Universidad Politécnica de Puerto Rico
Graduate School
Master Program in Electrical Engineering


Core Courses: 9 credit-hours  Core Courses: 9 credit-hours
Electives: 15 credit-hours  Electives: 30 credit-hours
Thesis: 6 credit-hours  Total: 30 credit-hours
Total: 30 credit-hours

Communication Systems
Area of Interest

Core Courses

EE 6010 – Math. Methods for Signal Processing
EE 6020 – Stochastic Processes
EE 6760 – Digital Communications

Elective Courses*

EE 6030 – Linear Systems
EE 6720 – Pattern Recognition
EE 6770 – Satellite Communication Systems
EE 7712 – Image Processing
EE 7714 – Satellite Remote Sensing

EE 7716 – Computer Vision
EE 7730 – Speech Processing
EE 7740 – Algorithms for Digital Signal Processing
EE 7772 – Wireless Communications
EE 7780 – Special Topics in Signal Processing

The student may include up to 6 credit-hours selected from this list:

EE 4724 – Digital Data Transmission Systems**
EE 4720 – Digital Signal Processing**

The student may include up to 6 credit-hours selected from this list:

CECS 6120 – Computer Architecture
CECS 6130 – Data Comm. and Comp. Networks
CECS 6150 – Object Oriented Design
CECS 6510 – Software Engineering

CECS 6010 – Advanced Design and Analysis of Algorithms
CECS 6240 – Technology-Based Start-Up
CECS 7550 – Artificial Intelligence

* In addition to the current list of elective courses, the student could select as an elective any course with GMP code that is not specified in this list.
** Must be taken if not completed during the undergraduate studies.

Thesis or Project

EE 7800 – Thesis
EE 7801 – Thesis Extension
EE 7790 – Project for Master in Electrical Engineering
EE 7791 – Project Extension for Master in Electrical Engineering

Contact Information:
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Università Politecnica de Puerto Rico
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M.S.E.E. (Thesis Option)
Core Courses: 9 credit-hours
Electives: 15 credit-hours
Thesis: 6 credit-hours
Total: 30 credit-hours

M.Eng.E.E. (Non Thesis Option)
Core Courses: 9 credit-hours
Electives: 30 credit-hours
Total: 39 credit-hours

Digital Signal Processing
Area of Interest
Core Courses
EE 6010 – Math. Methods for Signal Processing
EE 6020 – Stochastic Processes
EE 6030 – Linear Systems

Elective Courses*
EE 6032 – Non-Linear Control
EE 6660 – Advanced Robotics Manipulators
EE 6720 – Pattern Recognition
EE 6740 – Intelligent Control
EE 6760 – Digital Communications
EE 6770 – Satellite Communication Systems
EE 7712 – Image Processing

(Thesis option requires 15 credit-hours. Non-thesis option requires 30 credit-hours)

EE 7714 – Satellite Remote Sensing
EE 7716 – Computer Vision
EE 7730 – Speech Processing
EE 7740 – Algorithms for Digital Signal Processing
EE 7772 – Wireless Communications
EE 7780 – Special Topics in Digital Signal Processing

The student may include up to 6 credit-hours selected from this list:

EE 4724 – Digital Data Transmission Systems**
EE 4720 – Digital Signal Processing**

The student may include up to 6 credit-hours selected from this list:

CECS 6120 – Computer Architecture
CECS 6130 – Data Comm. and Comp. Networks
CECS 6150 – Object Oriented Design
CECS 6510 – Software Engineering

CECS 6010 – Advanced Design and Analysis of Algorithms
CECS 6240 – Technology-Based Start-Up
CECS 7550 – Artificial Intelligence

* In addition to the current list of elective courses, the student could select as an elective any course with GMP code that is not specified in this list.
** Must be taken if not completed during the undergraduate studies.

Thesis or Project

EE 7800 – Thesis
EE 7801 – Thesis Extension
EE 7790 – Project for Master in Electrical Engineering
EE 7791 – Project Extension for Master in Electrical Engineering

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### M.Eng.E.E.

**Core Courses:** 9 credit-hours  
**Electives:** 30 credit-hours  
**Total:** 39 credit-hours

#### Power Systems and Renewable Energy  
Area of Interest

**Core Courses**  
(3 credits each)
- EE 6010 – Mathematical Methods for Signal Processing  
- EE 6400 – Direct Energy Conversion and Renewables  
- EE 6402 – Market, Environmental and Public Policy Issues of Energy Systems

**Elective Courses**  
(3 credits each)

Student must complete the remaining 30 credit-hours by selecting courses from this list of electives, of which may include up to six (6) credit-hours of the Advanced Undergraduate Courses.

**Oriented Electives**

- EE 6410 – Smart Grids and Distributed Generation  
- EE 6412 – Energy Management  
- EE 6420 – Power Systems Transients  
- EE 6422 – Power Systems Dynamic Stability  
- EE 6424 – Power Systems Operation, Control and Planning  
- EE 7410 – Drives and Controls for Energy Conservation and Alternate Sources  
- EE 7420 – Advanced Electrical Power Quality  
- EE 7422 – Grounding Systems

**Advanced Undergraduate Electives**

- EE 4422 – Electric Power Quality  
- EE 4432 – Power System Protection  
- EE 4438 – Smart Distribution System Engineering  
- EE 4452 – Alternative Generation Systems  
- EE 4462 – Electrical Construction Project Management  
- EE 4466 – Renewable Energy Systems

* In addition to the current list of elective courses, the student could select as an elective any course with GMP code, MMP – Industrial Automation courses and MEM – Renewable Resources Management or Construction Management that is not specified in this list.

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