Welcome!

Prof. Clem Karl - Chair of the ECE Department

- Oversees the Undergraduate, Graduate, and PhD ECE Programs
Introduction

Chen Yang  
ECE Associate Chair for Master’s Programs

Hannah Zyung  
Academic Program Manager – MS  
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Department of Electrical & Computer Engineering

54 Faculty Members

Honors:
- 3 National Academy Members
- 36 Society Fellows
- 24 NSF/Doe/DoD Young Investigators
- 3 Former IEEE Society Presidents

465 Undergraduate Students
184 MS Students
142 PhD Students
Who are you? by the numbers

~1300 Applications (~300 Universities, ~30 countries)

65 Matriculants

50 Universities

27 Majors

1 Boston University

Wikipedia: continental models
Master of Science in Electrical and Computer Engineering

32 graduate-level credits or more
- GPA >= 3.0.
- No grade lower than C for degree.

Software requirement: (1 course)
- EC602 – Design by Software in ECE

Practicum requirement: (1 course)
- EC601 – Product Design in ECE
- OR with placement:
  - MS/MEng project
  - MS thesis

ECE graduate electives (4 courses)
- Graduate ECE courses
- CAS CS courses generally count as well

General electives (2 courses)
- Graduate college of engineering (ENG) courses
- ECE-related CAS technical courses (CS, math, physics, ...)
- MS project, thesis, and independent study

Suggested Elective Tracks

- Bio-ECE and Digital Health
- Computational and Cyberphysical Systems
- Computer Communications and Networks
- Cybersecurity
- Data Science and Intelligent Systems
- Electromagnetics, Photonics, and Nanotechnology
- Hardware
- Mobile and Cloud Computing
- Sensing and Information
- Signal Processing and Communications
- Software
- Solid-State Circuits, Devices, and Materials
- Systems and Control
Fall 2020 Course Schedule

Example Curriculum
3 courses each semester

- **EC601** – Product Design in ECE
- **EC602** – Design by Software
- **Elective:**
  - **EC516** – Digital Signal Processing
  - **EC560** – Introduction to Photonic
  - **EC605** – Computer Engineering
  - **EK 505** -- Robotics and Autonomous Systems
- **Alternatives:**
  - **EC580** – Analog VLSI Circuit Design *(requires analog electronics)*
  - **EC504** – Advanced Data Structures

“What if I want to take a different elective course as my 3rd course?”
- Consult your academic advisor for approval
- If approved, advisor can sign the add/drop form and email the form to ECEms@bu.edu
MS Project (optional)

Optional

You find a faculty advisor *yourself*.

3-5 page proposal:
- Submit your proposal and the MS Project Proposal form before doing the work!
- Guidelines on ECE website.

4 credits over 1 semester **only**.

End-of-Semester MS Project presentation.
Optional
You find a faculty advisor and committee *yourself.*
  Committee includes 3 ECE faculty (*includes advisor*)
  Can have non-ECE faculty members

3-5 page proposal:
  Submit your proposal and the MS Thesis Proposal form before doing the work!
  Guidelines on ECE website.
At *least* 4 credits.
Defend in front of your thesis committee
*Cannot* be downgraded to Project

Very limited availability.
  ~ couple of theses / year.
Internships

Required for the MS with Engineering Practice:
◦ First get an internship offer before applying for “with practice”

DOES NOT satisfy the practicum requirement.

You must first complete two academic semesters before you can enroll in an internship.
Violations:
You are responsible to read the Code and know what are violations.
• Exams, Cheating, Unauthorized Communication, Theft
• Homework/papers
  • Violating collaboration policy
  • Plagiarism
  • Misrepresentation/falsification of data

Process:
• First offense, undisputed:
  • Faculty member may request authorization for specific penalty.
• Second offense or disputed:
  • Academic Misconduct Committee

Potential penalties:
• Reprimand, Grade Reduction, Failure, Probation, Suspension, Expulsion
Advising Resources

1. MS Ambassadors
2. MS Academic Program Manager
3. Faculty Academic Advisor
4. Associate Chair of MS programs
1. MS Student Ambassadors

Are attending this session. Will be introduced one by one.

Consult Ambassadors for:

• *Peer advising* (course interests, field interests, specializations, internships, research, MS Projects/Thesis)

• *Adjusting* to the US/New England/Boston area (cultural/regional/social differences, transportation, food!)

• Always feel free to contact them in person or via email.

• Zoom office hours on **Fridays:**
  - [Office hours posted online](http://www.bu.edu/eng/departments/ece/resourcesforcurrentstudent/)

• Also available in EC 601 sessions.
2. Academic Program Manager (Masters Program)

Hannah Zyung (ecems@bu.edu)

Can assist with:

- Program questions
- Registration changes and questions
- MS Project/MS Thesis registration
- Internship registration
3. Faculty Advisors

Advisors have been assigned!
You can view your advisor on the Studentlink.

When to consult your Advisor
– Questions not answered by
  • MS Ambassadors, or
  • Academic Program Manager
– Broader, strategic questions of program
– Technical academic questions
4. Associate Chair - Masters Programs

Chen Yang

Consult for:

- Department-wide issues
- Problems not resolved by Advising Resources 1-3
For: MS students who want Computer Engineering focus...
  ◦ ...but don’t have Computer Engineering undergrad degree

Background/prereq for many courses, including:
  ◦ EC 513: Computer Architecture
  ◦ EC 521: Cybersecurity
  ◦ EC 527: High Performance Programming with Multicore and GPUs
  ◦ EC 535: Introduction to Embedded Systems
  ◦ EC 541: Computer Communications and Networks
  ◦ EC 551: Advanced Digital Design with Verilog and FPGA

Understanding the underlying hardware makes you a better programmer!
  ◦ Essential for writing efficient code
MS Ambassadors

Generally available via e-mail.
Also available at EC601 Design by Software in ECE 601 – A1:

MONDAY LECTURES 4:30-6:15PM

Haoyang Wang
haoyangw@bu.edu

Embedded Software &
Front-End Software Development
MS Ambassadors

Generally available via e-mail.

Also available at EC601 Design by Software in ECE 601 – A1:

**WEDNESDAYS LECTURES 4:30-6:15PM**

Shubham Arora
aroras@bu.edu

Software Engineering &
Distributed Systems
MS Ambassadors

Generally available via e-mail.
Also available at EC601 Design by Software in ECE 601 – A2:

MONDAY LECTURES 12:20-2:05PM

Krishna Chaitaya Palle Hayagreeva
pallekc@bu.edu
Data Analytics &
Machine & Deep Learning
MS Ambassadors

Generally available via e-mail.
Also available at EC601 Design by Software in ECE 601 – A2:

**WEDNESDAY LECTURES 12:20-2:05PM**

Raj Vipani
rvipani@bu.edu
Machine Learning & Software Engineering

Shen Zhou
zhoushen@bu.edu
Software Engineering
Questions?