

# New Curriculum or Curricular Change EFD Template



College of Engineering

Engineering Faculty Document

No.: 23-25

May 1, 2024

**TO:** The Engineering Faculty

**FROM:** The Faculty of the Elmore Family School of Electrical and Computer Engineering

**RE:** New Engineering Concentration

The Faculty of the Elmore Family School of Electrical and Computer Engineering has approved the following new Concentration from the College of Engineering. This action is now submitted to the Engineering Faculty with a recommendation for approval.

**TITLE:**

VLSI and Circuit Design

**DESCRIPTION:**

This concentration applies to these programs/major:

Programs:

- ECE-MSECE-OL
- ECE-MSECE

Major:

- ECEN (Electrical & Computer Engr)

To earn this concentration, students will complete the following coursework:

**Required:** ECE 55900, MOS VLSI Design, 3 credits

6 additional credits from this list:

Course Number	Title	Credits
ECE 51216	Digital Systems Design Automation	3
ECE 51220	Applied Algorithms	3
ECE 59500	CMOS Analog IC Design	3
ECE 60420	Radio Frequency Integrated Circuits	3
ECE 68800	VLSI Testing and Verification	3
ECE 69500	Advanced VLSI Design	3
ECE 69500	High-Speed Mixed Signal IC	3

ECE 69500	Quantum Circuits and Systems	1
ECE 69500	System-on-chip Design	3

**RATIONALE:**

VLSI and circuit design is one of the focus or research areas in ECE. Approximately 13% of our ECE graduate students have this as their primary area of interest. This concentration allows students to fine-tune their MSECE credential.



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Head/Director of the Elmore Family School of Electrical and Computer Engineering

Link to Curriculog entry: <https://purdue.curriculog.com/proposal:28375/form>