Major: Civil Engineering  
Concentration: Geotechnical/Structural  
Degree: MS in Civil Engineering

Major Requirements

MSCE Geotechnical/Structural Requirements: (30 credit hours)
The Civil Engineering master's degree consists of a minimum of 30.0 credit hours. Students select from one of two degree options: (1) thesis or (2) project.

**All programs of study must be approved by the Graduate Director prior to the end of the second semester of graduate study.**

Conditions for the degree:

1. All coursework must be completed with a grade of ‘B’ or better.
2. A GPA of 3.0 must be maintained. If the GPA falls below 3.0, probation will result.
3. At least 18.0 hours of coursework at the 6000-level must be applied toward the degree.
4. A maximum of 12.0 hours at the 5000-level can be applied toward the degree.
5. No more than 6.0 hours of transfer coursework can be applied to the degree, with the following exception:
   A student may transfer up to 12.0 hours from the Florida Engineering Education Delivery System (FEEDS) provided the total of FEEDS courses and other transfer courses does not exceed 12.0 hours.

EGN6456 3 Advanced Engineering Analysis  
CES5105 3 Advanced Mechanics  
SELECT. one of the following:
   - EML 5508 Finite Element Modeling/Analysis  
   - CES 6116 Finite Element

RESEARCH Thesis or Project option --
Select one of two research options:
- Project Option: Select 3.0 hrs of CGN 6974 CE Project.

SELECT CE Electives --
Civil Engineering Electives: select a minimum of 12 hrs from these courses:
   - CEG 5304 Applied Engineering Geology  
   - CEG 6016 Advanced Geotechnical Engineering  
   - CEG 6018 Applied Computational Geotechnics  
   - CEG 6118 Advanced Foundation Engineering  
   - CEG 6320 Drilled Shafts in Rock  
   - CEG 6515 Earth Retaining Sys/Slope Stability  
   - CEG 6806 Ground and Site Improvement  
   - CES 5326 Bridge Engineering  
   - CES 5706 Advanced Reinforced Concrete  
   - CES 6144 Advanced Structural Analysis  
   - CES 6715 Prestressed Concrete
- CGN 5932 Special Topics in Civil Engineering (v. 1-3)
- CGN 6933 Special Topics in Civil Engineering (v. 1-3)

Other Electives: Select sufficient credits at the graduate level to earn a total of 30.0 hours.
- Thesis option: Select 3 hrs of additional CE electives
- Project option: Select 6 hrs of additional CE electives

Civil engineering elective courses may also be selected from FEEDS within the limitations discussed above, and must be approved by the Graduate Advisor.
(Note: A maximum of 12 hrs at the 5000 level can be applied to the program.)
Major: Computer & Info Sciences  
Concentration: Software Engineering  
Degree: Master of Science

Major Requirements (36 credits)  
Software Engineering Requirements: (36.0 credit hours)

Conditions for the Masters:

- 1. All courses applied to the degree must be completed with a grade of ‘B’ or better.
- 2. A minimum of 21 credit hours must be taken at the 6000-level in the School of Computing.
- 3. No more than 6 credit hours taken outside of the School can be included in the degree.
- 4. No more than 15 credit hours of 5000-level courses can be applied to the degree.
- 5. No more than 6 credit hours of Directed Independent Study can be applied to the degree.
- 6. GPA of 3.0 or better must be maintained. A GPA below 3.0 or a grade of ‘C’ in three courses results in automatic probation.
- 7. A student on probation who subsequently receives a ‘C’ is subject to suspension. Receipt of a grade below ‘C’ results in immediate eligibility for suspension.

Softw Engr - Core Reqs

Core Requirement: (4 courses - 12.0 hrs)

- CEN6016 3 Engineering of Software I
- CEN6017 3 Engineering of Software II
- CEN6070 3 Software Quality Assur & Test
- COP6711 3 Database Engineering/Administr

Soft Engr - Major + Practicum

Major Requirements & SE Practicum: (4 courses - 12.0 hrs)

- CEN6940 3 Software Engineering Practicum

SELECT 3 THREE:

- CAP6100 Interface Design/Implementation
- CDA6011 Web Engineering
- CDA6506 Network Arch & Client/Server Computing
- CIS6302 Distributed/Internet Systems
- CIS6101 Software Processes & Metrics
- CIS6516 Managing Software Projects/Personnel
- COP6735 Developmnts in Database Structures

CS & SE - Research + Electives
Thesis and Major Electives: (12.0 hrs)
Enroll in the Thesis course CIS 6970 for at least two successive terms. In order to enroll in the Thesis course, the student must obtain the approval of the Graduate Director and a Thesis Advisor. Upon satisfactory completion of the Thesis, the student defends the Thesis in an open presentation to the satisfaction of the student's Thesis Committee.

RESEARCH Thesis --
CIS 6970 Thesis (6.0 hrs)

ELECTIVES (6 hrs for total 12 hrs)
Select sufficient credits at the graduate level to earn a total of 36.0 hours.
CAP CDA CEN CIS CNT COP COT

- Select at least 6 credits of electives.
  Note: CEN 6016 Engineering of Software I must be elected if the student's undergraduate coursework does not include a course equivalent to CIS 4251 Software Development.
Major: Civil Engineering  
Concentration: Water Resources/Environmental  
Degree: MS in Civil Engineering  

Major Requirements  
MSCE Water Resources/Environmental Requirements: (30 credit hours)  
The Civil Engineering master's degree consists of a minimum of 30.0 credit hours. Students select from one of two degree options: (1) thesis or (2) project.  

**All programs of study must be approved by the Graduate Director prior to the end of the second semester of graduate study.**

Conditions for the degree:

1. All coursework must be completed with a grade of 'B' or better.
2. A GPA of 3.0 must be maintained. If the GPA falls below 3.0, probation will result.
3. At least 18.0 hours of coursework at the 6000-level must be applied toward the degree.
4. A maximum of 12.0 hours at the 5000-level can be applied toward the degree.
5. No more than 6.0 hours of transfer coursework can be applied to the degree, with the following exception: A student may transfer up to 12.0 hours from the Florida Engineering Education Delivery System (FEEDS) provided the total of FEEDS courses and other transfer courses does not exceed 12.0 hours.

EGN6456 3 Advanced Engineering Analysis  
RESEARCH Thesis or Project option --  
Select one of two research options:  
Project Option: Select 3.0 hrs of CGN 6974 CE Project.

SELECT CE Electives --  
Civil Engineering Electives: select a minimum of 15 hrs from these courses:

- CWR 5545 Water Resources Systems
- CWR 5305 Stormwater Management
- CWR 6150 Engineering Hydrology
- CWR 6236 River Engineering/Sediment Transport
- ENV 5640 Design of Water Quality Mgmt Facilities
- ENV 6510 Aquatic Chemical Processes
- ENV 6511 Biological Treatment Systems
- ENV 6519 Physical/Chemical Treatment Systems
- CGN 5932 Special Topics in Civil Engineering (v. 1-3)
- CGN 6933 Special Topics in Civil Engineering (v. 1-3)

Other Electives: Select sufficient credits at the graduate level to earn a total of 30.0 hours.  
- Thesis option: Select 6 hrs of additional CE electives  
- Project option: Select 9 hrs of additional CE electives
Civil engineering elective courses may also be selected from FEEDS within the limitations discussed above, and must be approved by the Graduate Advisor.
(Note: A maximum of 12 hrs at the 5000 level can be applied to the program.)
Major: Electrical Engineering  
Degree: MS in Electrical Engineering

Major Requirements

MS Electrical Engineering Requirements: (30 credit hours)
The Electrical Engineering master's degree consists of a minimum of 30.0 credit hours.
*Students select from one of two degree options: (1) thesis or (2) project.
*Students must select one of three concentrations: Communications, Computer, or Controls & Signal Processing.

**All programs of study must be approved by the Graduate Director prior to the end of the second semester of graduate study.**

Conditions for the degree:

1. All coursework must be completed with a grade of 'B' or better.
2. A GPA of 3.0 must be maintained. If the GPA falls below 3.0, probation will result.
3. At least 18.0 hours of coursework at the 6000-level must be applied toward the degree.
4. A maximum of 12.0 hours at the 5000-level can be applied toward the degree.
5. No more than 6.0 hours of transfer coursework can be applied to the degree, with the following exception:
   A student may transfer up to 12.0 hours from the Florida Engineering Education Delivery System (FEEDS) provided the total of FEEDS courses and other transfer courses does not exceed 12.0 hours.

EGN6456 3 Advanced Engineering Analysis

SELECT. Concentration --
Select a minimum of 6 credits from one concentration.

1. Communications:
   ---- EEL 6532 Information Theory & Error Correction Coding
   ---- EEL 6568 Optical Systems & Networks
   ---- EEL 6591 Wireless/Mobile Communications

2. Computer:
   ---- EEL 6735 Computer System Design
   ---- EEL 6749 Embedded Systems Design
   ---- EEL 6825 Pattern Recognition

3. Controls & Signal Processing:
   ---- EEL 6558 Advanced Topics in Signal Processing
   ---- EEL 6650 Control and Instrumentation
   ---- EEL 6651 Motion Control

RESEARCH Thesis or Project option --
Select one of two research options:
Thesis Option: Select 6.0 hrs of EEL 6972 EE Thesis.
Project Option: Select 3.0 hrs of EEL 6925 EE Project.

SELECT EE Electives --
Electrical Engineering Electives: select 12-15 hrs from these courses depending on research option:

- EEE 5316L Advanced Electronics
- EEL 5060 High Tech Entrepreneurship
- EEL 5500 Digital Communications
- EEL 5500L Digital Communications Lab (1)
- EEL 5511 Communications Systems
- EEL 5513 Introduction to Digital Signal Processing
- EEL 5563 Fiber Optics
- EEL 5613 State-Space Control Systems
- EEL 5722C Digital Design (4)
- EEL 5764C Digital Computer Architecture
- EEL 5820 Digital Image Processing
- EEL 6521 Advanced Digital Communications
- EEL 6521L Advanced Digital Communications Lab (1)
- EEL 5934 Special Topics in Elect Engineering (v. 1-3)
- EEL 6935 Special Topics in Elect Engineering (v. 1-3)
- CDA5106 Intro to Computer Architecture
- CDA5106L Intro to Computer Architecture Lab (1)
- COP6616 Parallel Computing

Select sufficient credits at the graduate level to earn a total of 30.0 hours.

- Thesis option: Select 12 hrs of EE electives
- Project option: Select 15 hrs of EE electives

Electrical engineering elective courses may also be selected from FEEDS within the limitations discussed above, and must be approved by the Graduate Advisor.

(Note: A maximum of 12 hrs at the 5000 level can be applied to the program.)
Major: Computer & Info Sciences
Concentration: Computer Science
Degree: Master of Science

Major Requirements (36 credits)

Computer Science Requirements: (36.0 credit hours)

Conditions for the Masters:

- 1. All courses applied to the degree must be completed with a grade of 'B' or better.
- 2. A minimum of 21 credit hours must be taken at the 6000-level in the School of Computing.
- 3. No more than 6 credit hours taken outside of the School can be included in the degree.
- 4. No more than 15 credit hours of 5000-level courses can be applied to the degree.
- 5. No more than 6 credit hours of Directed Independent Study can be applied to the degree.
- 6. GPA of 3.0 or better must be maintained. A GPA below 3.0 or a grade of 'C'
in three courses results in automatic probation.
- 7. A student on probation who subsequently receives a 'C' is subject to suspension. Receipt of a grade below 'C' results in immediate eligibility for suspension.

Comp Sci - Depth

Depth Requirement: (4 courses - 12.0 hrs)
Select one course from each group of two shown.

SELECT-A One:
- CAP6100 Interface Design and Implementation
- CAP6400 Graphics Image Recognition/Manipulation

SELECT-B One:
- CDA6506 Network Architecture & Client/Server Computing
- CIS6302 Distributed and Internet Systems

SELECT-C One:
- COP6611 Advanced Operating Systems
- COP6616 Parallel Computing

SELECT-D One:
- COP6735 Developments in Database Structures
- COP6557 Programming Language Design Paradigms

Comp Sci - Breadth&Major Reqs

Major Requirements: (4 courses - 12.0 hrs)
Breadth + Major requirements must equal a total of 12 semester hours.

* Any hours short of 12 in the Breadth category must be selected from the Major Req list below.
* Courses may not count for both the Depth and Major requirements.
BREADTH Requirement: (optional)
The following courses must be taken if the equivalent was not covered in undergraduate studies.

- CDA5505 Networks & Distributed Systems
- COP5615 Operating Systems
- COP5716 Data Modeling & Performance
- COT5405 Algorithms & Complexity

MAJOR Requirements:
Any hours short of 12 in the Breadth category must be selected from the list below. Courses may not count for both the Depth and Major requirements.

- CAP6100 Interface Design & Implementation
- CAP6400 Graphics Image Recognition/Manipulation
- CAP6671 Intelligent Systems
- CDA6011 Web Engineering
- CDA6506 Network Arch Client/Server Computing
- CIS6302 Distributed and Internet Systems
- COP6557 Programming Language Design Paradigms
- COP6611 Advanced Operating Systems
- COP6616 Parallel Computing
- COP6735 Developments in Database Structures

**CS & SE - Research + Electives**
Thesis and Major Electives: (12.0 hrs)
Enroll in the Thesis course CIS 6970 for at least two successive terms. In order to enroll in the Thesis course, the student must obtain the approval of the Graduate Director and a Thesis Advisor. Upon satisfactory completion of the Thesis, the student defends the Thesis in an open presentation to the satisfaction of the student's Thesis Committee.

- RESEARCH Thesis --
  - CIS 6970 Thesis (6.0 hrs)

- ELECTIVES (6 hrs for total 12 hrs)
  Select sufficient credits at the graduate level to earn a total of 36.0 hours.
  CAP CDA CEN CIS CNT COP COT
  - Select at least 6 credits of electives.
    Note: CEN 6016 Engineering of Software I must be elected if the student's undergraduate coursework does not include a course equivalent to CIS 4251 Software Development.
Major: Mechanical Engineering
Degree: MS in Mechanical Engineering

Major Requirements

MS Mechanical Engineering Requirements: (30 credit hours)
The Mechanical Engineering master's degree consists of a minimum of 30.0 credit hours.
Students select from one of two degree options: (1) thesis or (2) project.

"All programs of study must be approved by the Graduate Director prior to the end of the second semester of graduate study."

Conditions for the degree:

- 1. All coursework must be completed with a grade of 'B' or better.
- 2. A GPA of 3.0 must be maintained. If the GPA falls below 3.0, probation will result.
- 3. At least 18.0 hours of coursework at the 6000-level must be applied toward the degree.
- 4. A maximum of 12.0 hours at the 5000-level can be applied toward the degree.
- 5. No more than 6.0 hours of transfer coursework can be applied to the degree, with the following exception:
  A student may transfer up to 12.0 hours from the Florida Engineering Education Delivery System (FEEDS) provided the total of FEEDS courses and other transfer courses does not exceed 12.0 hours.

EGN6456 3 Advanced Engineering Analysis
RESEARCH Thesis or Project option --
Select one of two research options:
Project Option: Select 3.0 hrs of EML 6556 ME Project.

SELECT ME Electives --
Mechanical Engineering Electives: select a minimum of 15 hrs from these courses:

- EML 5808 Robotics Engineering II
- EML 6809 Intelligent Planning for Robotic Systems
- EML 5315 Advanced Control System Theory
- EML 6311 Modern Control Engineering
- EML 5508 Finite Element Modeling and Analysis
- EML 5211 Introduction to Continuum Mechanics
- EGN 6333 Advanced Mechanics of Materials
- EML 5105 Classical and Statistical Thermodynamics
- EML 5131 Combustion Phenomena
- EML 6451 Energy Conversion
- EML 5403 Fuel Cells
- EML 6417 Solar Energy Devices
- EML 5606 Air Conditioning and Refrigeration
- EML 5932 Special Topics in Mech Engineering (v. 1-3)
- EML 6933 Special Topics in Mech Engineering (v. 1-3)
Other Electives: Select sufficient credits at the graduate level to earn a total of 30.0 hours.

- Thesis option: Select 6 hrs of additional ME electives
- Project option: Select 9 hrs of additional ME electives

Mechanical engineering elective courses may also be selected from FEEDS within the limitations discussed above, and must be approved by the Graduate Advisor.
(Note: A maximum of 12 hrs at the 5000 level can be applied to the program.)
Major: Computer & Info Sciences
Concentration: Information Systems
Degree: Master of Science

Major Requirements (36 credits)

Information Systems Requirements: (36.0 credit hours)

Conditions for the Masters:

1. All courses applied to the degree must be completed with a grade of ‘B’ or better.
2. A minimum of 21 credit hours must be taken at the 6000-level in the School of Computing.
3. No more than 6 credit hours taken outside of the School can be included in the degree.
4. No more than 15 credit hours of 5000-level courses can be applied to the degree.
5. No more than 6 credit hours of Directed Independent Study can be applied to the degree.
6. GPA of 3.0 or better must be maintained. A GPA below 3.0 or a grade of ‘C’ in three courses results in automatic probation.
7. A student on probation who subsequently receives a ‘C’ is subject to suspension. Receipt of a grade below ‘C’ results in immediate eligibility for suspension.

Information Systems Core

Info Systems Core Requirements: (7 courses - 21.0 hrs)
includes 12 hrs of Information Systems courses and 9.0 hrs of Business courses.

- CEN6016 3 Engineering of Software I
- CEN6017 3 Engineering of Software II
- COP6711 3 Database Engineering/Administr
- ISM6021 3 Mgmt Information Technology
- MAN6785 3 E-Business Strategy
- SELECT_IS One from Info Systems: 
  - CIS6516 Managing Software Projects & Personnel 
  - MAN6026 Project Management
- SELECT_BS One from Business: 
  - MAR6726 Marketing on the Internet 
  - MAN6875 Entrepreneurship & Venture Capital

Info Sys - Research+Electives

Thesis and Major Electives: (15.0 hrs)

Enroll in the Thesis course CIS 6970 for at least two successive terms. In order to enroll in the Thesis course, the student must obtain the approval of the Graduate Director and a Thesis Advisor. Upon satisfactory completion of the Thesis, the student
defends the Thesis in an open presentation to the satisfaction of the student's Thesis Committee.

RESEARCH Thesis --
CIS 6970 Thesis (6.0 hrs)

ELECTIVES (9 hrs for total of 15 hrs)
Select sufficient credits at the graduate level to earn a total of 36.0 hours.
CAP CDA CEN CIS CNT COP COT

- Select at least 9 credits of electives.
  Note: CEN 6016 Engineering of Software I must be elected if the student's undergraduate coursework does not include a course equivalent to CIS 4251 Software Development.