Welcome to Week 1!

CodePath Intermediate Software Engineering

What's your dream company or prodoct that you'd want to work on?

Feel free to talk in the room chat

Agenda

- Intros
- Why study programming problems?
- Goals
- Breakout sessions - meet your pod!
- Top 5 coding interview mistakes and how to avoid them
- Free form Q&A!

Instructor Intros!

Caren

Paulina

Ben

Sushma

Noel

TA Intros!

Allison

Amanda

Best

Geethika

Rashmi

Trang

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Luck is when **preparation** meets
opportunity

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- Be prepared to **continue studying and practicing** after the course ends

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- Extra practice problems and review materials to help you fill potential gaps
- Weekly HackerRank assessments to keep yourself on track
- Mentors, fellow classmates, instructors for help and support

What is your personal goal for the next 12 weeks?

Expectations

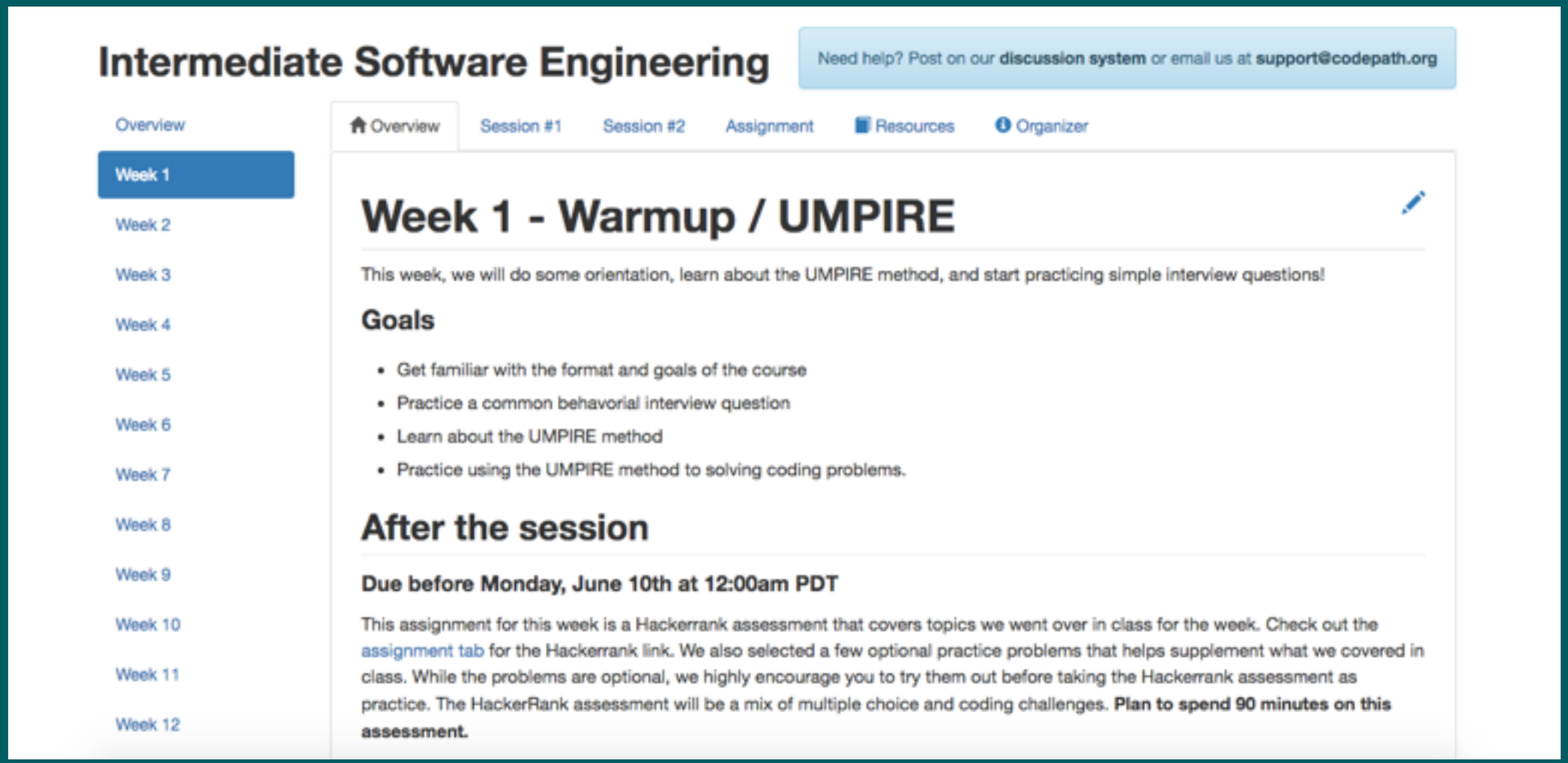
Attend weekly sessions
Tuesdays and Saturdays

Complete weekly HackerRank test
*linked in course portal every week

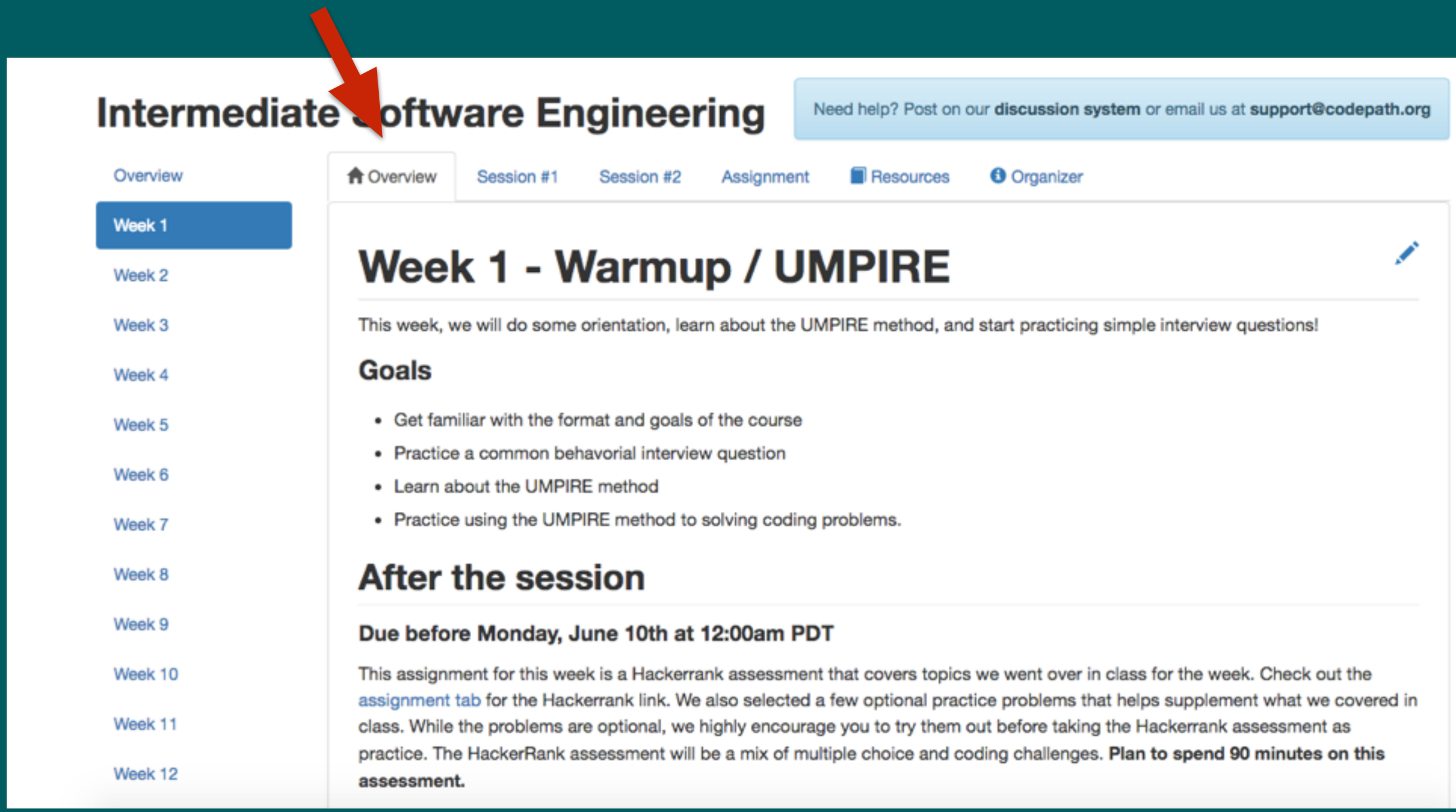
Optional resources: extra reading and practice problems

Course Portal

https://courses.codepath.com/courses/intermediate_software_eng



Course Portal



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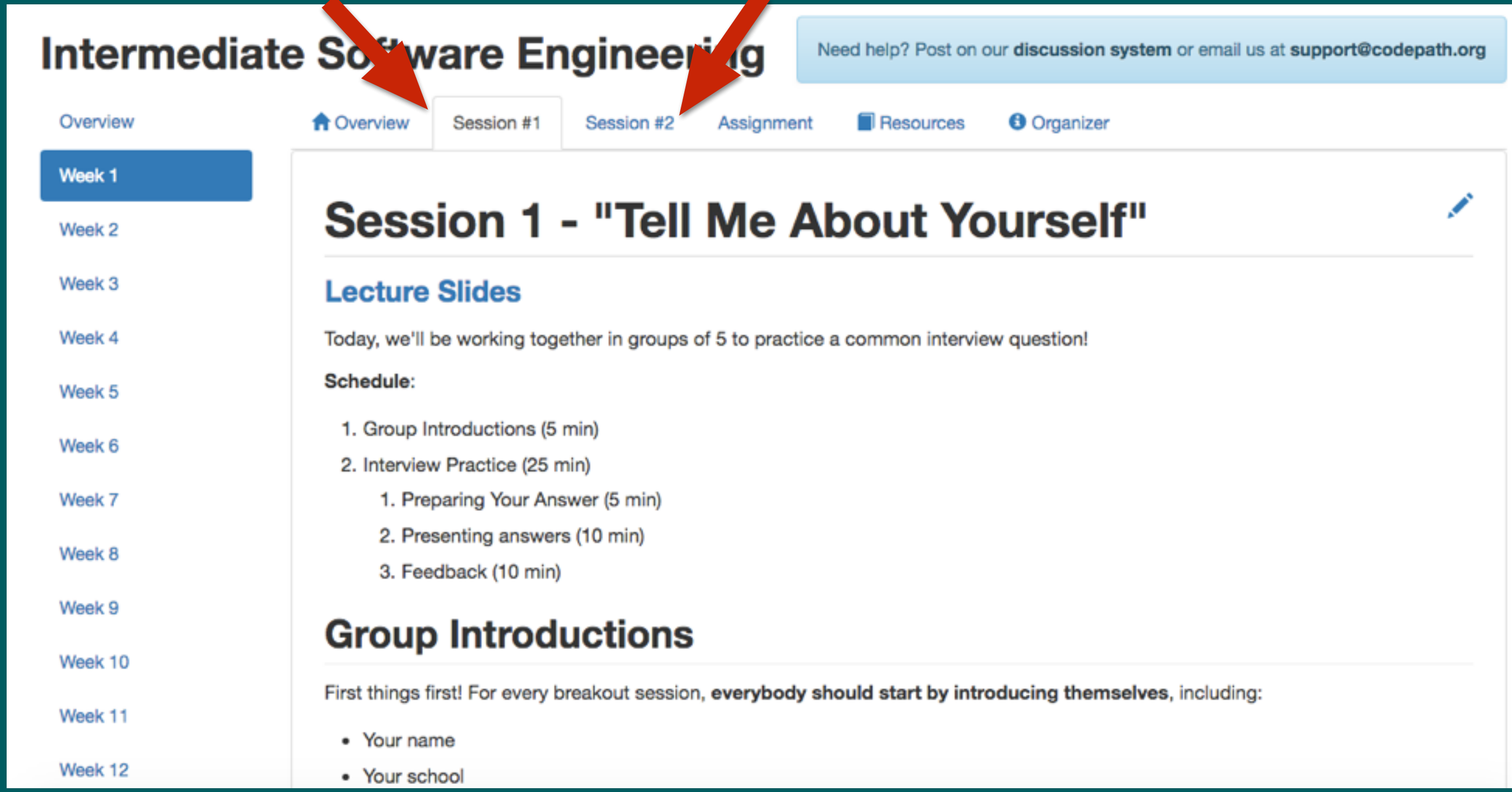

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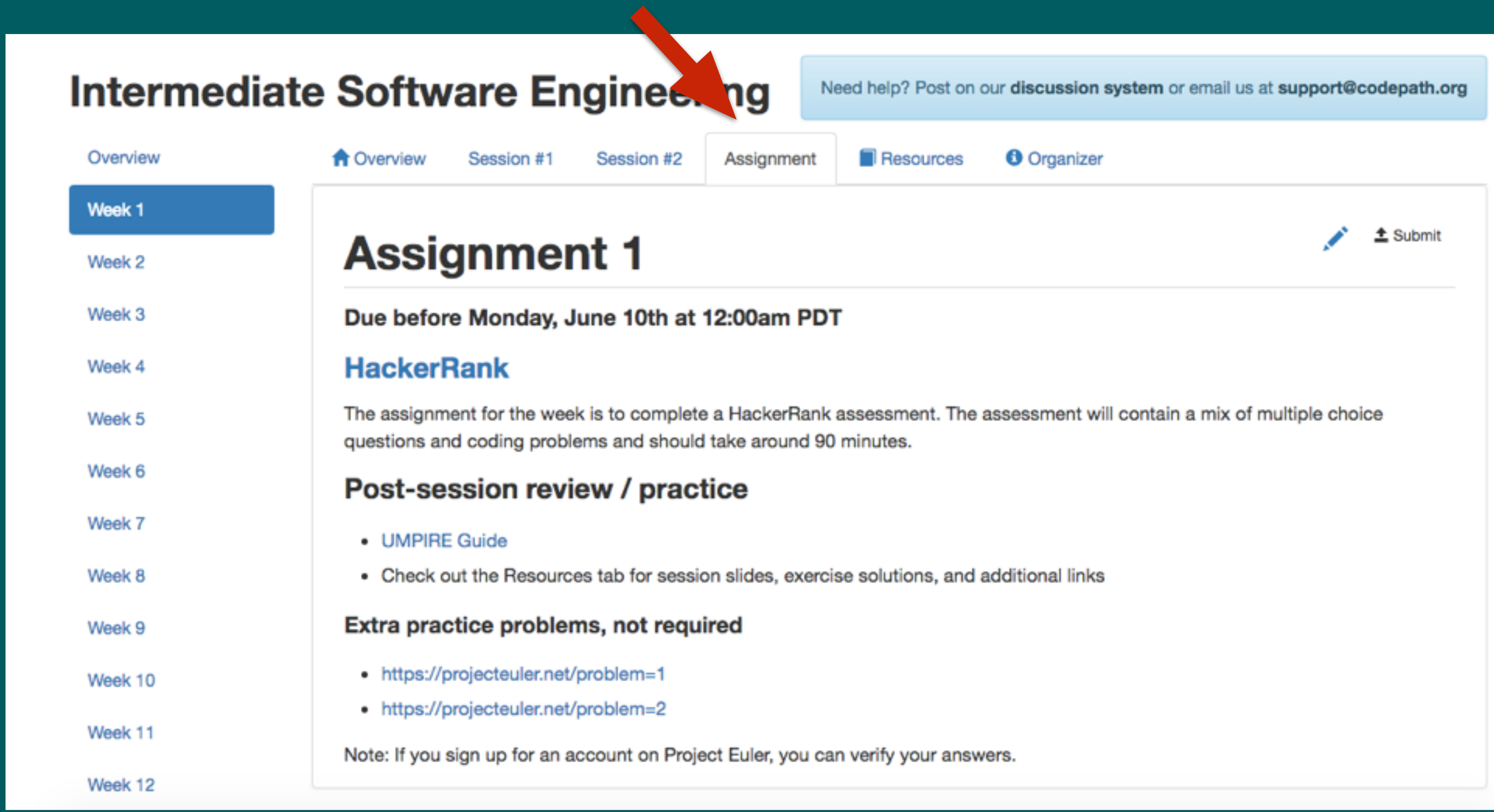

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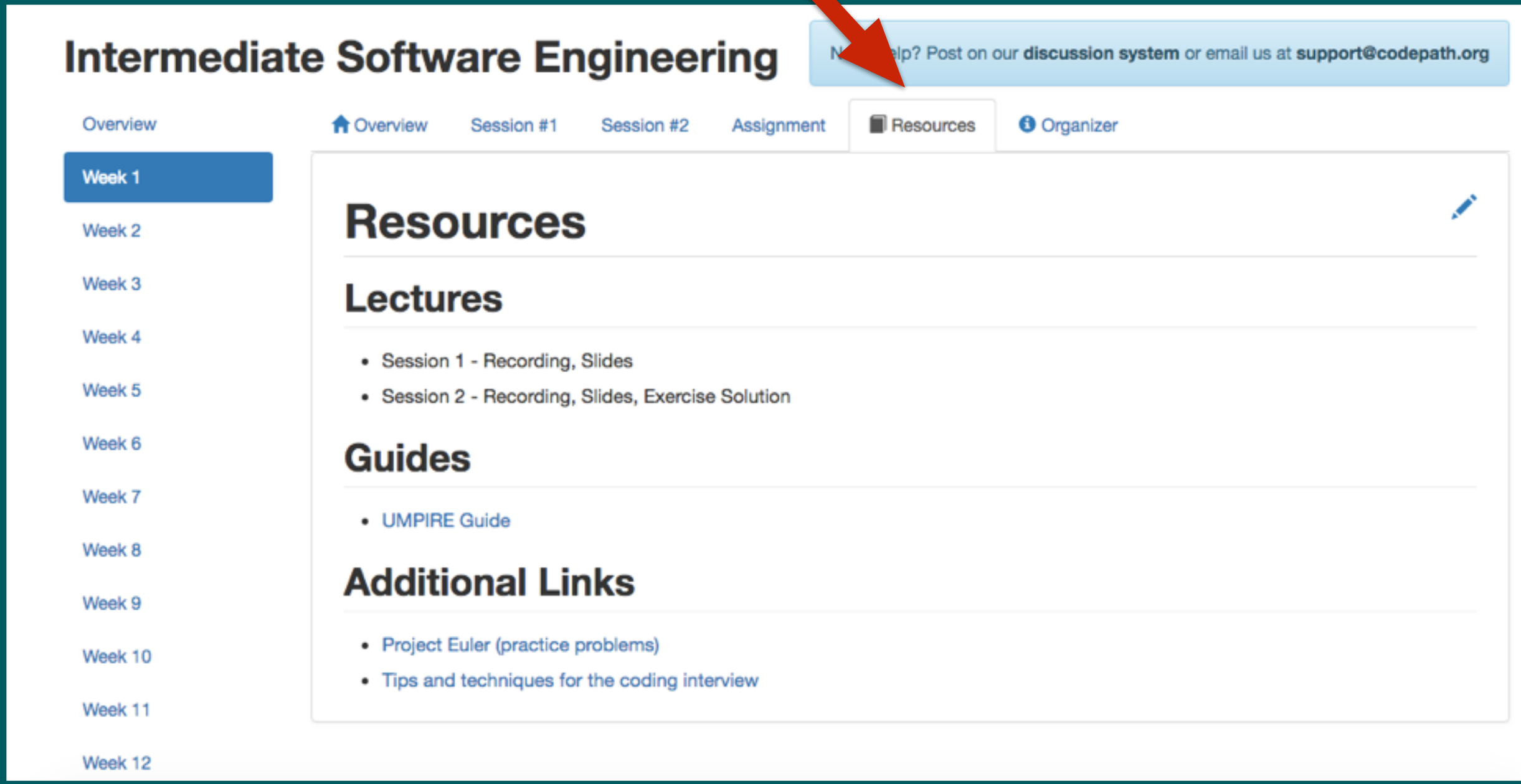

Pods / Teams

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- 5-6 students per team
- This is the group you'll be working with for the next 12 weeks
- Help support each other throughout the course!

Pods / Teams

- Find your pod number, prepend it to your name right now! (Caren to send link in Zoom chat)
- Students: 5 - Caren Chang
- Mentors: 4, 5 - Caren Chang

Mentors

- Engineers working in the tech industry - some are past students of this course!
- Will be there for most of your Satuday sessions to help you through in-class exercises

In class exercises

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- Break out into small groups of 5-6
- Work on problems together for the topic of the week
- Great practice for phone interviews!

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- Most common interview question: “Tell me a little about yourself”

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Once everyone is done, get some feedback!

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- Only talking about things that's already on your resume
- Not showing enthusiasm
- Not knowing about the company / role you're interviewing for

Great things to talk about

- Interesting focuses / projects from past companies
- Passion projects
- Why you're interested in the company
- Specialities you're interested in (Mobile, Machine Learning, …)

Ready for our first breakout rooms?

- For instructions, go into the course portal, Week 1 - Session 1

- Let’s meet back at …. 4:25pm (Pacific), 7:25pm (Eastern)

How’d it go?

The key to acing interviews

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The reality: Most problems can be solved following the same patterns / tricks. You should only have to study about 30-40 problems really well in order to be successful in 90% of coding interviews.

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- jumping to conclusions / solving the wrong problem
- doesn’t catch or can’t fix bugs
- not discussing space / run time tradeoffs
- speed - interviewer wasn’t able to get a good signal

U M P _ R E

Understand

Match

Plan

Implement

Review

Evaluate

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Given… `x` input, do we expect `y` output?

Match

Does this problem match any common patterns we've seen?

Which data structures / techniques can we use to simplify this problem?

- can we use hash tables for easy lookup later?
- would using stacks / queues be helpful?
- should we use Depth First Search or Breadth First Search?

Plan

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Run through your approach with test cases to check that it works

Implement

Code!

Review

Trace through your code with an input to check for the expected output

Catch possible edge cases and off-by-one errors

Evaluate

Analyze the run time and space complexity of your solution

Discuss tradeoffs that were made, or assumptions that were taken

Questions?

Next Session

Walk through a problem with UMPIRE approach

Group exercise to try UMPIRE yourself!

Survey