MASTER ¶ AND POST-BACHELOR ¶ CERTIFICATE PROGRAM COURSE DESCRIPTIONS

Graduate Course Prefix Abbreviation

ACCT	Accounting	FINS	Finance
CAPS	Capstone	INST	Information Systems
CMSC	Computer Science	MCYS	Management of Cyber Security
CYBR	Cyber Security	MGMT	Management
DATA	Data - Theory & Applications	MKTG	Marketing
ECON	Economics	MSAE	System and Application Engineering
EITE	Educational/Instructional Technology	QANT	Quantitative Studies
		TECH	Technology

All course codes are preceded by four-character abbreviations that are used to represent the area of study. These areas of study abbreviations are followed by three numbers that are used to qualify the level of study. All 8 R 1 $ 0 D V W H U ' H J U H H courses are within the range of 500 ±599, except the

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Program /Core Courses

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EITE 510 Principles of Learning/Teaching Strategies and Methods 4.5 credit hours
In this course, students will review the principles of teaching methods and strategies that motivate learning. Students will investigate, interpret, and apply techniques used in effective classroom knowledge acquisition and management decision making. A range of approaches and their effectiveness will be explored, including individual student and group techniques and instructor-driven methods.

EITE 520 Transformational Education/Instruction 4.5 credit hours
This course builds an understanding of innovative practices that transform instruction by utilizing learner-centered practices and technology in a range of educational environments. Applications of available digital tools and media for various levels of learners are examined. The impact of the integration of innovative practices with current methods is explored.

EITE 530 Contemporary Classroom Approaches 4.5 credit hours
In this course, students demonstrate the application of contemporary classroom theory to knowledge management decision making. Modern tools and techniques, including learner-centered and digital resources, to address a range of challenges and formulate solutions are presented. Students will investigate and evaluate best practices for various classroom settings.

EITE 540 Integrating Technology in the Classroom 4.5 credit hours
Students will develop an understanding of how to integrate technology in specific classrooms and learning environments. Applications and techniques to motivate learners and to collect, measure, and analyze learner outcomes are investigated. Students will explore practical methods to engage learners who are immersed in a technology- and media-driven society.

EITE 550 Ethical Considerations for Educational / Instructional Technologies
4.5 credit hours
This course emphasizes the impact of technology on the values and behaviors of learners and

INST 574 Management I nformation Systems 4.5 credit hours
In this course, students gain an overview of information systems in the business world. Students will study hardware; software; databases; telecommunication systems; the development and strategic use of information systems; and the social, legal, and ethical issues involved with information systems.

MKTG 571 Marketing Management 4.5 credit hours
In this course, students will develop an understanding of the marketing resources, activities and personnel required to identify customer requirements for products and services. Students will analyze marketing opportunities through new product or service development, strategic planning, electronic commerce, product strategies, and product mix. Students will also exa2 re 1 ents will al

Elective Courses

CMSC 589 Java Programming 4.5 credit hours
In this course, students advance their

DATA 522 Solving Big Data Problems ±Data Analytics 4.5 Credit Hours
Prerequisite: DATA521. In this course, students will learn the analytical aspects of solving problems involving large data sets and gain an appreciation of the fundamentals of Data Science. The course will cover topics in statistical modeling, parallel processing and machine learning and applications of graph theory to problems involving large sets.

DATA 523 Big Data Technologies 4.5 Credit Hours
Prerequisite: DATA521. In this course, students will explore various technical aspects involved when solving big data problems, challenges posed by the ability to scale, and the constraints of today's computing platforms and algorithms. This course provides general knowledge of the technologies used in big data solutions. Students will review the Hadoop ecosystem, and how to implement big data architecture stack and load large sets, and apply algorithms using software code to define analytical problem statements.

FINS 540 Investment Portfolio Management 4.5 credit hours
Prerequisite: FINS 520. Students will review principles of investment used to develop financial plans for individuals and businesses. Through analyses of financial forecasting in a dynamic environment, students will be prepared to create limited risk solutions. They will also examine accountability of financial managers to their clients in a range of markets, including volatile markets.

FINS 550 Case Studi es in Financial Analysis and Reporting 4.5 credit hours
Prerequisite: FINS 520. Students will examine contemporary case studies in which financial solutions were developed for private and public companies to exemplary corporate and government organizations. They will analyze the effectiveness of the solutions and work in teams to evaluate simulated outcomes created by changing several key variables, including non-financial factors.

INST 518 Technology and Operations Management 4.5 credit hours
In this course, students increase their perspective of the technical link between information systems and business operations. Students will examine management issues including managing productivity, production planning, forecasting, and scheduling, inventory management including just-in time systems, and overall project management.

INST 522 Database Design and Processing 4.5 credit hours
In this course, students gain a solid understanding of database system concepts and architecture; data models, schema, and instances; data independence and database language and interface; data definition languages; and overall database structures. Students will explore relational data model concepts, integrity constraints, data manipulation, functional dependencies, transaction processing concepts and concurrency control techniques.

INST 523 Database Administration 4.5 credit hours
Prerequisite: INST522. In this course, students will be introduced to a broad range of topics related to administering databases. Students will explore database concepts such as data modeling; database design and creation; database performance and tuning; and database maintenance, backup, restoration, and recovery. Students will also examine the role and responsibilities of the database administrator, including the use of various DBA tools. Students will study programming in SQL, and Oracle database solutions will be employed to demonstrate concepts and for student exercises.

INST 524 Big Data and the Enterprise 4.5 credit hours
In this course, students will explore big data and its implications in solving business problems. Students will be exposed to IBM analytic tools used for unlocking big data and examining it at rest and in motion. Lastly, students will evaluate requirements for governance and integration of big data in the enterprise.

INST 525 Business Intelligence and Data Warehousing 4.5 credit hours
Prerequisite: INST522. In this course, students will gain an overview of data warehousing and business intelligence, including the role of data in an organization, and the need for developing a data warehouse and business intelligence strategy. Students will explore topics such as components of data warehouse architecture, enterprise data models, data governance, data marts, and data quality. Topics include components and different alternatives involved in building a data warehouse, and how to weigh the advantages and disadvantages in choosing one option over another.

INST 540 Principles of Information Security 4.5 credit hours
In this course, students explore the domains of information security as established by the (ISC International Information System Security Certification Consortium) Common Body of Knowledge (CBK). Students will use the domains of CBK as a framework to critically analyze security awareness issues and evaluate best practices in implementing security systems within the enterprise.

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MGMT 576 Teamwork and Project Management 4.5 credit hours
In this course, students will improve their understanding of the dynamics of team development and interpersonal problem solving. Students will learn to frame the project and team, identify the appropriate project management approach, and develop strategies for accelerating the development of true team effectiveness. Students will gain an understanding of the key technical competencies of project management, as well as the critical dimensions of project scope, time, and cost management. Students will explore a variety of best practices including anticipating, preventing, and overcoming barriers to project success.

MSAE 530 Cloud and Mobile Computing 4.5 Credit Hours
In this course students will examine the basic architecture of cloud and mobile computing, as well as the business and technical models that support cloud and mobile computing deployment. Students will investigate the issues and practices that are associated with mobile cloud computing, as well as their applications in the green environment, sensor industry, and artificial intelligence (AI) development. Topics will also include development and practice in security, privacy, trust, and social areas relevant to mobile cloud computing.

MSAE 550 Emerging Systems and Technologies 4.5 Credit Hours
This course will provide students with a broad view of the latest developments and advances in the information technology (IT) industry. Current advanced topics include big data analytics and algorithms, new development in artificial intelligence (AI), deep learning, drone development, general purpose GPU development, and block chain technology based on up