Computer Engineering Undergraduate Curriculum Updates

Electrical and Computer Engineering
Information Session
October, 2020
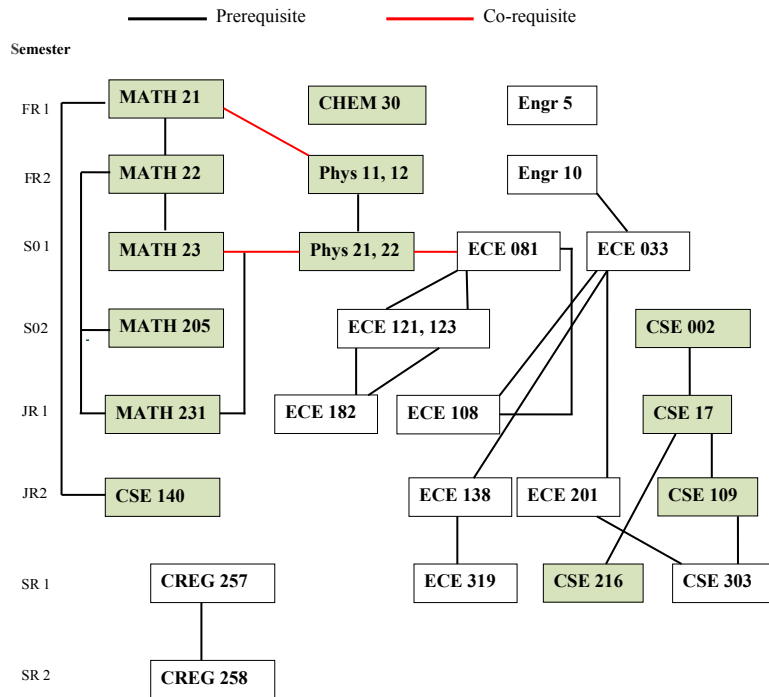
Aims of the Updates

- Increase the number of credit hours on computer engineering

- Decrease the number of credit hours on electrical engineering (circuits)

- Offer courses with programming and computer lab components earlier

- Shorten the gap between dependent courses

- Help students to better adapt to advanced study and/or industry
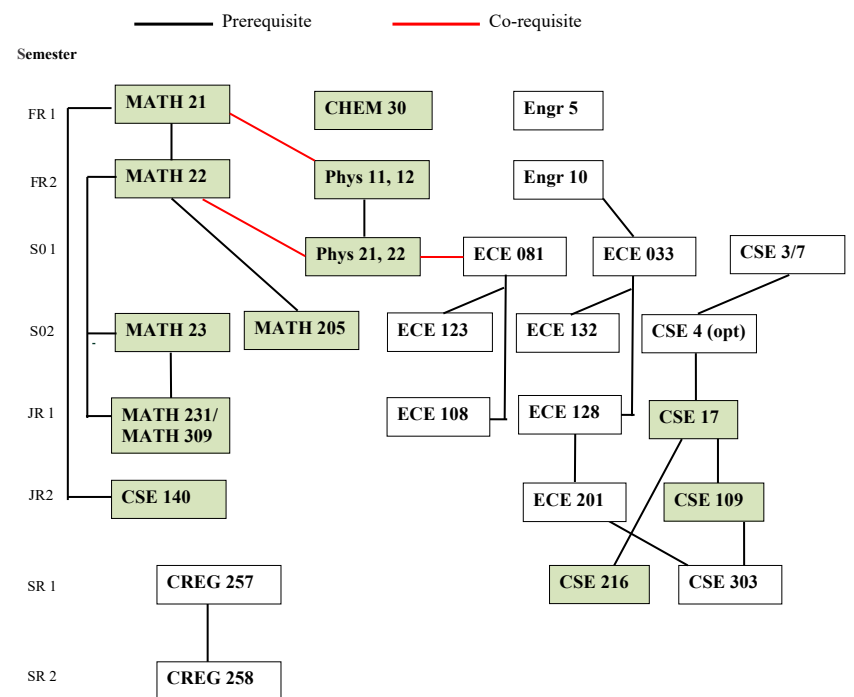
Overview of the Changes

- CSE 2 (2) is replaced by CSE 7 (or 3+4)
  - CSE 7 (4) or CSE 3 (2) + CSE 4 (2)
  - Have taken CSE 2: take CSE 17 next and 5 ATEs (old program)
- ECE 138 Digital System Lab (2) is replaced by
  - ECE 132 Microcontroller Lab (3) and
  - ECE 128 FPGA Lab (3)
- ECE 182 (1) and ECE 121 (2) no longer required
  - Can count toward technical electives under the new program
- ECE 319 (3) no longer required
  - It will be offered every Fall and counts toward technical electives

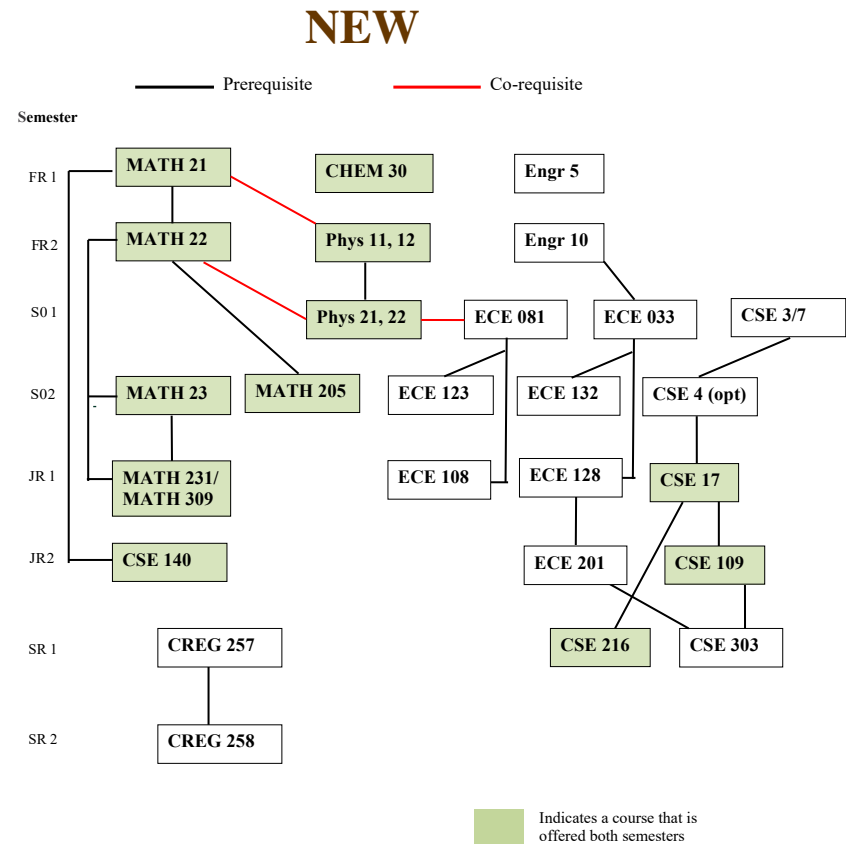# Comparison between OLD and NEW Course Sequence

Implementation Timeline

- **Spring 2021**: start to offer ECE 132 and stop offering ECE 138

- **Fall 2021**: start to offer ECE 128

- **Spring 2022**: add RTL projects to ECE 201 and change prerequisite to ECE 128

Class 2021 (Senior) and Before

- Use OLD curriculum
- If not taken ECE 138 yet, take ECE 128 instead and substitute through petition
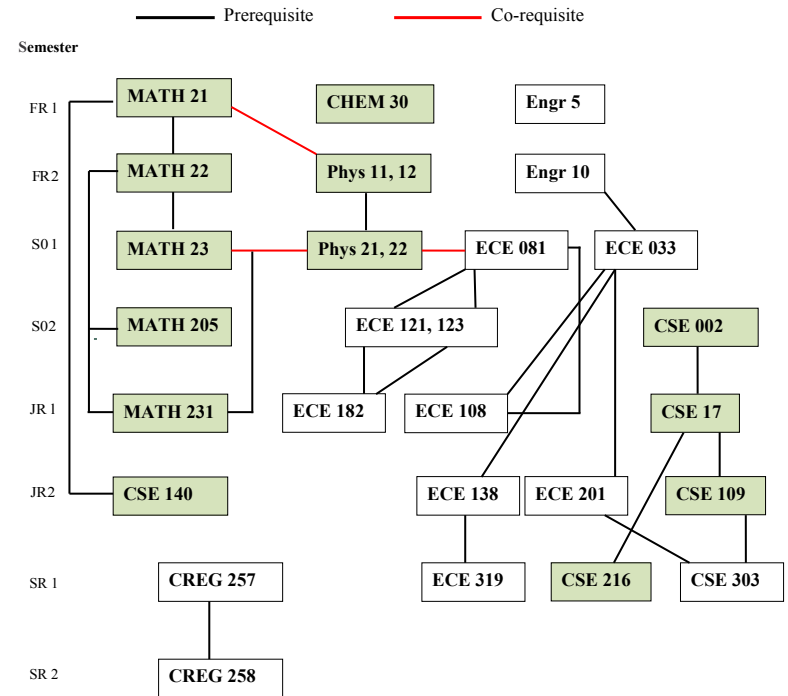
Class 2022 (Junior)

- Can choose either OLD or NEW (recommended) program

- If choose NEW
  - Add ECE 132 to the NEW JR 2
  - Add ECE 128 to the NEW SR 1
    - If taken ECE 138 already, can substitute ECE 128 through petition

NEW

— Prerequisite   — Co-requisite

Semester

FR 1	MATH 21	CHEM 30	Engr 5
FR 2	MATH 22	Phys 11, 12	Engr 10
S0 1	Phys 21, 22	ECE 081	ECE 033	CSE 3/7
S02	MATH 23	MATH 205	ECE 123	ECE 132	CSE 4 (opt)
JR 1	MATH 231/ MATH 309	ECE 108	ECE 128	CSE 17
JR 2	CSE 140	ECE 201	CSE 109
SR 1	CREG 257	CSE 216	CSE 303
SR 2	CREG 258

Indicates a course that is offered both semesters
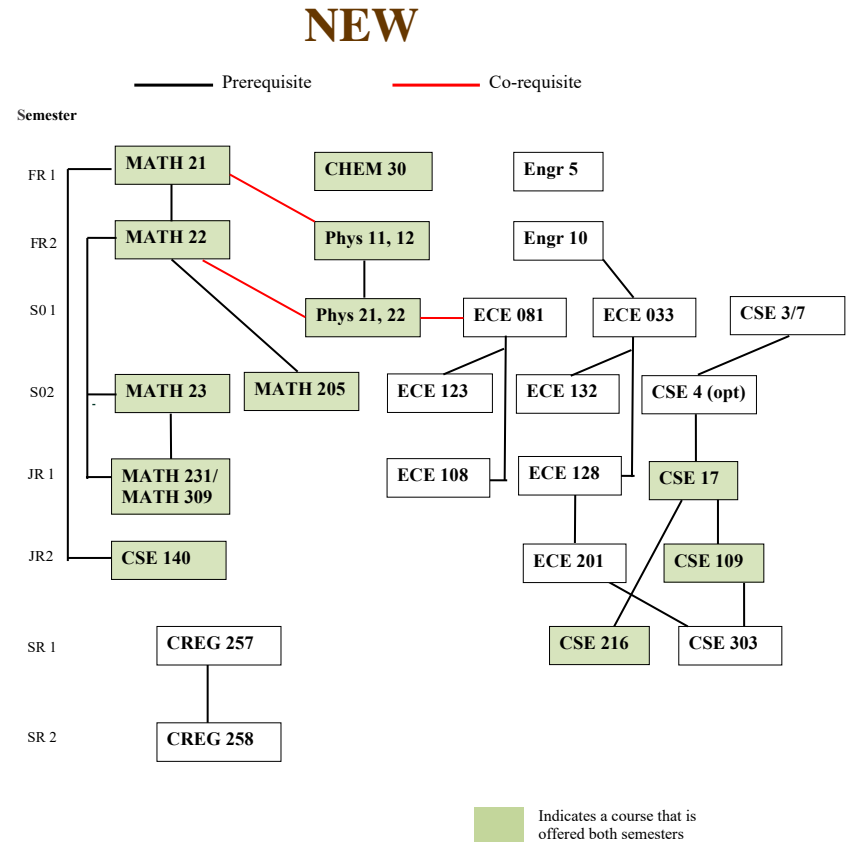
Class 2022 (Junior) Continued

- If choose OLD
  - Need to petition to follow OLD requirement
  - ECE 319, ECE 121, ECE 182 are still required
  - If not taken ECE 138
    - Take ECE 128 to substitute through petition

OLD

Class 2023 (Sophomore)

- Use NEW curriculum

Transition Period Summary

	2020 Spring	2020 Fall	2021 Spring	2021 Fall	2022 Spring	2022 Fall	2023 Spring
	CSE 2 (Last time)	CSE 3/7	CSE 4				
	ECE 138 (Last time)		ECE 132 (2022&2023)	ECE 128 (2022&2023)			
Class 2021 (CE)	OLD Y3S2	OLD Y4S1	OLD Y4S2				
Class 2022 (CE)	OLD Y2S2	OLD Y3S1	NEW Y3S2	NEW Y4S1	NEW Y4S2		
			Add ECE 132	Add ECE128			
Class 2023 (CE)	OLD Y1S2	NEW Y2S1	NEW Y2S2	NEW Y3S1	NEW Y3S2	NEW Y4S1	NEW Y4S2