

Administrativa

30 September 2021

Sebastian Wild

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

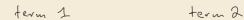
Canvas



also used for announcements

► *Slido*: student response system for formative feedback

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





Components of COMP 335



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"





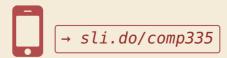
Clicker Question



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

A Yes

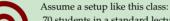
No



Clicker Question

Wishful thinking question:

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



70 students in a standard lecture hall (fixed seat rows, capacity 100)

A F2F traditional lecture

D) live stream + polls & chat

B F2F seminar-style lecture

E prerecorded videos

c video conference

F website + media



→ sli.do/comp335

Assessments

final mark =
$$0.20 \cdot \text{Essay}$$

+ $0.50 \cdot \text{Activity Development \& Lesson Plan}$
+ $0.15 \cdot \text{Lesson Delivery (Taster days)}$
+ $0.15 \cdot \text{Reflective report}$

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

→ current plan always on Canvas

Contingency Plans

- ▶ Plan so far: Semester 2 fully on campus



Contingency Plans

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





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

→ Should try to plan activities where this is feasible.

Contingency Plans

- ▶ Plan so far: Semester 2 fully on campus





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?

8

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

 \rightarrow *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?