consent of department.

TPS 5010 ETHICS AND ISSUES WITH TECHNOLOGY (3) Theoretical concepts and examination of ethics, morality, legal, social and management issues involved in the use of technology and information.

TPS 5050 PROFESSIONAL PRACTICE AND PORTFOLIO I (1) Introduction to the program and assessment process. Students begin the construction of their portfolio, research the history of performance improvement, investigate current trends and job opportunities, and study and apply effective team process techniques. Prerequisite: Consent of department.

TPS 5060 FUNDAMENTALS OF PERFORMANCE IMPROVEMENT (3) Study and application of the theories, strategies, and practices of the field of performance improvement.

TPS 5070 INFORMATICS ESSENTIALS (3) Introduction to essential knowledge of computer hardware and software for information professionals. The modules comprise computer assembly, basics of computer troubleshooting, fundamental operating system, portable computing, printers and scanners, network, security, safety procedures in computing, working in the informatics sector, and introduction to industrial certifications. Lecture and laboratory.

TPS 5080 QUALITY SYSTEMS AND METHODS (3) Study of quality methods, systems and tools and how they are utilized in quality improvement projects. Students will work in groups to conduct an independent quality assessment. Provides the background necessary to sit for the CQIA certification offered by the American Society for Quality.

TPS 5090 RESEARCH METHODS FOR TECHNOLOGY AND PERFORMANCE IMPROVEMENT (3) Research methods and their application in the fields of technology and performance improvement. Theoretical principals and practical procedures for planning, designing, conducting, analyzing, and evaluating research using qualitative, quantitative, and mixed methods are introduced. Students also learn to be better consumers and critics of published research. Prerequisites: Student must be accepted into the Masters of Science in Technology and Performance Improvement Studies Program prior to enrolling in TPS 5090. T

PS 5110 PROJECT MANAGEMENT (3) This course develops a foundation of knowledge, concepts, and skills needed to successfully manage projects across industries, including planning, scheduling, controlling, resource allocation, and relationship management.

TPS 5210 E-LEARNING STRATEGIES AND TECHNIQUES (3) Strategies, tools, and techniques for designing and delivering instruction using eLearning technologies.

TPS 5220 INTERNET PUBLISHING FOR INFORMATION SPECIALISTS (3) Internet publishing is vital for today's information and communications related careers. This course introduces Information Specialists to Web publishing, HTML, XHTML, and the latest web development tools. Students will become

proficient in the key aspects of the cyberspace publishing process. The course is foundational to move towards advanced web development courses. Students will design, develop, and release their own web sites.

TPS 5230 MULTIMEDIA PRODUCTION (3) Introduction to the design, production and use of multimedia instructional resources for school library media centers and libraries. Applications of communication theory and development of techniques and skills for selection, production and use of media. Hands-on training in the use of computers, desktop publishing and audio-visual recording technology will be undertaken within a cooperative learning environment. Prerequisites: LIS 5050 or LIMS 5340, LIS 5600 or LIMS 5610/454, LIS 5520 or LIMS 5020/402, ED 5999/499 or permission of department.

TPS 5240 ADVANCED MEDIA PRODUCTION (3) Advanced media production for library and classroom professionals, including web page design and distance learning utilizing traditional and cyberspace techniques. Prerequisites: LIS 5920 or consent of department.

TPS 5300 FUNDAMENTALS OF INSTRUCTIONAL DESIGN (3) An introduction to contemporary processes and procedures in the design, validation and management of instruction.

TPS 5310 DEVELOPMENT OF INSTRUCTIONAL MATERIALS (3) Design, construction, use and evaluation of instructional materials. 3 3 TPS 5500 COMPUTER SYSTEMS TECHNOLOGIES (3) Introduction to computer hardware and knowledge of computer hardware and software various troubleshooting techniques and hands-on real-world experience. Study of microprocessors as well as their architecture, hardware design and hardware/software interrelations are used to solve case studies with practical applications. Obtain knowledge of computer operating systems, install, manage, maintain, and troubleshoot software problems through real-world, hands-on assignments with various operating systems. Course content is enough to take the A+ Certificate Exam. Credit will not be given for both TPS 5500 or IT 5220 and TPS 3500 or IT 3220 or IT 2220.

TPS 5510 NETWORKING FUNDAMENTALS FOR INFORMATION SPECIALISTS (3) Course introduces information specialists to fundamental networking concepts and technologies. It is a laboratory and theory course that covers networking technologies and their implementation. The focus of this course is on learning the fundamentals of networking. Key topics: OSI Model, TCP/IP Mode, Networking Media (copper, fiber, wireless, etc.), Networking Devices (Types and Basic Configuration), Networking Protocols Overview, Common Networking Tools (Packet Tracer, Wireshark, etc.). Course is the first course to be taken in preparation to the CCNA exam.

TPS 5520 NETWORK CONFIGURATION II FOR EDUCATORS (3) Techniques of managing, documenting and configuring interconnected networks and securing information about various networking devices. Course designed for those who deliver instruction. Additional course fee. Prerequisites: TPS 4510 or IT 2233/233

TPS 5530 NETWORKING PRACTICUM I FOR EDUCATORS (3) Practical applications in designing and configuring Local Area Network (LAN); major project required. Course designed for those who deliver instruction. Prerequisites: TPS 4520 or IT 4333/333

TPS 5540 NETWORKING PRACTICUM II FOR EDUCATIONS (3) Practical applications in designing and configuring Wide Area Network (WAN); major project required. Course designed for those who deliver instruction. Prerequisites: TPS 4510 or IT 2233/233 and TPS 4520 or IT 4333/333

TPS 5550 NETWORK ADMINISTRATION TECHNOLOGIES (3) Purpose and types of communication that link people, products and resources via electronic means; the benefits that each networking technology offers education, and government organization; and administration and implementation issues.

TPS 5600 APPLIED CYBER SECURITY (3) Covers applied cybersecurity techniques and tools in the following areas: attacks and mitigation, security applications, risk assessment, disaster recovery and incident response, mobile devices security, and vulnerability assessment. Hands-on activities and labs. Research studies on intelligence and cybersecurity. Prepares for Security+ and the ECCouncil Certified Ethical Hacker (CEH) certification exams. Credit will not be given for both TPA 4600 and TPS 5600. Prerequisites: TPS 5070

TPS 5605 APPLIED ETHICAL HACKING (3) Covers techniques for hacking applications, websites, database, hosts, and networks. This includes foot-printing, reconnaissance, scanning, enumeration, malware, social engineering, and sniffing. Tools for security hacking, penetration testing, and traffic analysis. Hands-on actives and labs. Research studies on intelligence and cybersecurity. Prepares for Security+ and the EC-Council Certified Ethical Hacker (CEH) certification exams. Credit will not be given for both TPA 4605 and TPS 5605. Prerequisites: TPS 5600

TPS 5610 WIRELESS NETWORKS SECURITY AND DESIGN (3) Necessary knowledge on wireless networks types and technologies, configuration procedures, threats, and security algorithms and protocols. Necessary skills needed to understand the challenges of implementing wireless networks in home and work environments. Credit will not be given for both TPS 4610 or IT 4350 and TPS 5610 or IT 5350.

TPS 5620 CLOUD COMPUTING AND VIRTUALIZATION (3) Provides an overview for the fundamentals of cloud computing and virtualization and describes the delivery model of IT resources including applications, computing and storage. Course covers how cloud computing services releases consumers from owning the physical resources and paying for unused services. The concepts of Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS) are covered. Course is supported by hands-on labs which satisfy the VMware Certified Professional (VCP) certification. Prerequisite: Knowledge of IT is recommended.

TPS 5630 DATABASE SYSTEMS AND TECHNOLOGIES (3) Covers advanced database management, system design principles and techniques, and the essentials of database architecture, database management systems, and database systems. Principles and methodologies of database design, and techniques for database application development are also addressed.

TPS 5920 SURVEY RESEARCH METHODS (3) Study of the effective creation, use, and analysis of surveys; including when survey research is appropriate, methods and ethics regarding the administration of surveys, and the appropriate analysis of results. This course will introduce basic statistical concepts.

TPS 5960 SPECIAL TOPICS (1-3) In depth study of specific topics related to the field of technology and performance improvement. May be repeated as topics change. Prerequisite: Consent of department.

TPS 5970 INDEPENDENT STUDY (1-3) Independent study under the direction of a faculty member. May be repeated with different content. Prerequisite: Consent of department.

TPS 5980 THESIS/PROJECT SEMINAR (1-6) Individually supervised research as approved by the department. Course content varies and is designed around departmentally approved thesis, project or

paper. This is a variable credit course that will be repeated until research is accepted by the department. Prerequisite: Consent of department.

TPS 5990 PROFESSIONAL PRACTICE AND PORTFOLIO II (2) Prepares the student for graduation and introduction to the work force. Students will finalize their professional portfolio, create resumes, investigate potential career opportunities, and construct a professional development plan. Prerequisite: Consent of department.