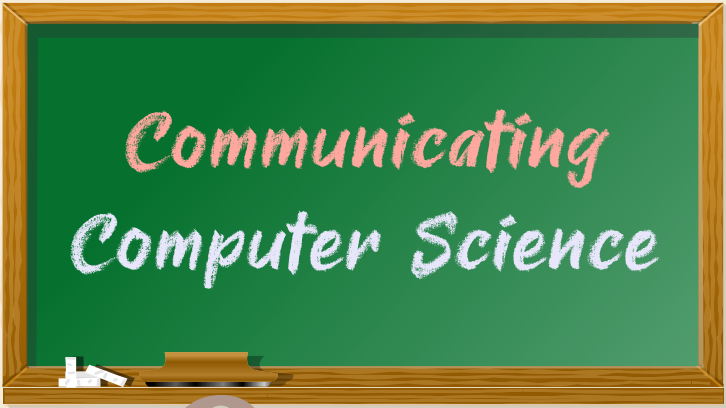

0 Administrativa

30 September 2022

Sebastian Wild

COMP335 (2022-23)
University of Liverpool
version `2022-09-29 21:59`

Welcome to COMP 335 – Communicating Computer Science

- Lecturer: Sebastian Wild
  Ashton Building 223 . . . on and off
  wild@liverpool.ac.uk

- Module website: www.wild-inter.net/teaching/comp335
  → your first address for any infos on COMP 335

- *MS Teams:* discussions
  also used for announcements
- *Canvas:* assessments & marks
- *Slido:* student response system for formative feedback

- Final mark: 15% essay + 35% lesson plan + 35% lesson delivery + 15% final report

Components of COMP 335

Lectures

learning theory
education system
background

CS Taster Days

deliver your activity
evaluate success

Lesson plan

select a CS topic &
prepare a lesson on it

Essay

literature work

Final report

reflect on delivery

MS Teams

discussion

Overview of the module

Goals:

- Develop initial teaching skills:
  structuring content, creating lesson plans, engage learners
- Give you a taste of a secondary-school teacher career
- Expose you to empirical research in education
- Build appreciation for professional values in education:
  safeguarding principles, the widening participation agenda, embracing diversity

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Units:

0. Administrativa ← today

1. The National Curriculum in Computing

2. Learning and Motivation Theory

3. Lesson Planning

4. Empirical Science & Statistics

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We will not (really) touch on:

evaluation and assessment of learning,
quality assurance and enhancement processes,
continuing professional development,
the wider context of school and higher education

What are clickers? Why use it?

- I use "clickers" as short term for any *student response system*
  We will use Slido, a web-based system.
- Goal: Collect immediate, formative feedback
  - Stay focused and engaged! *"active learning"*
  - Quick feedback for students if they are on track.
  - Quick feedback for teacher if (most of) students are following.
  - *"lightweight peer instruction"*

Let's try it!

Clicker Question

Have you ever used clickers (or similar systems) before?

A Yes

B No

→ *sli.do/comp335*

Clicker Question

Wishful thinking question:

How would you rank these **modes of teaching** (for lectures) in terms of their **effectiveness for your (personal) learning**?

Assume a setup like this class:
70 students in a standard lecture hall (fixed seat rows, capacity 100)

- **A** F2F traditional lecture
- **B** F2F seminar-style lecture
- **C** video conference
- **D** live stream + polls & chat
- **E** prerecorded videos
- **F** website + media

→ *sli.do/comp335*

Assessments

$$
\begin{aligned}
\text{final mark} = \quad & 0.15 \cdot \text{Essay} \\
+ \; & 0.35 \cdot \text{Activity Development \& Lesson Plan} \\
+ \; & 0.35 \cdot \text{Lesson Delivery (Taster days)} \\
+ \; & 0.15 \cdot \text{Reflective report}
\end{aligned}
$$

Essay

- focus on learning theories
- focus on literature work
- ~~keep you busy in semester 1~~
- get inspiration for topics for your activity

Taster Day Activity

- focus on your practical skills
- focus on collaboration and peer feedback
- half of mark for **planning**!
- . . . only other half on delivery
- plus a bit on reflection and postprocessing

Time Plan

Semester 1

- Weeks 1–5: **Lecture units**
- Weeks 3–6: Work on **essay**
- Weeks 7–10: Work on **lesson**
  2 further meetings to
  - decide topics (Week 7)
  - pitch lesson plan to group (Week 11)

Semester 2

- $\approx$ 7 **Taster Day** slots
  - lead lesson of **one** Taster Day
  - help organize the day
  - $\rightsquigarrow$ plan to be on campus
    9:30am – 2pm on your day
  - (details to follow)
- final report towards end of term

$\rightarrow$ *current plan always on Canvas*

Essay – CA1

- **Topic**
  - up to you!
  - must touch on CS education
  - must involve literature/sources research
- **Submission**
  - Tue, 1 Nov 2021 18:00
  - on Canvas
- **Marking scheme**
  - Content (70%)
    The overall coverage of the essay and how it addresses the topic
  - Organisation (20%)
    The structure and presentation of the essay
  - Grammar & Style (10%)
    The overall readability of the essay

Example topics:

Should every child learn how to program?

What technology and content is needed to enhance learning in and outside of the classroom?

Why does computer science have a diversity problem and what can we do about it?

How can the teaching of Computing within the National Curriculum be improved at KS3?

. . .

Taster Day Lesson

- **Goals**
  - show that CS is fun and approachable
  - show that CS is relevant and important
  - advertise for Liverpool and yourself
- **Setup**
  - one school hour (45min)
    (prep can be done during break before slot)
  - one school class (≈30 pupils)
  - Year 8–10 (age 12-15)
  - in our computer labs (GH Lab 3)
- **Topic**
  - up to you!
  - **Relatable** for all students
    have relevance to their life & environment
  - **Inclusive**
    both of students with disabilities and of students with varying prior knowledge
  - **Connected** to National Curriculum in Computing
    without duplicating content from there,
  - ideally feature a ***Eureka*** moment
    lead students to grasp something new
  - Cater for **achievement** on different levels
    accommodating variable engagement and ability
  - **Fun and memorable!**

→ *More details on lesson & assessments (CA2 – 4) later.*

Introduction / Ice breaker

1. What is an important property / character trait that you have?
2. Where did you go to (secondary) school, what type of school is it?
3. For me, computer science in school was . . .
4. What would you like to take from COMP335?