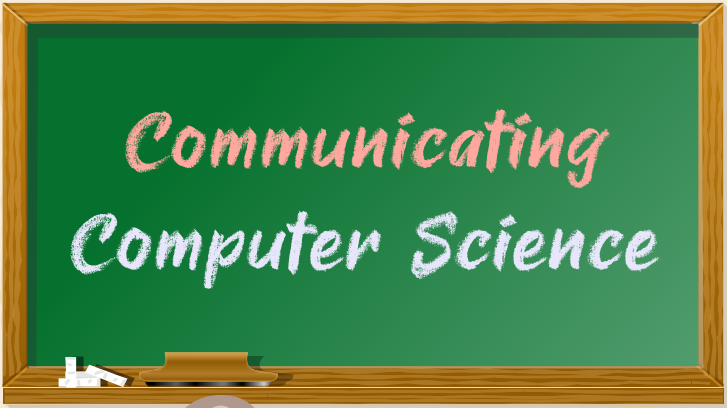

0 Administrativa

8 September 2021

Sebastian Wild

version 2021-09-30 14:42

Welcome to COMP 335 – Communicating Computer Science

- Lecturer: Sebastian Wild
  Ashton Building 223 . . . normally
  wild@liv.ac.uk

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

Canvas

- *MS Teams:* discussions
  also used for announcements

- *Slido:* student response system for formative feedback

- Final mark: 20% essay + 50% lesson plan + 15% lesson delivery + 15% final report

term 1 term 2

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 you individually) if you are on track.
  - Quick feedback (for me) if (most of) you are on track.
  - *"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

$$\begin{aligned}\text{final mark} = \quad & 0.20 \cdot \text{Essay} \\ + \; & 0.50 \cdot \text{Activity Development \& Lesson Plan} \\ + \; & 0.15 \cdot \text{Lesson Delivery (Taster days)} \\ + \; & 0.15 \cdot \text{Reflective report}\end{aligned}$$

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
- bulk of mark for **planning**!
- . . . plus a bit on delivery and reflection

Time Plan

Semester 1

- Week 1–5: **Lecture units**
- Week 6–7: Work on **essay**
- Week 8–13: Work on **lesson**
  2 further meetings to
  - decide topics (Week 8)
  - pitch lesson plan to group (Week 12)

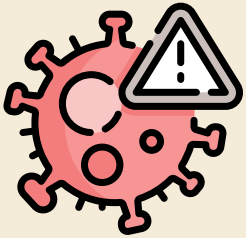
Semester 2

- ≤ 10 **Taster Day** slots
  - deliver your lesson on **3 days**
  - help organize the day
  - (details to follow)
- final report towards end of term

$\rightarrow$ *current plan always on Canvas*

Contingency Plans

- Plan so far: Semester 2 fully on campus
- ⇝ Can invite schools to campus for Taster Days



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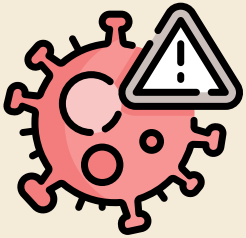

⚠ *If that cannot go ahead, we will convert the activities to an online version.*

- ⇝ Should try to plan activities where this is feasible.

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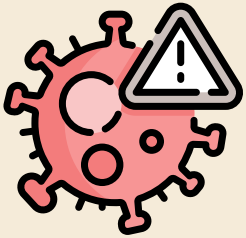

⚠ *If that cannot go ahead, we will convert the activities to an online version.*

- ⇝ Should try to plan activities where this is feasible.

- But: Full lockdown very unlikely at this point.
  - ⇝ For the marked delivery, we might fake a Taster Day with module students if necessary.
  - ⇝ *We will discuss contingency plans individually for each activity.*

Essay – CA1

- **Topic**
  - up to you!
  - must touch on CS education
  - must involve literature/sources research
- **Hand-in**
  - Tue, 9 Nov 2021 18:00
  - on Canvas
- **Marking scheme**
  - Content (60%)
    The overall coverage of the essay and how it addresses the topic
  - Organisation (30%)
    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 8–9 (age 12-14)
  - in our robotics lab (probably)
- **Topic**
  - up to you!
  - must be engaging & enthusing
  - approachable even if some prerequisites are lacking
  - deliver an "Aha!" moment
  - should *connect* to National Curriculum but ideally *complement* it
    🤔 *"We've done this already . . . "*
  - ideally allows a "Zoom-only" variant

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

Clicker Question

What programming languages are you familiar with (= can you program in)?

→ *sli.do/comp335*

Introduction / Ice breaker

1. Who are you?
2. Where did you go to (secondary) school?
3. What would you like to get from COMP335?