

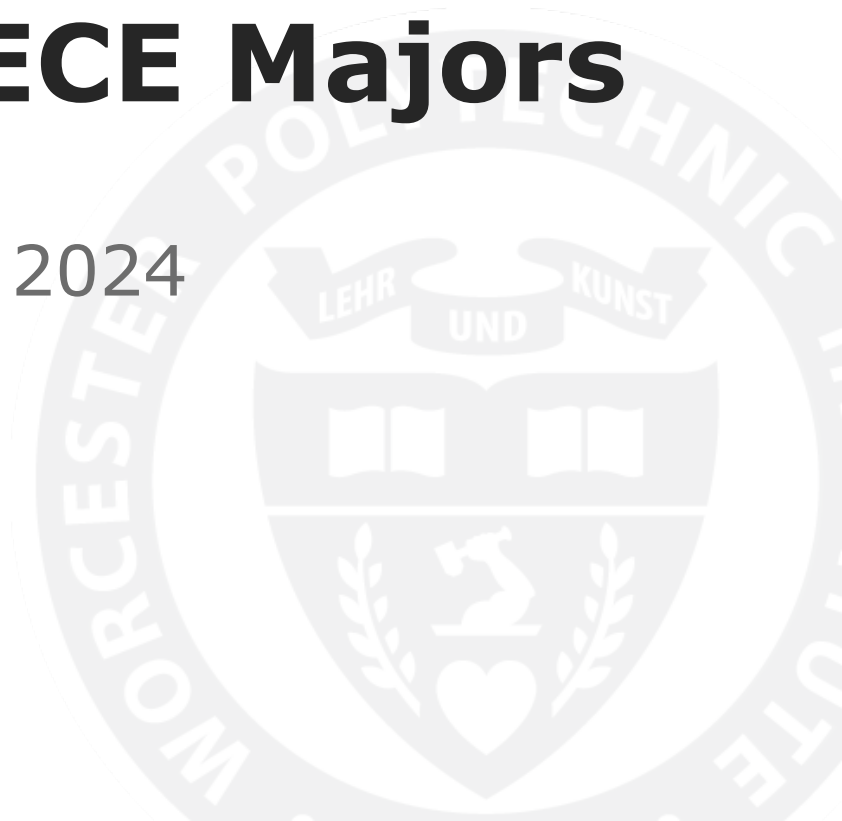


# WPI

## **Course Selection Advice— First-Year WPI ECE Majors**

Last Updated 13 December 2024

Ted Clancy (ECE Professor)



# Big-Picture Preliminaries

- **Maintain work-life balance!**
  - Some extracurriculars → **Good!**
    - Too many extracurriculars → **??**
  - WPI “Student Development & Counseling Center” (SDCC) available to all students
- See WPI CDC (Career Development Center) if interested in Internships or Co-ops
- ECE BS/MS program is about as many courses as a double-major, but gives a stronger credential
  - The higher degree designation (MS) trumps
- Keep an up-to-date ECE Tracking sheet
  - Sheets available through Office of Academic Advising



# WPI Course “Prerequisites”

---

- **Most colleges:** Computerized course selection prevents registration if prerequisites not satisfied
  - Administrator can manually over-ride
- **WPI:** Computer registration **not** restricted!!
  - Must learn **WPI terminology:**
    - 1) **Recommended** background course = WPI-speak for **Required**
      - Faculty assume you know material from “recommended” prior course (or learned material in other ways)
    - 2) **“Suggested”** background course = **Helpful, not required**



# Your Advisors at WPI

---

- You have **at least two assigned Academic Advisors**
  - 1) **Staff Advisor from WPI Academic Advising Office**
    - Assigned upon entry to WPI
    - See for **non-technical course advise** and first-year math/science
      - Humanities and Arts, Phys. Ed./Wellness, Social Science, IQP, Electives, first-year math (calculus)/science (physics)
  - 2) **ECE Advisor** (an ECE faculty member)
    - Assigned first-year 2<sup>nd</sup> semester
    - See for **technical course advise**
      - All ECE/engineering plus advanced Math/science and CS courses, MQP

# Typical Course Selection: Overview

---

- **First Year:** Intro math, science, CS. Great Problems Seminars. Start Humanities & Arts. Start ECE.
  - Of course, skip courses for which you have AP credit!
- **Sophomore:** Complete ECE “Entry Core.” Many will complete Humanities & Arts. Additional math, science.
  - “Entry Core” = ECE 2010, 2019, 2029, 2039, 2311
- **Junior:** IQP. Complete ECE courses desired as MQP background.
- **Senior:** MQP. Consider graduate courses. Complete everything.

# Typical Course Selection: First Year

---

- **Math:**

- Complete Math Placement Test: Complete calculus courses contiguously: MA 1021, 1022, 1023, 1024, 2051
  - Thus, this sequence finished A-term sophomore year, or earlier

- **Physics:**

- PH 1110 (Mechanics): A-term
- PH 1120 (Electric. & Magnet.): B-term (Need before ECE 2010)

- **ECE:**

- ECE 2010 (Electronic Circuits): C-term
- ECE 2029 (Digital Circuits): D-term
- Usually ECE 2309 (Pre-requires CS 1101/2/4 or BME 1004) (Need ECE 2039 before ECE 2049)

- **Great Problems Seminars:** Excellent for critical thinking!!

- Can count for **SOME** Humanities & Arts credit

- **Humanities & Arts (H&A):** Often 2–3 courses

- At least one Phys. Ed./Wellness course (always overloaded)

# Example First Year Course Selection

- Example 1: (H&A denotes Humanities & Arts)

A-Term	B-Term	C-Term	D-Term
MA 1021	MA 1022	MA 1023	MA 1024
PH 1101	PH 1102	ECE 2010	ECE 2029
Great Problems Seminars		CS 1001, H&A, ...	
Phys. Ed.			

- Example 2: (Assumes AP Credit for MA 1021, PH 1101)

A-Term	B-Term	C-Term	D-Term
MA 1022	MA 1023	MA 1024	MA 2051
PH 1102	H&A 1	ECE 2010	ECE 2029
Great Problems Seminars		CS 1001, H&A, ...	
Phys. Ed.			

# Typical Course Selection: Sophomore

- **Complete any left-over First Year recommendations**

<b><u>ECE:</u></b>	<b>Term</b>	<b>Example 1</b>	<b>Example 2</b>
	A-Term	ECE 2019	ECE 2039
	B-Term	ECE 2311	ECE 2049
	C-Term	ECE 2039	ECE 2019
	D-Term	ECE 2049	ECE 2799

**ECE 2799 B-Term Junior Year**



**ECE 2311 B-Term Junior Year**



- **Humanities & Arts:** Often complete as sophomore
- **Other Math, Science, Social Science**
  - Save one Social Science course for ID 2050 (before off-campus IQP)
  - Linear Algebra (MA 2071) recommended for all ECE students
- At least one Phys. Ed./Wellness course



# Typical Course Selection: Junior

---

- **Complete any left-over prior year recommendations**
- **ECE:**
  - Focus on courses needed as background for your MQP
- **IQP:**
  - Off-campus centers highly recommended!!
- Likely complete some requirement areas:  
Humanities & Arts, social science, math/science, etc.
  - Consider graduate course planning: ECE graduate courses also “count” towards undergrad requirements
    - If so, consider ECE B.S./M.S. program: “Double count” some courses
- At least one Phys. Ed./Wellness course

# Typical Course Selection: Senior

---

- **ECE:**
  - Courses to round-out undergraduate background
  - Consider graduate courses
- **MQP !!**
- **Complete all requirements**