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| REQUIREMENTS | BADGE REQUIREMENTS |
| **Admission Requirements**  Candidates must satisfy all of the following:  1. **Grade point average of 3.0** (B) from all undergraduate coursework. Those with a GPA below 3.0 must contact the College of Computing for advising.  2. **Resume** detailing work experiences and accomplishments.  3. **Personal video:** submit a link to a video (no more than three minutes) where you briefly describe your career goals, background experiences, and previous projects, including an explanation of how this program will help achieve educational and professional objectives. Please be sure the video is available to people without needing to log in, and for at least a 30-day period after submission of your application.  4. **Recommendations:** submit acceptable recommendations from at least two individuals attesting to the likelihood of the candidate’s successful completion of the program.  **Degree Requirements**  All candidates for the degree must complete 33 credits as indicated:  **Core Requirements (9 credits)**  Students are required to complete one course in three of the following categories:  **Data Engineering:**  CIS 660 Data Engineering\*  CIS 673 Principles of Database Design\*  **Networking:**  CIS 654 Computer Networking\*  CIS 656 Distributed Systems\*  **Project Management:**  CIS 641 Management of Software Development\*  CIS 642 IS Project Management\*  **Software Engineering:**  CIS 518 Secure Software Engineering\*  CIS 612 Requirements Specification\*  CIS 613 Software Testing\*  CIS 622 Software Design Methodologies  **Elective Requirements (9 - 15 credits)**  Any 500- or 600-level CIS course can be used as an elective toward the M.S. ACS degree, except CIS 500, 511, or 512.  **Capstone Requirements (3 or 6 credits)**  Each candidate must complete either the project course or the thesis two-course option.  CIS 693 Master's Project  **OR**  CIS 690 Thesis Research Preparation **AND**  CIS 695 Master’s Thesis  **Badge Requirements (6-9 credits)**  All candidates are required to complete at least one badge.  \*overlaps with 1 or more badge requirements | **Biomedical Informatics**:  CIS 661 Introduction to Medical and Bioinformatics  CIS 665 Clinical Information Systems  **AND** one of the following:  CIS 635 Knowledge Discovery and Data Mining  CIS 660 Data Engineering\*  CIS 671 Information Visualization  **Cybersecurity**:  CIS 615 Information Security Principles  **AND** two of the following:  CIS 518 Secure Software Engineering\*  CIS 553 Ethical Hacking  CIS 555 Applied Cryptography  CIS 616 Data Security and Privacy  CIS 617 Digital Forensics and Investigations  CIS 619 Data Analytics for Cybersecurity  **Data Analytics**:  CIS 635 Knowledge Discovery and Data Mining  CIS 671 Information Visualization  **AND** one of the following:  CIS 677 High-Performance Computing  CIS 678 Machine Learning  **Database Management:**  CIS 673 Principles of Database Design  **AND** two of the following:  CIS 635 Knowledge Discovery and Data Mining  CIS 660 Data Engineering\*  CIS 665 Clinical Information Systems  CIS 671 Information Visualization  CIS 676 Database Management Systems  CIS 679 Special Topics in Database Management    **Distributed Computing**:  CIS 654 Computer Networking\*  CIS 656 Distributed Systems\*  CIS 658 Web Architectures  **Information Systems Management**:  CIS 641 Management of Software Development\*  CIS 642 Software Product Management\*  CIS 643 Information Systems Policy  **Software Design and Development**:  CIS 611 Introduction to Software Engineering  **OR** CIS 641 Management of Software Development\*  CIS 657 Mobile Application Development  **OR** CIS 658 Web Architectures  CIS 660 Data Engineering  **OR** CIS 673 Principles of Database Design\*  **Software Engineering**:  Choose threeof the following:  CIS 518 Secure Software Engineering\*  CIS 611 Introduction to Software Engineering  CIS 612 Requirements Specification\*  CIS 613 Software Testing\*  **Web and Mobile Computing**:  CIS 657 Mobile Application Development  CIS 658 Web Architectures  \*overlaps with 1 or more core requirements |