

# EE 193: Advanced Embedded Systems

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# Roadmap

Designing breakout boards for temperature sensors this week

Order them next week

Then move on to microcontrollers

# **A word on expectations**

I don't expect that everyone has done everything

But I do expect you to get help on stuff you don't know yet!

**What exactly is a printed circuit board?**

# Packaging for passive components

1) Through-hole (i.e., breadboardable)

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1) Through-hole (i.e., breadboardable)

2) Surface-mount

# Active component packaging

1) Through-hole (can go in a breadboard)

# Active component packaging

1) Through-hole (can go in a breadboard)

2) Packages with pins (can be soldered by hand)



# Active component packaging, continued

3) Packages without pins

# Active component packaging, continued

3) Packages without pins

4) Ball grid arrays (BGAs) (must be reflowed)

# How to read a component datasheet

# Pulse check

How are you feeling about today's class?

Respond at [\*\*pollev.com/stevenbell\*\*](https://pollev.com/stevenbell)

# For Thursday

Design a schematic for your breakout board

(Attempt to) create a footprint/symbol for your part