

# Mechanical Engineering Curriculum Changes for Fall 2024

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First of all...

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# Don't Panic!

The new curriculum takes effect for incoming students in Fall 2024.  
You all have the *option* to change to the new curriculum

# Why did we make changes now?

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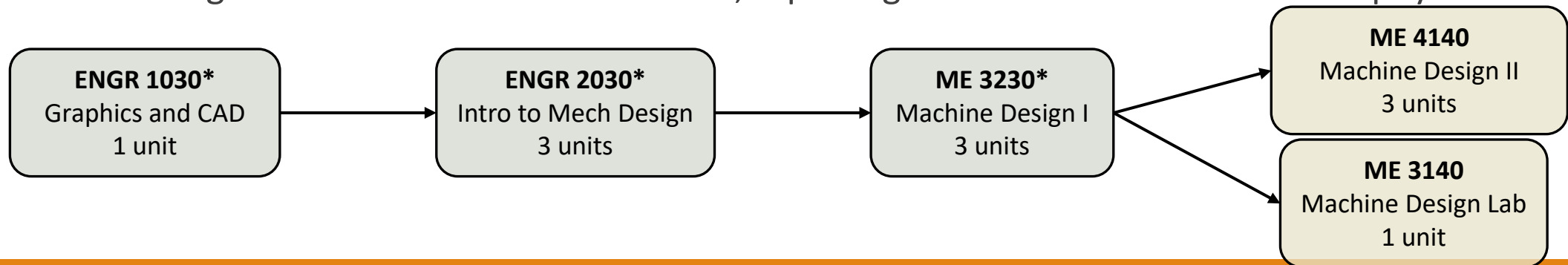
- The physics department is changing PHYS 2100 + 2200 from 5 units to 4 units each
  - This gives us 2 extra units to add to our curriculum
- There are many other changes we've wanted to make for a long time, and this is a good opportunity to make these changes.
  
- Major Changes, explained in the next slides:
  - Improved Design Sequence
  - Condensed Math Courses
  - Better professional preparation



# Improved Design Sequence

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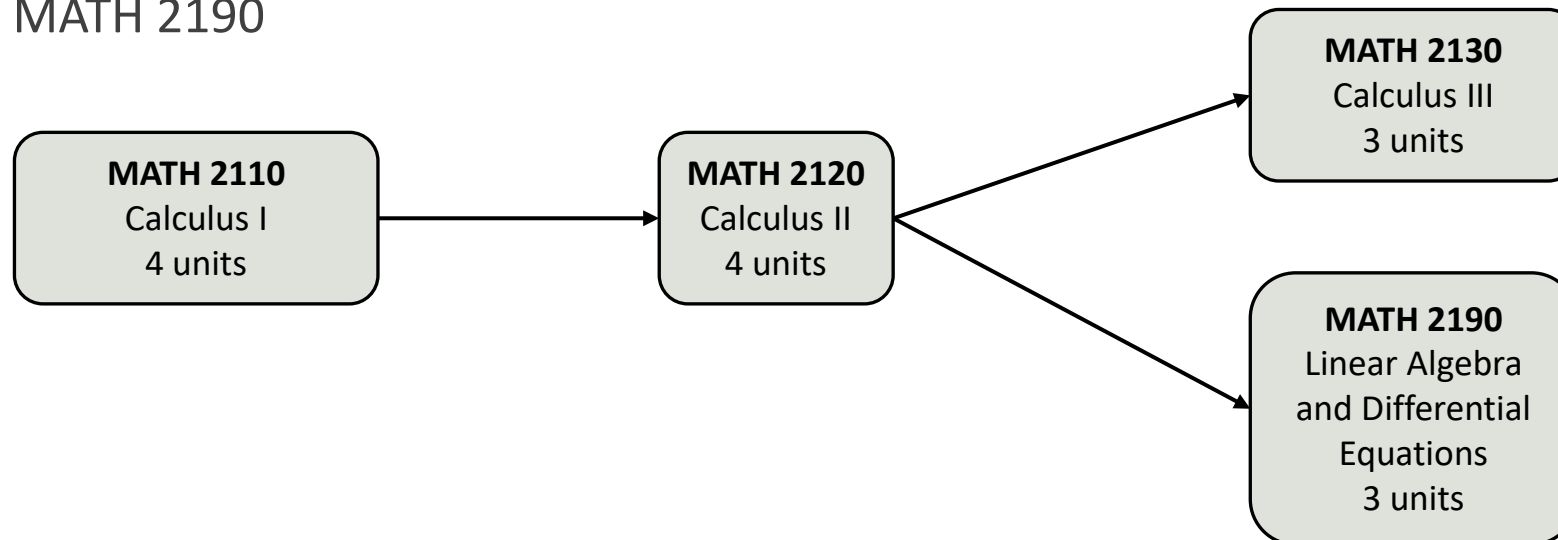
- To allow ME 2030 (Intro to Mechanical Design) to spend more time focusing on design, we've added a 1-unit prerequisite course, **ME 1030 – Graphics and CAD**.
  - If you already took ME 2030 and switch to the new curriculum, we'll give you credit for ME 1030
- To give you more design experience, **ME 4140 (Machine Design II)** is now a required course, instead of ME 4110 (Vibrational Analysis)
  - If you don't switch to the new curriculum, we'll allow you to choose ME 4140 in place of ME 4110
- To give you more hands-on design experience, we are requiring **ME 3140 (Machine Design Lab)**
- These changes add 2 units to the curriculum, replacing the two units removed from physics



# Condensed Math Courses

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- To make your math courses more engineering-focused, and to remain consistent with many other colleges and universities, we are creating a new course, **MATH 2190 (Linear Algebra and Differential Equations)**, to replace MATH 2150 and MATH 2550.
- This takes 3 units out of the major
- If you switch to the new curriculum and already took MATH 2150 & MATH 2550, you'll get credit for MATH 2190

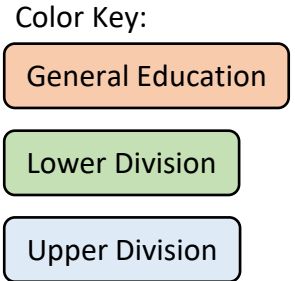
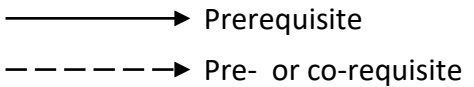


# Better Professional Preparation

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- The change to the Math sequence gives us 3 more units. We are using this to add another upper-division ME elective. **In the new curriculum, you will need three elective courses.**
  - This allows you to specialize in the field you are most interested in
- We want to encourage and prepare you for professional licensing through the Engineer-in-Training (EIT) certification exam. We're introducing a new required 1-unit course, **ME 4960 (EIT Exam Preparation)**.
  - You'll take this course during Senior Design I or II
  - This course is graded just like the real Fundamentals of Engineering (FE) exam. There is a in-class mock FE exam, and you'll get a Pass/Fail grade based on that exam. If you pass the real FE exam, you pass the course.
  - Even if you don't switch to the new curriculum, we recommend this course
  - To make room in the schedule, we are combining ME 3039 (Fluids lab) and ME 4069 (Thermal Systems lab) into **ME 4079 (Thermal-Fluids Lab)**

California State University, Los Angeles  
 Mechanical Engineering, B.S. Degree Requirements Flow Chart (Fall 2024 Curriculum)  
 Refer to the catalog for more detailed information



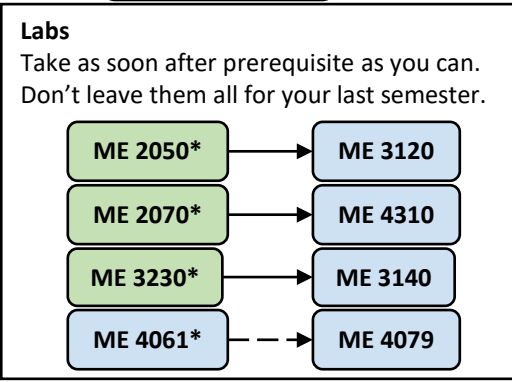
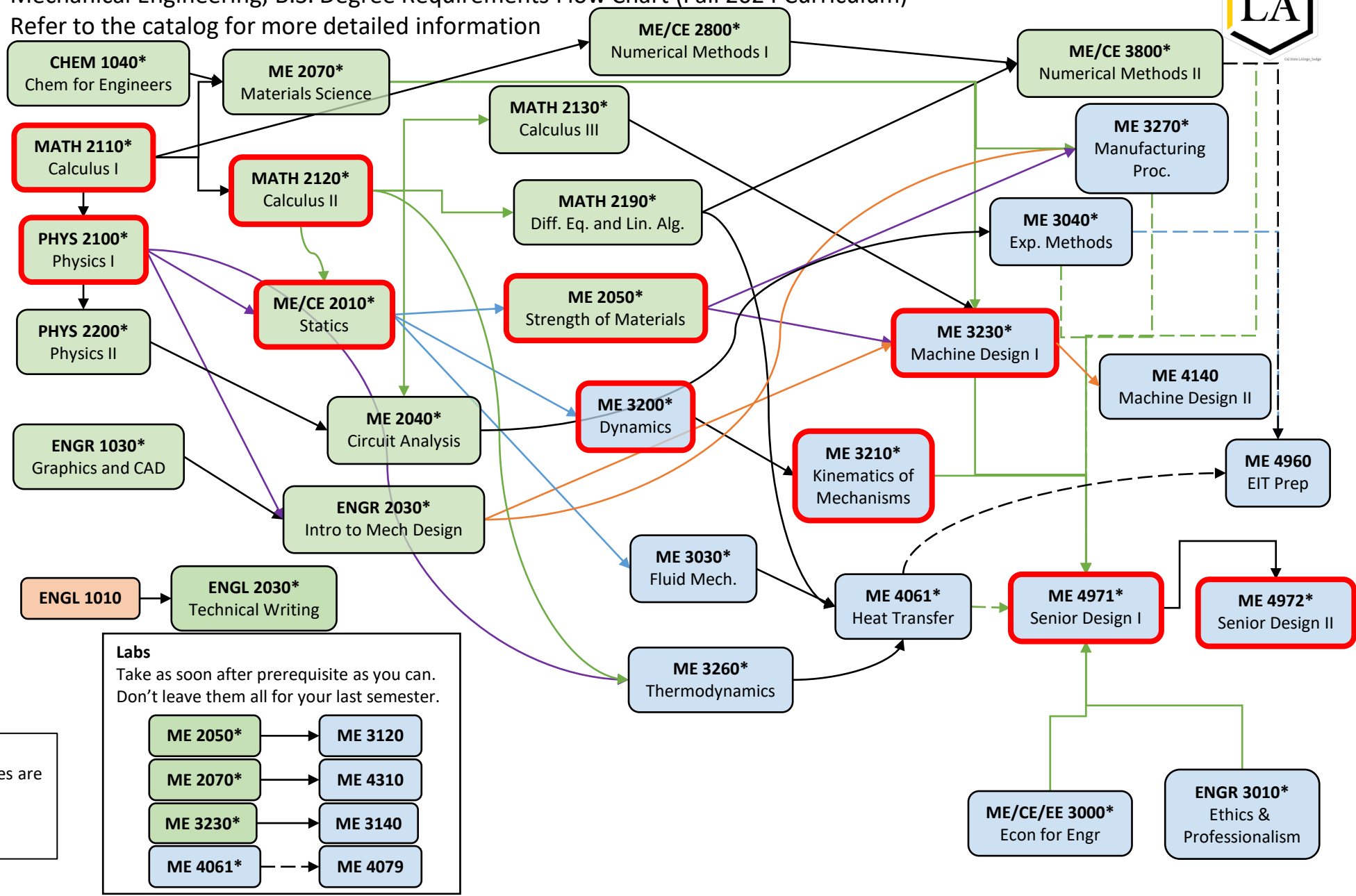
**Additional GE Courses**

- AM1 - US History
- AM2 - US/state/local government
- A1 - Oral Communication
- C1 - Arts
- E - ENGR 1500
- F - Ethnic Studies
- Note: All upper-division GEs are met by ME courses

**GE Overlays**

Your courses must also include one (re) and one (d), or two (re)'s.  
 (re) = race/ethnicity  
 (d) = diversity

- All courses with a \* require a C or better
- Additionally, three upper-division ME electives are required.
- Some arrows are colored for clarity
- Red courses represent longest chain



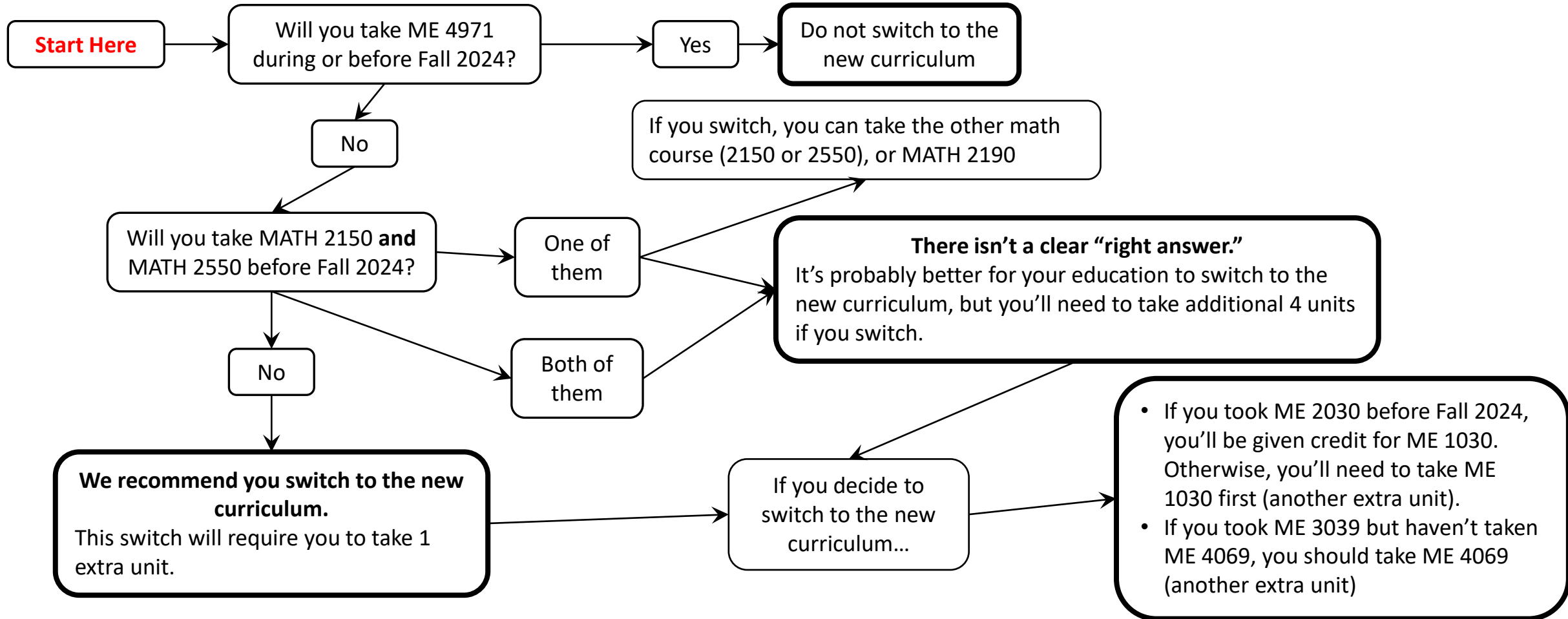
# Summary – Why is the new curriculum better?

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- Improved Design Sequence
  - One more lecture course, two more lab courses. These will prepare you for your senior design projects and careers.
- Condensed Math Courses
  - We will focus on the applied math you need in engineering, and remove much of the pure math
- Better professional preparation
  - By taking three electives, you can concentrate in your chosen field. You'll learn more content that's relevant to your career, and improve your job prospects and performance
  - Getting certified as an Engineer in Training (EIT) will improve your job prospects, help you retain your knowledge from all courses, and put you on the track towards a Professional Engineer (PE) license.
- Caveat – this change is still working its way through the approval process. There is a very small chance that it is rejected



# Should you switch to the new curriculum?



# How does this affect my courses for next semester?

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- **If you plan to switch to the new curriculum...**
  - **If you haven't taken MATH 2150 or MATH 2550**, we recommend you switch to the new curriculum, and take MATH 2190 when it is offered in the Fall. **Do not take MATH 2150 or MATH 2550 next semester (Spring 2024).**
  - If you haven't taken ME 2030 yet, but have taken PHYS 2100, take ME 2030 next semester (Spring 2024) to avoid the new prerequisite (ME 1030)
- Otherwise, this doesn't affect you yet.

# Final Notes

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- To help you make your decision, [fill out the survey here](#)
- The new curriculum and new courses become active in Fall 2024
- If you stay on the current curriculum, but you want to take ME 4140 instead of ME 4110, we will allow that. Email an advisor for help **after** you take ME 4140.
- If you stay on the current curriculum, it's still a good idea for you to take ME 4960 - Engineer-in-Training (EIT) Certification Exam Preparation.
- We will continue to offer ME 3039 and ME 4069 for those who stay on the current curriculum.
- **Right now (Fall 2023), if you haven't taken MATH 2150 or MATH 2550**, you should not take them in the Spring. Instead, switch to the new curriculum in Fall 2024, and you can take the combined math class.
- This change does not affect General Education (GE) courses. Stick with your current GE course plan.