

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



 \rightarrow 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



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

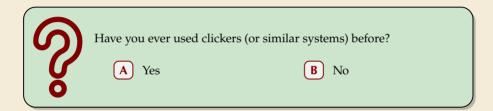
What are clickers? Why use it?

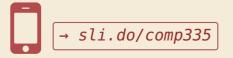
- I use "clickers" as short term for any student response system We will use Slido, a web-based system.
- ► Goal: Collect immediate, formative feedback
 - Stay focused and engaged! "active learning"
 - Quick feedback for students if they are on track.
 - Quick feedback for teacher if (most of) students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





Clicker Question





Clicker Ouestion

Wishful thinking question:

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

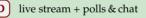
Assume a setup like this class:

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



F2F seminar-style lecture

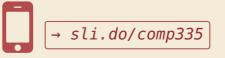
video conference





prerecorded videos

website + media



Assessments

final mark = $0.15 \cdot \text{Essay}$

- + 0.35 · Activity Development & Lesson Plan
- + 0.35 · 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
- 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

- \blacktriangleright \approx 7 Taster Day slots
 - lead lesson of one Taster Day
 - help organize the day
 - plan to be on campus9:30am 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!

 \rightarrow 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?