# Year in Computer Science 2021–22: Post-Covid Edition

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I ordered a stamp in March 2020, in part for dealing with YCS applications. It was waiting for me in my pigeonhole six months later, and the phone still rings out…

# Who am I?

- First degree in Computer Science at Birmingham 1983–86
- Worked here until 1988 doing things that are still causing problems
- Then worked for BT, Fulcrum and Fujitsu 1988–2010, on a variety of projects including convincing BT to deliver internet to houses over broadband
- ~~Had a mid-life crisis~~ Did PhD in formal verification of trusted execution full-time 2010–14
- Now a lecturer teaching mostly security and networking courses

# Who are you?

- Year in Computer Science, from everywhere from Maths to History via Pharmacy and English.
- If not…you’re in the wrong place!

# What is this course?

- A  chance for you to do 120 credits of computer science, giving you a substantial amount of computing to show to an employer or to support your research work in your PhD
- Programme is essentially the 180 credit conversion Masters course, less the 60 credit Jun–Sep project
    - It would be great for you to do a large summative project, but it's hard to fit in with only 120 credits available
- You will have most of your lectures alongside students from the conversion Masters.
- Beware of nomenclature: YCS was historically referred to as ICY, as it used to be called the Intercalated Computer Science Year.  We think we have flushed out all the references, but there's always one more to find…
- I am a huge advocate for this programme, and I want this to work well for you.  **Please bring me issues as soon as possible, and I will make sure you get the best answers available.**

# The course

- 120 credits of compulsory modules.  We finally fixed the morass of options that were often unsuitable, irrelevant or aimed at final year CS students, to give you a one-year, intensive CS course.

# Source of Truth

- Maintaining the multiple locations where programme structures are described is a nightmare
- Every organisation faces this problem, and only enterprises which are small, new or run by geniuses (and probably all three) can honestly say that their information is entirely consistent
- **This presentation is correct**, as of 20 Sep 2021. It is taken directly from module approval documents.  Other sources of information may not be quite up-to-date.

| Compulsory Modules | Autumn | Spring |
|---|---|---|
| Building Usable Software | 20 | |
| Computer Systems | 20 | |
| Software Workshop 1 | 20 | |
| Artificial Intelligence and Machine Learning | | 20 |
| Software Workshop 2 | | 20 |
| Data Structures, Algorithms and Databases | | 20 |
| **Total** | **60** | **60** |

# Communication

- **READ YOUR STUDENT EMAIL EVERY DAY**
- Everything else is done via Canvas.
- We are playing with Teams, but email is the universal lowest common denominator.
- igb@uk.ac.bham.cs or igb@cs.bham.ac.uk date back to 1984, and should stay there.

# Lecture Support

- All lectures should be pre-recorded via Panopto and made available through the Canvas pages for the module.
- There will then be face-to-face sessions for extension, discussion, etc, and a Zoom equivalent for those that cannot make the face-to-face sessions.  We really encourage you to come back to campus, though.
- As a minimum, the slides will also be available.  Some courses will have written notes as well, but it is not universal.
- The precise relationship between Zoom/etc discussion sessions and their face-to-face equivalents are still be being debated: it will be left to module leads.

# Assignments

- Assignments will be announced and submitted via Canvas.
- If you feel that there are pile-ups of deadlines, please let me know: YCS is now a self-contained programme with Conversion MSc so there should be no problems with clashes with other programmes.

# Assessment

- University policy for 2020–21 was that all modules must be at least 50% continuous assessment. However, we took the opportunity to reshape several modules which are far more sensibly continuously assessed to 100%.
- Computer Systems will be 50% CA, 50% Exam. All other modules will be 100% CA.  You will therefore only have one exam in January and no exams in the summer (but check with module leaders).

# Pass Marks

- The pass-mark for I Level modules is 40%. Some modules are co-taught as M Level modules on conversion MSc with 50% pass-marks. For extra fun, Workshop 1 is co-taught with conversion and 1st year CS.
- The regulations, the regulations.

# Feedback

- School policy is ten working days
- University policy is fifteen working days
- Please let me know if the ten-day deadline is missed ~~even if it's me~~.
- The school's intention this year is that new exercises should not be set unless the feedback has been completed from the previous exercise, but there may be exceptions to this: this is a fast-moving programme.

# Tutorials

- Historically, tutorials have been honoured in the breach, particularly for non-first-years.
- This year I (CS Senior Tutor), we (CS) and we (UoB) want to use weekly tutorials to keep a close connection with students and make sure remote learning is working.  But I can't finally figure out weekly or fortnightly until I know MSc numbers.
- We will mail out the tutorial group assignments this week, and we expect you to meet with them (by Zoom).
- I will be chasing staff and students if this does not happen.

# Tooling

- We are a Unix/Linux shop (and use Macs because they are Unix machines).  But it's not a huge issue for YCS.
- You don't need a fast laptop.  Either it works on any laptop, or it needs cloud services anyway.  Most of us use small, portable, old, ~~cheap~~ machines.  8GB of RAM or more is handy, though, as is an SSD.
- You might be given virtual machines to work with, but M1 Macs complicate this and we are having to adapt.
- If you use a Mac, or a Linux laptop, then you can do some of the work directly anyway.
- On every platform, the Java IDE of choice is Eclipse, which you can install now.

# Working Environment

- Some of it is going to be Zoom.  Do what you can to get that working nicely: well-located cameras, decent microphone, that sort of thing.
- Big monitors are nice if you have one or can afford one.
- Good keyboards, too: RSI and Carpal Tunnel Syndrome are the CS demons.

# CS is small machine land

- There is more than enough processing power in a Raspberry Pi to do any and all undergraduate CS work: faster than a Sun 4/690, fridge-freezer size.
- And those little Intel “NUC” s are fabulous.


# People

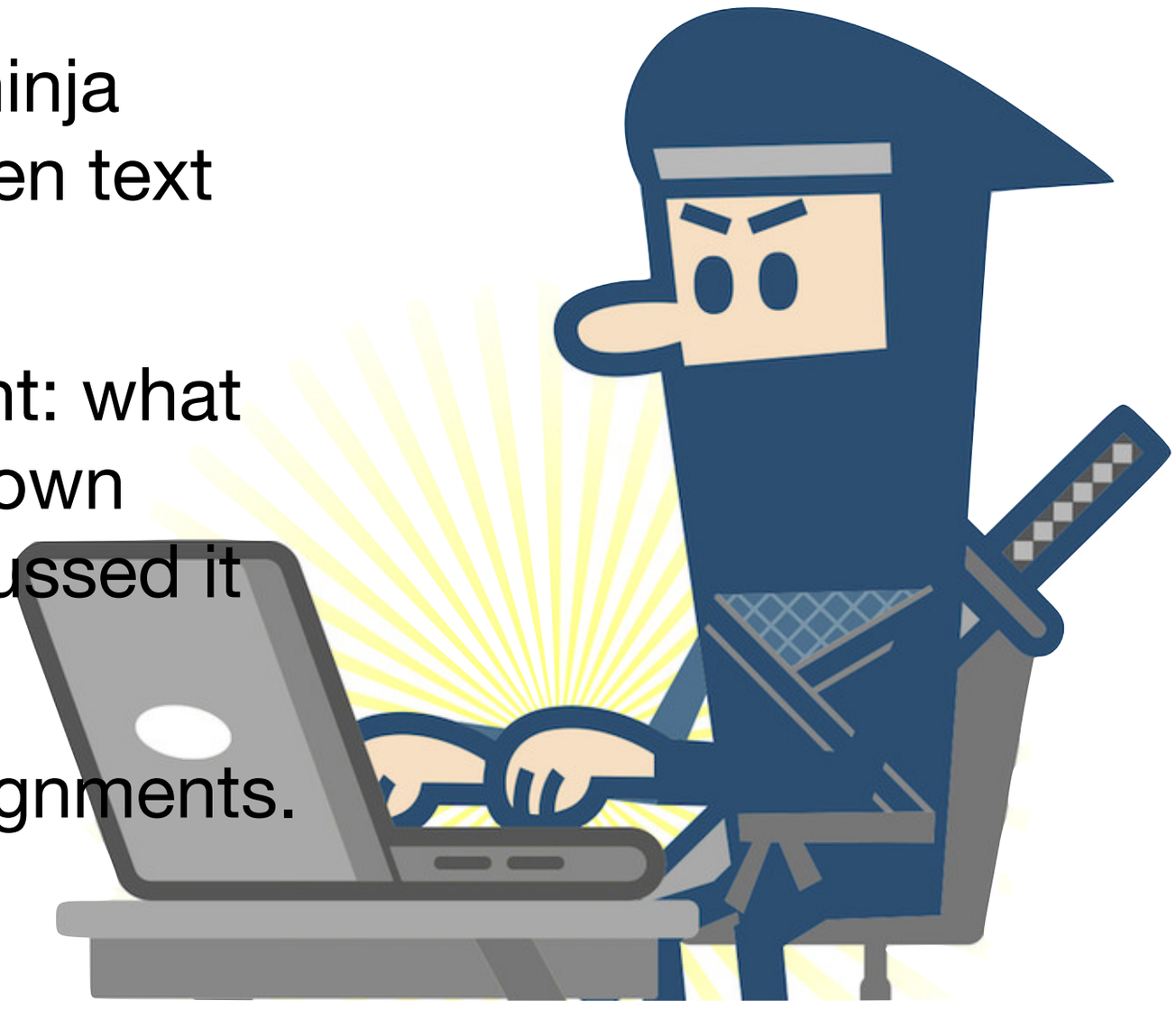
- Course Director: Ian Batten
- Student Experience: Phil Smith
- Director of Undergraduate Studies: Mohammed Bahja
- Director Postgraduate Studies: Paul Levy
- Senior Tutor: Ian Batten
- Head of School: Mark Lee

# Plagiarism

- You know the drill, right?
- Over-use of tutorials, cookbooks, StackOverflow is a major problem, and you can accidentally plagiarise without bad intentions.  Once it's intentional, it's expulsions: two last week.
- Credit stuff in comments, without worrying too much about format: "I didn't know how to reference tutorial websites, so I didn't" was the heart of a horrible plagiarism case last summer which nearly caused someone to fail their MSc.

# Plagiarism

- Programming is an inherently collaborative activity, stereotypes aside.
- The days of the lone code ninja hunched over a screen, green text on black, are long gone.
- It's a fine line for assessment: what you submit should be your own work, even if you have discussed it and critiqued it with other.
    - There are group/pair assignments.



# Questions?