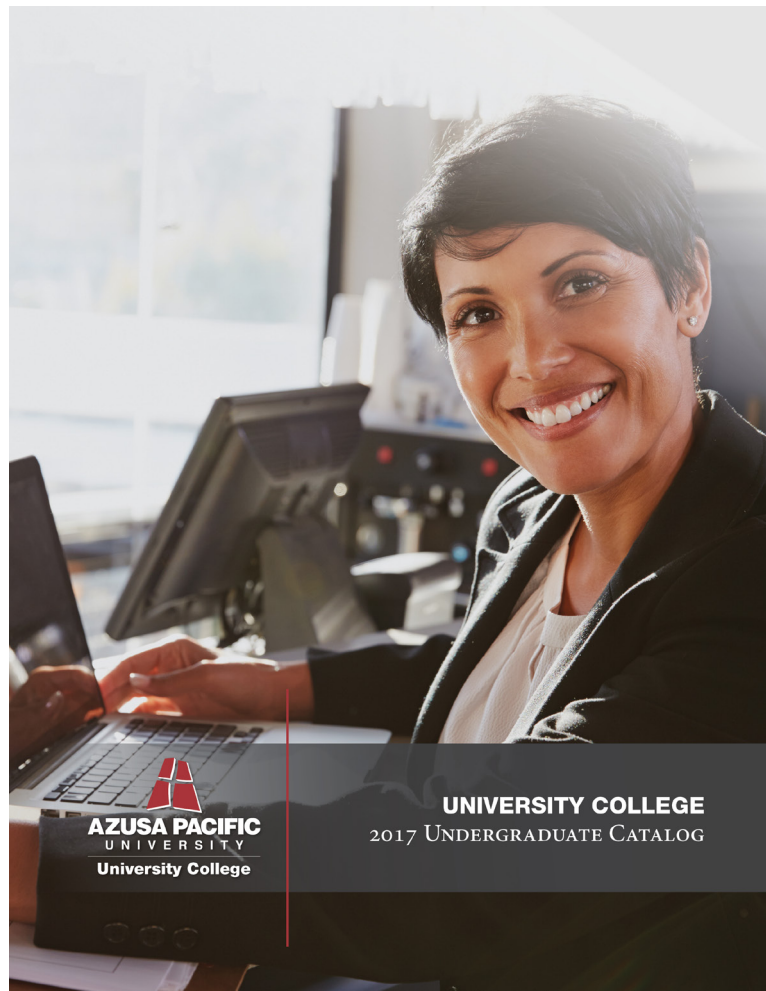




University  
College



**UNIVERSITY COLLEGE**  
2017 UNDERGRADUATE CATALOG

**ADDENDUM** - May 2017



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## Regional Centers

All references to **Regional Centers** has changed to **Regional Campuses**.

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## Evidence of Proficiency

**The Learning Enrichment Center is no longer offering the COMPASS Standardized test.**

There are no required pre-admission tests for applicants to UC. However, learners must present evidence of a math placement score in preparation for math courses. Such evidence may include an official college transcript verifying successful completion of the prerequisite course (Intermediate Algebra), an American College Testing (ACT) math score, or a Scholastic Aptitude Test (SAT I) math score. (Please refer to page 33 for a table of acceptable score results.) Official proof must be received by the Office of the Registrar before registering for math courses.

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## Refund Policy

### Military Tuition Assistance Return Policy

The DOD MOU requires that the university “have an institutional policy that returns any unearned TA funds on a proportional basis through at least the 60 percent portion of the period for which the funds were provided. TA funds are earned proportionally during an enrollment period, with unearned funds returned based upon when a student stops attending”. In accordance with that requirement, the university TA funds return policy is as follows:

Between the start date of a class and up to the Add/Drop date of that class (as defined by the academic calendar), the university will refund 100% of TA funds back to the respective military department if a student drops from a course for which TA funds were used to pay tuition. After the Add/Drop date and prior to the 61% point, “earned” TA funds are prorated on a per day basis. So, for example, if a student has \$100 in TA funds applied to their account for a class, and completes 14 days of a 60 day course (23%), then the student is considered to have earned \$23. The remaining \$77 would be returned. The student’s withdraw date is calculated in accordance with the institutions withdraw date definitions for federal R2T4 purposes. After the 60% point in a class, a student is considered to have “earned” all TA funds and no return is made.

\*The institutional policy for TA funds may be superseded by the return policies of military branches. So for example, if the university return policy determines that a student has earned \$50 of \$100 in TA funds, but the Army requests a full return of

\$100, the university will return the amount that is requested by the branch (\$100).

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## Adds/Drops

### Add/Drop Policy changes.

1. Learners who do not submit an assignment during Week 1 (online learners) or do not attend the first night of class (face-to-face learners), are administratively dropped and refunded 100 percent.
2. Learners who drop during Week 1 are refunded 100 percent. Drop requests must be received by 12:00 p.m. (noon PT) on Friday of Week 1.
3. Learners may add courses up until 12:00 p.m. (noon PT) on Friday of Week 1. However, learners are responsible for meeting the assigned due dates for all course work and are subject to the UC Late Work Policy.
4. Learners who withdraw after 12:00 p.m. (noon PT) on Friday of Week 1 receive no refund and a W grade is issued. All learners are subject to a proration of federal financial aid per the regulations for all federal aid. Withdrawal requests will be processed on the date received through Sunday of Week 5 (the last day of Week 5).
5. Learners requesting a drop after 12:00 p.m. (noon PT) on Friday Week 1 must submit a General Petition requesting to do so by 12:00 p.m. (noon PT) on Friday of Week 3 and all supporting documentation must be received by 12:00 p.m. (noon PT) on Friday of Week 7. Such petitions will only be considered due to extenuating circumstances and may result in the delay of financial aid disbursement. Late drop petitions will be processed by the end of the same session.

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## CLEP Chart – under Composition and Literature

**American Literature:** Score – 50, Units – 3, Course Equivalent – *Fulfills Literature requirement*

**English Literature:** Score – 50, Units – 3, Course Equivalent – *Fulfills Literature requirement*

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## Credit by Examination

Mathematics Requirements: Testing and Prerequisites

**The Learning Enrichment Center is no longer offering the COMPASS Standardized test.**

## Flexible Learning Pathways

**PLA credit may only be granted for lower division coursework in undergraduate programs at UC.** It should be noted that credit granted through “other credit opportunities” does not count toward UC residency requirements. Specific discipline and prerequisite requirements must be followed. Contact the appropriate Assistant Dean or designee if there is any question regarding credit transfer.

## Grievance Policy

Director of Student Success is **changed to Associate Vice President for Enrollment and Student Success.**

### Student Complaint Process

University College at Azusa Pacific University (UC) takes complaints and concerns regarding the institution very seriously. If you have a complaint regarding University College, the university has established a grievance process for students that you can find in the University College Undergraduate Catalog and University College Graduate Catalog under the heading, “Student Grievance.”

If you have a complaint not addressed by one of the grievance processes identified there, or if you have questions regarding the proper process for addressing your complaint, you may contact:

- The Associate Vice President for Enrollment and Student Success (626) 815-4050
- The Academic Dean (626) 804-2590
- The Office of the General Counsel at (626) 387-5763

These contacts will provide guidance on the process for addressing your particular issue.

If you believe that your complaint warrants further attention after you have exhausted all the steps and appeals outlined by the Associate Vice President of Enrollment and Student Success, Academic Dean, or the Office of the General Counsel, you may present your complaint to the WASC Senior College and University Commission (WSCUC) at [wascsenior.org/comments](http://wascsenior.org/comments) if your complaint is associated with the institution’s compliance with academic program quality and accrediting standards. WSCUC is the agency that accredits Azusa Pacific University’s academic programs.

If you believe that your complaint continues to warrant further consideration after exhausting the review of either WSCUC or administrators at Azusa Pacific University - University College, you may contact the Bureau for Private Postsecondary Education for review of a complaint.

The bureau may be contacted at 2535 Capitol Oaks Drive, Suite 400, Sacramento, CA 95833, [bppe.ca.gov](http://bppe.ca.gov), (916) 431-6924 (phone), and (916) 263-1897 (fax).

View [SHEEO's Student Complaint Information document](#) which provides students and prospective students with contact information for filing complaints with state officials or agencies that would handle any student complaints outside of California.

*Nothing in this disclosure should be construed to limit any right that you may have to take civil or criminal legal action to resolve your complaints. Azusa Pacific University - University College has provided this disclosure in compliance with the requirements of the Higher Education Act of 1965, as amended, as regulated in CFR 34, sections 600.9 (b) (3) and 668.43(b). If anything in this disclosure is out of date, please notify the Office of the General Counsel at Azusa Pacific University, 901 E. Alosta Ave., Azusa, CA 91702.*

## Requirements for the B.S. in Criminal Justice

In order to earn the Bachelor of Science in Criminal Justice degree, students must complete the following required courses while achieving a minimum cumulative grade-point average (GPA) of **2.0** in their major courses.

## Academic Programs (*new program- ONLINE*)

### Bachelor of Science in Information Systems

A successful information systems career requires both a broad professional knowledge base as well as a practical skill set. The online Bachelor of Science in Information Systems at University College equips learners with such resources while integrating a Christian worldview.

Students who major in information systems will develop professional competencies in managing information, computers, databases, systems analysis, and business principles related to information systems. With the opportunity to choose an emphasis area, students are able to pursue personal or specific career interests within the field of information systems.

Careers in the field of information systems include the areas of electronic data processing, database administration, information systems management, systems analysis, information security, and computer programming.

Graduates will also be equipped to continue their studies in graduate programs in information systems, information technology, or related fields.

## Purpose and Program Learning Outcomes (PLO) for the B.S. in Information Systems

**Purpose:** The B.S. in Information Systems degree equips learners with a foundational framework, practical skills, and ethical values essential for career success in the information systems field.

Graduates of the Bachelor of Science in Information Systems will:

**PLO 1:** Demonstrate the ability to integrate biblical concepts and principles with discipline specific topics and domains.

**PLO 2:** Develop professional competencies in information systems, including an understanding of the various components of the field.

**PLO 3:** Demonstrate effective written and oral communication skills.

**PLO 4:** Utilize appropriate research concepts and processes in the analysis of information systems issues, practices, and trends.

**PLO 5:** Demonstrate critical thinking and creative problem-solving skills.

**PLO 6:** Apply principles of Christian ethics in response to ethical dilemmas and issues within the field of Information Systems.

## Requirements for the B.S. in Information Systems

To earn the Bachelor of Science in Information Systems, learners must complete the following degree components:

<b>General Studies Core</b>	<b>28 units</b>
<b>Program Requisites</b>	<b>15 units</b>
<b>Major Requirements</b>	<b>45 units</b>
<b>Emphasis Area</b>	<b>15 units</b>
<b>Electives</b>	<b>17 units</b>
<b>Total:</b>	<b>120 units</b>

In order to earn the Bachelor of Science in Information Systems degree, students must complete the following required courses while achieving a minimum cumulative grade-point average (GPA) of **2.0** in their major courses:

### General Studies Core (28 units)

Please reference page 49 to view the coursework for the General Studies Core.

### Program Requisites (15 units)

- UC 101 Momentum: Success in the University (3)
- IS 150 Applied Math for Information Systems (3)
- IS 200 Introduction to Information Systems (3)
- IS 210 Hardware and Software (3)
- IS 220 Object-Oriented Programming (3)

### Major Requirements (45 units)

- IS 230 Introduction to Systems Analysis (3)
- MGT 200 Business in a Digital World (3)
- BSOL 308 Ethics and Worldviews in Business (3)
- IS 310 Server Management (3)
- IS 320 Business Communication Systems (3)
- IS 330 Network Administration (3)
- IS 340 Database Design and Administration (3)
- IS 400 Web Development (3)
- IS 410 Operating Systems Analysis and Design (3)
- IS 420 Enterprise Architecture (3)
- IS 440 Data Analysis and Warehousing (3)
- IS 450 Web and Mobile Applications (3)
- IS 490 Information Systems Capstone (3)
- MGT 380 Information Systems Management (3)
- MGT 390 Project and Change Management (3)

### Emphasis Area (15 units)

Note: Learners are encouraged to pursue graduate education in lieu of additional emphasis areas. If a learner wishes to have more than one emphasis area, he or she may do so with the permission of the appropriate Assistant Dean. Learners may have a maximum of two emphasis areas. The learner must meet all course requirements for both emphasis areas, in addition to all other graduation requirements for the degree. If the emphasis areas share courses, a learner must take a minimum of four more distinct courses to obtain the additional emphasis. When courses are not articulated in the emphasis, the additional courses are chosen by the appropriate Assistant Dean of that degree.

#### Recommended Emphasis Areas:

- Business Information Systems
- Cyber-Security
- Data Analytics
- General Information Systems
- Health Information Systems

View descriptions and coursework for all of University College emphasis areas on page 61.

### Electives (17 units)

Learners may choose from any course in the catalog. Learners may also earn up to 30 units of electives via Prior Learning Assessment (PLA).

### TOTAL: 120 units

## Emphasis Areas

**Forensics Emphasis** *is being removed from the catalog.*

### **NEW EMPHASES ADDED (BSIS)**

#### **Business Information Systems (15 Units)**

The Business Information Systems emphasis provides learners with specialized knowledge and skills related to the intersection between information systems and business environments. Learners are prepared to apply such knowledge and skills to a variety of business contexts and processes.

MGT 320 Financial Management and Markets (3)

MGT 350 Marketing and E-Commerce (3)

IS 460 Data Analytics and Business Intelligence (3)

IS 465 Business Information Systems and Ethics (3)

IS 470 Information Security and Compliance (3)

#### **Cyber-Security (15 Units)**

The Cyber-Security emphasis provides learners with specialized knowledge and skills related to information and system security, including best practices related to vulnerability assessment, data protection, compliance, and risk management. Learners are prepared for a variety of career opportunities within the information security industry.

FRN 350 Principles of Digital Forensics (3)

IS 350 Ethical Hacking (3)

IS 465 Business Information Systems and Ethics (3)

IS 470 Information Security and Compliance (3)

IS 495 Enterprise Risk Management (3)

#### **Data Analytics (15 Units)**

The Data Analytics emphasis provides learners with basic theories and applications of information technology and electronic evidence as they are related to both business efficiency and security planning. Learners are prepared for work in private, public, and nonprofit sectors in enhancing business operations and security.

MGT 350 Marketing and E-Commerce (3)

IS 460 Data Analytics and Business Intelligence (3)

IS 470 Information Security and Compliance (3)

IS 480 Advanced Data Management (3)

IS 485 Data Modeling and Architecture (3)

#### **General Information Systems (15 Units)**

The General Information Systems emphasis provides learners with the opportunity to combine electives from

Information Systems and related disciplines to customize their learning to meet their individual needs.

IS 470 Information Security and Compliance (3)

Four upper division elective courses in IS and/or a related discipline, approved by the Assistant Dean (12)

#### **Health Information Systems (15 Units)**

The Health Information emphasis offers courses that prepare learners for effective healthcare work as a member of a clinic, hospital, or laboratory setting. Classes in the emphasis offer both current theory and practice to enhance the professional skills of those interested in pursuing informatics.

IS 360 Introduction to Health Informatics (3)

HCM 320 Healthcare Financial Management (3)

HCM 400 Healthcare Information Systems Management (3)

IS 460 Data Analytics and Business Intelligence (3)

IS 470 Information Security and Compliance (3)

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**Paralegal Emphasis** *s being removed from the catalog*

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## Course Descriptions

#### **ACC410 Tax Accounting (3 units, 8 weeks)**

This course provides learners with an intensive study of the theory and principles of federal income tax law as it applies to individuals and flow-through and business entities including corporations, partnerships, estates, and trusts. Emphasis is placed on the theoretical framework and philosophy of the federal tax system as well as practical application and planning. The basic concepts of taxation associated with corporate, partnership, and S-corporation formation and operation are covered. The course also covers the tax audit process and professional tax preparer responsibilities. *Prerequisite: ACC 320 Intermediate Accounting II*

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**New BIO courses are being added.**

#### **BIO 230 Anatomy and Physiology I (4 units, 8 weeks)**

This course is intended for nursing and allied health students requiring a two-semester anatomy and physiology sequence. This course covers structure and function of cells and tissues, along with the anatomy and physiology of the integumentary, skeletal, nervous and muscular systems. This course includes both lecture and laboratory components.



### **BIO 240 Anatomy and Physiology II (4 units, 8 weeks)**

This course is intended for nursing and allied health students requiring a two-semester anatomy and physiology sequence. This course covers the continuation of body systems started in Anatomy and Physiology I and includes the study of the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. This course includes both lecture and laboratory components. *Prerequisite: BIO 230 Anatomy and Physiology I.*

### **BSOL 301 Dynamics of Group Behavior (3 units, 8 weeks)**

Learners examine group behavior and how group functioning affects organizational effectiveness. Emphasis is placed on the principles of group dynamics, problem solving, decision-making, diagnosis and resolution of conflict, and managing meetings.

### **BSOL 302 Adult Development and Learning Assessment (3 units, 8 weeks)**

Learners examine adult development and learning theory, including how adults think, act and behave in the workplace. Learners conduct assessments to be able to understand the adult development cycle, learning styles, and how temperaments impact the workplace. A strengths-based orientation toward workforce development is explored. Learners are also introduced to the process of identifying sources of life and work experience that might be applicable to earning college credit through “flexible learning pathways.”

### **BSOL 303 Introduction to Research Methodology (3 units, 8 weeks)**

Learners examine the purpose and value of research as a problem-solving tool in organizations. Approaches for identifying, analyzing, and researching organizational problems are emphasized as students select and review an appropriate organizational problem to apply data-driven decision making strategies. *(If taken as a pairing, corequisite BSOL 401)*

### **BSOL 304 Organizational Analysis (3 units, 8 weeks)**

Learners analyze how organizations function as complex systems, focusing on the interrelatedness of organizational purpose, structure, leadership, relationships, and rewards in an organization.

### **BSOL 307 Managerial Communication (3 units, 8 weeks)**

In this course, learners refine both written and oral presentation skills. Presenting ideas, reports, and proposals clearly and concisely is the primary goal of this course.

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### **BSOL 308 Ethics and Worldviews in Business (3 units, 8 weeks)**

In this course learners examine the significant impact ethics and worldviews have in the workplace through the lens of biblical perspective. Learners develop an integrated approach to business for the common good, to formulate responses about ethical and worldview aspects of current professional and social issues. Learners consider multiple ethical and worldview perspectives to gain an awareness of navigating a multi-faith oriented workplace.

### **BSOL 401 Data-Driven Decision Making I (3 units, 8 weeks)**

Learners are introduced to the principles of secondary research by creating a literature review related to an organizational problem. This consists of critically evaluating secondary research (validity, relevance, and credibility). Learners also will evaluate strategies for effectively organizing a literature review and synthesize research findings to inform data-driven decision making. *(If taken as a pairing, corequisite BSOL 303; if taken outside of a pairing, prerequisite is BSOL 303)*

### **BSOL 402 Data-Driven Decision Making II (3 units, 8 weeks)**

Learners will conduct secondary research using business databases in order to identify data that informs their organizational problem. Learners evaluate research findings and apply decision-making models in order to reach evidence-based conclusions. Learners effectively present research findings and rationale to stakeholders, proposing a data-driven solution to their organizational problem. *(If taken as a pairing, corequisite BSOL 408; if taken outside of a pairing, prerequisite is BSOL 408)*

### **BSOL 405 Leading Disruptive Innovation (3 units, 8 weeks)**

This course surveys the shifting trends and emerging issues in organizations in which leaders are challenged to innovate. Learners consider the implications of sustainability of an organization’s societal, environmental and financial footprint. Learners examine contemporary, relevant case studies to develop innovative solutions to lead actual or imagined organizations, focusing on proactive strategies.

### **BSOL 408 Introduction to Data Analysis (3 units, 8 weeks)**

Learners explore how quantitative and qualitative data analysis contributes to making decisions and solving organizational problems. Basic methods of summarizing, analyzing, and presenting secondary research data are explored. Learners interpret and communicate findings as a rationale for making organizationally impactful decisions. *(If taken as a pairing, corequisite BSOL 402)*

**BSOL 409 Diversity in the Workplace  
(3 units, 8 weeks)**

Learners examine the barriers that inhibit diversity from thriving in the workplace. As a result of learning more about key ethnic and social groups, learners will be better equipped to contribute to initiatives that promote diversity and inclusivity in the workplace. Learners will also appraise cultural intelligence and strategies for strengthening their leadership competency.

**BSOL 410 Principles of Management and Supervision (3 units, 8 weeks)**

Learners identify the actual roles managers play in complex organizations. This course prepares learners for managerial roles while helping them work more effectively with current managers. Management theory is critically evaluated for its usefulness in light of actual practices.

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**CRJU 490 Criminal Justice Capstone/Senior Project (3 units, 8 weeks)**

The capstone course for the Bachelor of Science in Criminal Justice gives learners the opportunity to demonstrate professional competency required in the field, effective written and oral communication skills, critical thinking and creative problem-solving skills in the context of a biblical worldview by applying the knowledge they have acquired throughout the program to a case study. Criminology, criminal law, corrections, ethics in criminal justice, constitutional law, juvenile justice and homeland security will be integrated into the course.

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**ENG 403 Language Principles and Processes  
(4 units, 8 weeks)**

This course introduces the student to the overall nature of language, and helps students to be aware of, identify, analyze, and develop strategies for dealing with the linguistic complexities found in a diverse society. The course includes an examination of language acquisition, development, and change as well as an analysis of the technical aspects and societal impact of language use. Students examine morphology, phonology, and the grammar systems of prescriptive English in order to make learning English not only easier, but interesting, to the student in the classroom.

**ENG 407 Composition: Theory and Practice  
(4 units, 8 weeks)**

This writing-intensive course examines the theory, practice, and literature of language arts pedagogy, with an emphasis on composition. Students engage in discussion and practice centered on writing theory and processes, and discuss the best practices for teaching writing to children in an elementary or secondary classroom.

**ENG 433 Children's Literature (4 units, 8 weeks)**

This course examines the purpose, nature, and power of literature for children, classic as well as contemporary, particularly as it relates to the role literature plays in child development at home and school. Emphases include the nature of literature for children, evaluating and selecting books, responses to literature, understanding and experiencing the genres of literature, reading aloud and writing about literature, as well as becoming conversant with major writers and illustrators of children's literature, with special attention to multicultural literature.

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**FRN 310, FRN 330, and FRN 410** *are being removed from the catalog*

**HCM 320 Healthcare Financial Management  
(3 units, 8 weeks)**

The course examines the complexities of reimbursement including changes in Medicare payment and other third party payers, the evolution and shape of managed care, related public programs, and public policy. Topics addressed include financial management, financial statement analysis, working capital management, present value analysis, capital budgeting, cost of capital, variance analysis, and financing techniques.

**HCM 400 Healthcare Information Systems Management (3 units, 8 weeks)**

The course studies the mission-supporting role, organization, and technological applications of health information management systems. The course reviews best practices and issues of planning, privacy, electronic health records, information security, e-health, community health networks and emergent technologies. Learners analyze how healthcare organizations utilize information to improve clinical and managerial decision-making. *Prerequisite: MGT 380 Information Systems Management*

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**NEW COURSE DESCRIPTIONS added for  
BS in Information Systems**

**IS 150 Applied Math for Information Systems (3)**

This course introduces learners to mathematical concepts that are frequently used in computer science and information systems. Learners analyze and solve mathematical problems related to information systems through the application of logic and critical thinking skills.

**IS 200 Introduction to Information Systems (3)**

This course provides learners with an overview of computer information systems including computer hardware, software, networking, programming, databases, the Internet, security, systems analysis, ethics, and problem solving using business applications.



**IS 210 Hardware and Software (3)**

This course provides learners with the knowledge and skills necessary for computer configuration, maintenance, repair and administration. The course covers hardware and software installation, systematic troubleshooting, and integrating peripherals. Learners also explore methodologies for installing system enhancements and upgrades.

**IS 220 Object-Oriented Programming (3)**

This course provides learners with the knowledge and skills necessary to design, code, and test computer applications. The course focuses on learning to design and write syntactically and logically correct code using an industry-relevant programming language and integrated development tools to develop business applications. Topics include object-oriented programming concepts, such as classes, objects, methods, interfaces, packages, inheritance, encapsulation, and polymorphism.

**IS 230 Introduction to Systems Analysis (3)**

This course introduces learners to systems analysis and design using unified modeling language (UML) including use cases, use case diagrams, domain models, interaction diagrams, and design class diagrams. Significant focus is given to understanding the system development life cycle and its role in systems analysis.

**IS 310 Server Management (3)**

This course introduces students to Microsoft Windows Server and enterprise networks. Students learn an overview of the Windows environment, installing and administering servers, domain management, and networking. Emphasis is placed on managing a Windows network, setting up user accounts and user access, and managing resources.

**IS 320 Business Communication Systems (3)**

This course provides learners with a survey of business data communications systems, including the features, operations, and limitations of a variety of communications and network systems. Topics covered include: fundamentals of digital communications, telecommunications systems, wired and wireless media, the Internet, and communication systems security. Learners gain practical knowledge and skills for interacting with and administering such systems.

**IS 330 Network Administration (3)**

This course is an introduction to basic concepts in the application, design, and implementation of computer and telecommunication networks. It includes an overview of various network topics including network architecture and protocols, network management, routing, security, hardware, and basic programming principles. Learners analyze common problems in network implementation, maintenance, and repair and management of network systems.

**IS 340 Database Design and Administration (3)**

Database design and administration are foundational components of all information systems. This course equips

learners to design and administer relational databases, emphasizing such topics as functional analysis, data modeling, conceptual and physical design, normalization, database security, and permission models. Learners also develop a basic understanding of SQL and its use in querying and managing databases.

**IS 350 Ethical Hacking (3)**

Learners explore the hacker mindset and work with various hacker tools. In today's rapidly changing security landscape, understanding the ethical application of hacker tools and techniques prepares learners to design and build practical information technology defenses for the purpose of safeguarding and protecting legitimate resources.

**IS 360 Introduction to Health Informatics (3)**

This course introduces learners to the history, key policies and principles, industry standards, and technological advances related to health informatics. Learners will develop a theoretical and conceptual framework of the design, development, and implementation of health information systems. Special focus will be given to the safeguarding and secure delivery of health information in the context of healthcare organizations and public health.

**IS 400 Web Development (3)**

This course studies website design, methods, principles, concepts, standards, and programming applications in conjunction with business practices and operations. Learners gain practical web-design, implementation, maintenance, and analysis skills. Learners evaluate websites and develop processes to improve business efficiency and effectiveness.

**IS 410 Operating Systems Analysis and Design (3)**

This course provides an introduction to the basic functions of modern operating systems including installation, configuration, administration, use, and analysis of leading operating systems. Learners develop practical skills, including the use of command language scripting, file systems, security, and user rights.

**IS 420 Enterprise Architecture (3)**

This course introduces learners to enterprise architecture, the system for relating business needs to IT structures, tools, guiding principles, and software development projects. Learners determine appropriate enterprise architecture models in response to a variety of business information needs, making recommendations for business processes, information, applications, and technology in order to reduce costs while improving performance, agility, and alignment of information systems to business goals.

**IS 440 Data Analysis and Warehousing (3)**

This course focuses on data analysis for business intelligence and data warehousing applications. Learners examine the specific data storage, retrieval, and analysis challenges introduced by big data, and how to optimize database and query design to overcome these challenges. Particular focus

is given to the development of efficient, robust algorithms designed for large datasets. *Prerequisite: IS 340 Database Design and Administration.*

### **IS 450 Web and Mobile Applications (3)**

This course studies the concepts, trends, and roles of mobile computing in business. Topics include mobile development platform, framework, and tools for designing, constructing, and testing mobile applications.

### **IS 460 Data Analytics and Business Intelligence (3)**

The course examines how data analytics and business intelligence technologies can inform decision making across a variety of business sectors. These tools provide business leaders with the information they need to shape business strategies, corporate policies, and performance optimization. Special focus is given to business intelligence concepts, tools, and applications, and the use of data warehouse for business reporting and online analytical processing, for creating visualizations and dashboards, and for business performance management and descriptive analytics. *Prerequisite: IS 340 Database Design and Administration.*

### **IS 465 Business Information Systems and Ethics (3)**

This course explores ethical issues related to information systems in the context of business, including information privacy, intellectual property rights, malicious technologies, workplace access to inappropriate content, and ethical codes of conduct. Learners are presented with ethical theory and decision-making models to help them determine appropriate responses to ethical issues.

### **IS 470 Information Security and Compliance (3)**

This course introduces learners to the basics of information security in the workplace with an emphasis on the role of compliance with regulatory bodies. Compliance requirements in all areas of information technology continue to grow. Learners explore the analysis and design required to meet these evolving demands.

### **IS 480 Advanced Data Management (3)**

At the heart of data management is the identification of clear business information needs and the data structures required to store and retrieve such data. This course helps learners clarify business information needs, practice data cleaning methods, and formulate robust algorithms for analyzing data. Learners also explore methods for optimizing data structures, indices, queries, and stored procedures for rapid data retrieval. *Prerequisite: IS 340 Database Design and Administration.*

### **IS 485 Data Modeling and Architecture (3)**

This course examines various data modeling and architecture options available to database administrators and helps learners identify the best options for particular business information needs, taking into consideration complex factors such as performance, scalability, adaptability and available database platforms.

### **IS 490 Information Systems Capstone (3)**

This course comprises a cumulative information systems project in which learners apply business and information systems knowledge and skills acquired in the major and emphasis courses to a real-world information systems project. The capstone project includes an information systems needs analysis, research, design of a solution, and presentation of a proposal to key business stakeholders. *Prerequisites: the completion of all BSIS core courses and 9 units in emphasis area or consent of the Assistant Dean.*

### **IS 495 Enterprise Risk Management (3)**

Enterprise risk management (ERM) is the process of planning, organizing, leading, and controlling the activities of an organization in order to minimize the effects of risk on an organization's capital and earnings. Learners will acquire the skills necessary to successfully identify and analyze risks, develop risk management processes and remediation plans, and explore the different models used in the risk management practice.

### **MGT 200 Business in a Digital World (3)**

In this course learners explore how the growth of digital communication and information sharing has fundamentally changed the nature of business in the 21st Century. Topics include the growth of the Internet, social media, online retailing, business intelligence, and the security and use of customer data.

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### **MGT 390 Project and Change Management (3 units, 8 weeks)**

This course examines the process and practice of project and change management of information systems and software applications. Learners work through the process of defining, planning, implementing and delivering a change project. Learners develop cost estimates, time requirements, quality controls, team assignments, training schedules, documentation and potential risks associated with the change.

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**PARA 310, PARA 330, PARA 350, PARA 410, and PARA 430** are being removed from the catalog