

Informatics 1A
Introduction to
Computation
Lecture 0

Introduction

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Who

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Functional
Programming
(FP, weeks 1–3 & 8–11)*

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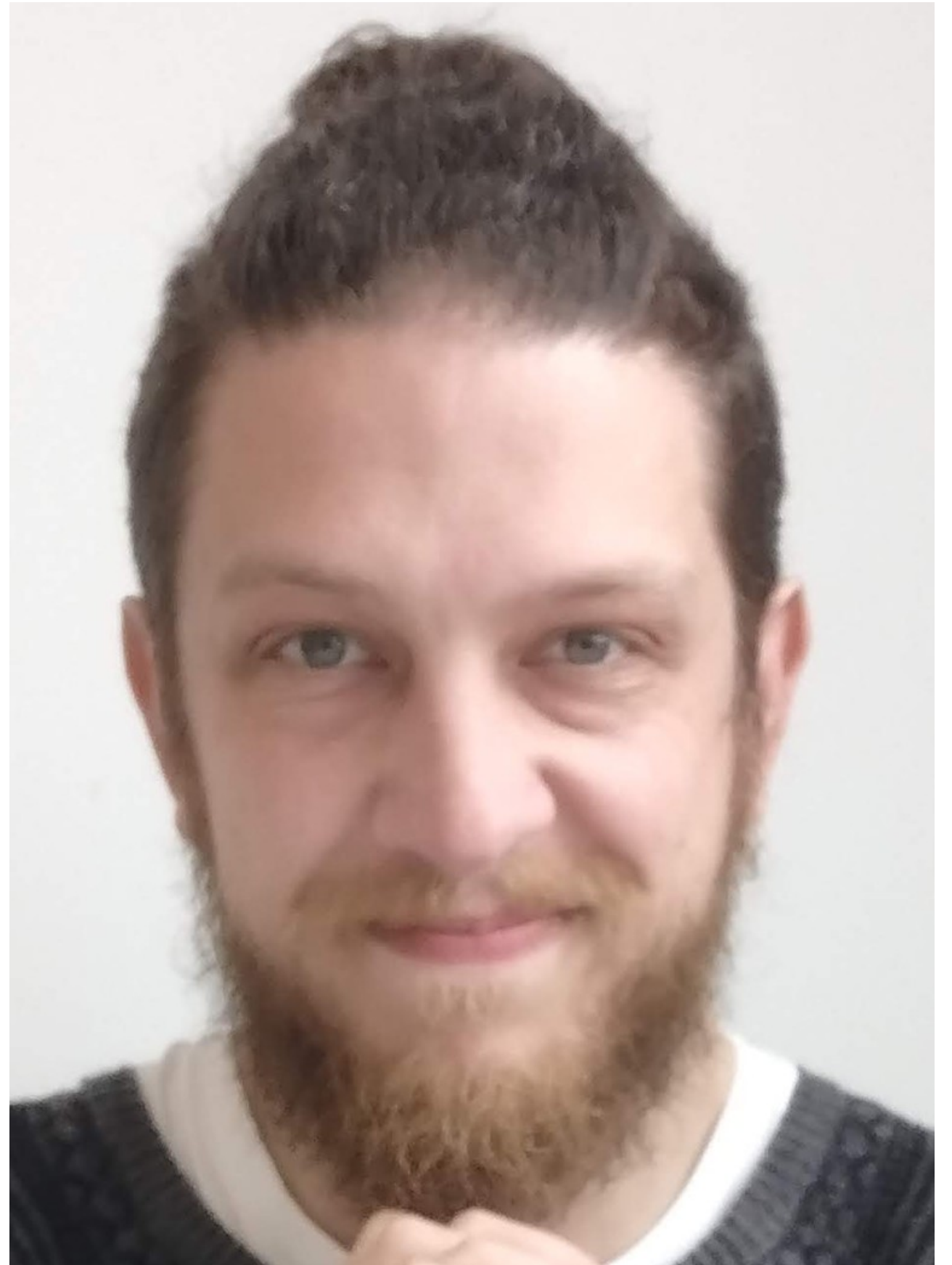
Informatics 1

Course

Organiser

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AT 8.12A



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What

Functional Programming

Haskell: Computing based on
calculation using data structures,
without states

An introduction to programming and
algorithmic thinking

Logic and Computation

Symbolic Logic: Describing and reasoning about information, where everything is either true or false

Finite Automata: Computing based on moving between states in response to input

Why

Foundations for Informatics

A solid basis for study of other topics

Interesting *connections* between FP and CL, and *practical applications*

Accessible to all students, *regardless of previous background*

Demonstrates the *intellectual depth* of Informatics: not just technical skills

When & Where

Lectures

FP 2:10–3:00 Monday, Oak LT

FP 2:10–3:00 Tuesday, Oak LT

CL 2:10–3:00 Thursday, Oak LT

CL 2:10–3:00 Friday, Oak LT

*Oak LT = Oak Lecture Theatre,
Nucleus Building, King's Buildings*

Lectures

FP 2:10–3:00 Monday, Oak LT

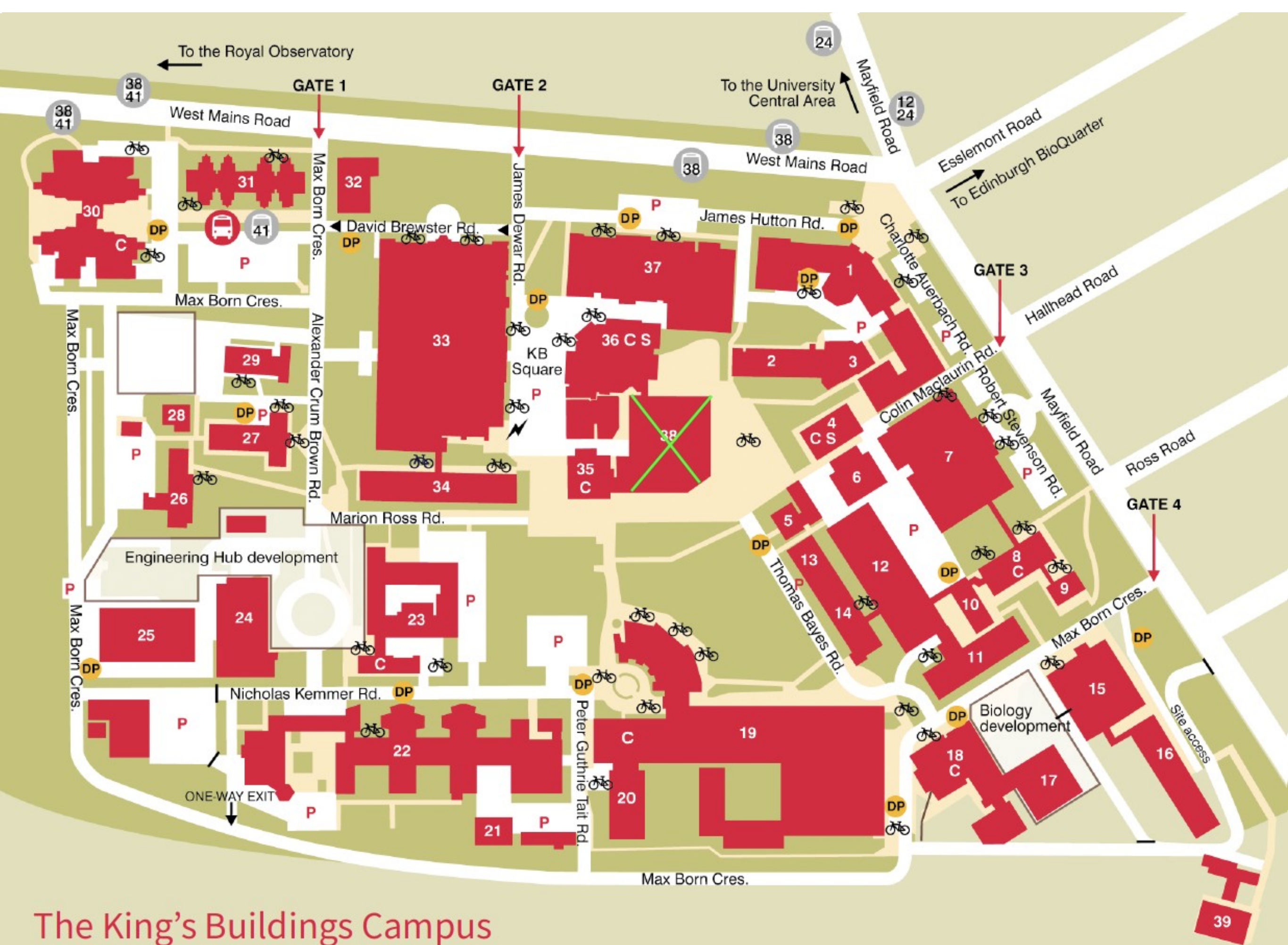
FP 2:10–3:00 Tuesday, Oak LT

CL 2:10–3:00 Thursday, Oak LT

CL 2:10–3:00 Friday, Oak LT

except for weeks 4–5, FP $\Leftrightarrow$ CL

*Oak LT = Oak Lecture Theatre,
Nucleus Building, King's Buildings*



The King's Buildings Campus

Lectures

FP 2:10–3:00 Monday, Oak LT

FP 2:10–3:00 Tuesday, Oak LT

CL 2:10–3:00 Thursday, Oak LT

CL 2:10–3:00 Friday, Oak LT

Tutorials

exercises issued: noon Tuesday (week n)

due in: noon Tuesday (week $n+1$)

separate exercises for FP and for CL

meeting: 90 minutes in small groups

Thursday and Friday, starting in week 2

(50 minutes from week 6 onwards)

Drop-in Labs

optional, good place to get help in person

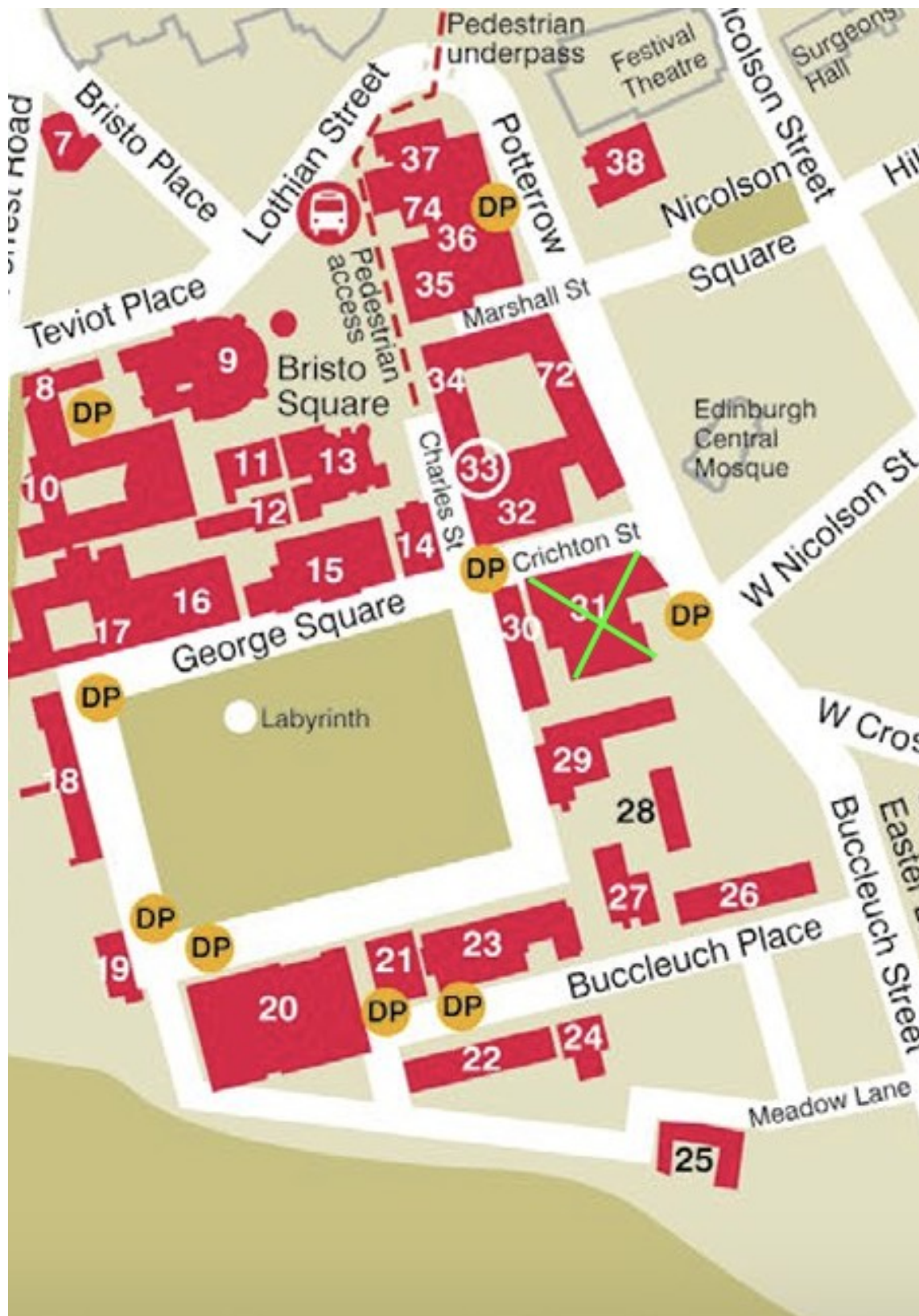
16:10–18:00 Monday: MH LG.12

16:10–18:00 Monday: AT 6.06

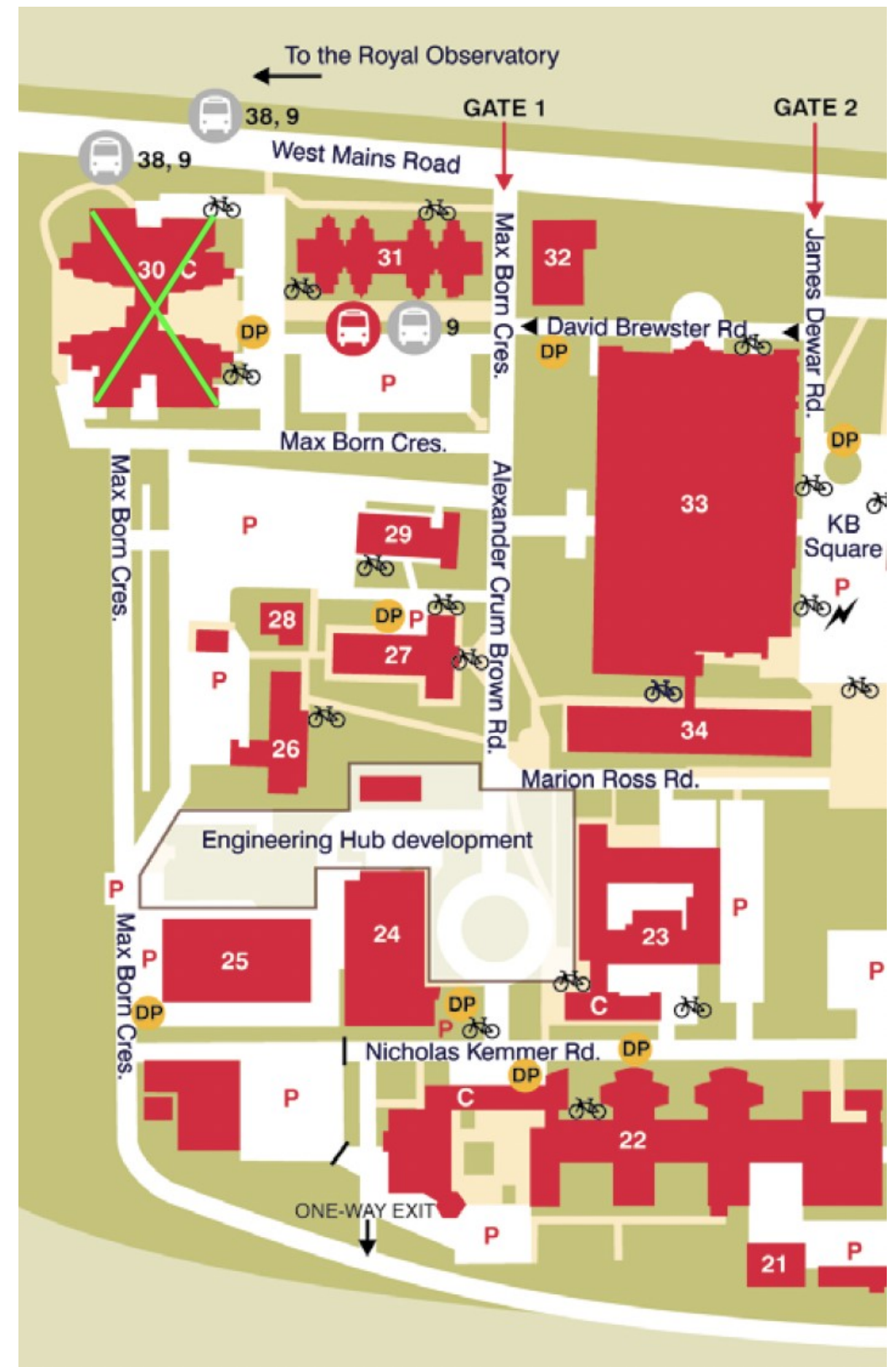
16:10–18:00 Thursday: AT 6.06

AT = Appleton Tower

MH = Murchison House



*Central
Area*



*King's
Buildings*

Learn + Course Webpage

Everything about the course will be published on the course's Learn page and course webpage

Organisational information: when & where

Lecture slides, reading assignment, tutorial exercises, solutions

Programming competition

Other resources

How

Undergraduate Topics in Computer Science

Donald Sannella · Michael Fourman
Haoran Peng · Philip Wadler

Introduction to Computation

Haskell, Logic and Automata



Electronic copy in the
university library

(Learn → Library Resources →
Resource List → Essential → View
online → Springer ebooks)

PDF, not EPUB!

Physical copies available in
Blackwells or online

Assessment

FP *quiz*, due 12.00 Wednesday (starting week 2)

CL *quiz*, due 16.00 Saturday (starting week 1)

(FP and CL flipped in weeks 4–5)

FP & CL *tutorial*, due 12.00 Tuesday

Tutorial meeting Thursday or Friday
each week, starting week 2

Programming project, weeks 9–11

Assessment

FP *quiz*, 1 point each

CL *quiz*, 1 point each

FP *tutorial*, 4 points each

CL *tutorial*, 4 points each

each best 8 of 10

Programming project, 20 points

Any questions?

Please ask questions!

- Ask in lectures
- Ask other students
- Ask demonstrators during labs
- Ask your tutor during tutorials
- Ask in the Piazza online forum

Do the work

You *must* listen to the lectures each week *before* the tutorial!

You *must* do the assigned reading each week *before* the tutorial!

You *must* do the tutorial exercises each week *before* the tutorial!

You will only receive marks for coursework if you *attend* the tutorial

You will fail the course if you don't do the work!

Common Marking Scheme

A1 90-100 Excellent

A2 80-89 Excellent

A3 70-79 Excellent

B 60-69 Very Good

C 50-59 Good

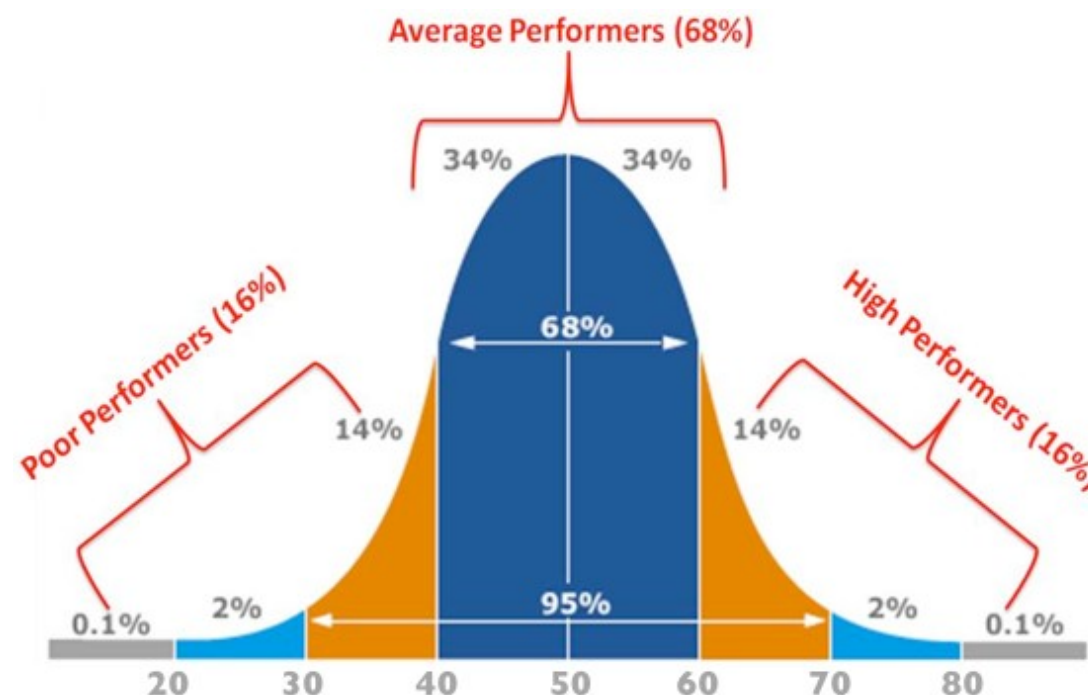
D 40-49 Pass

E 30-39 Marginal Fail

F 20-29 Clear Fail

F 10-19 Bad Fail

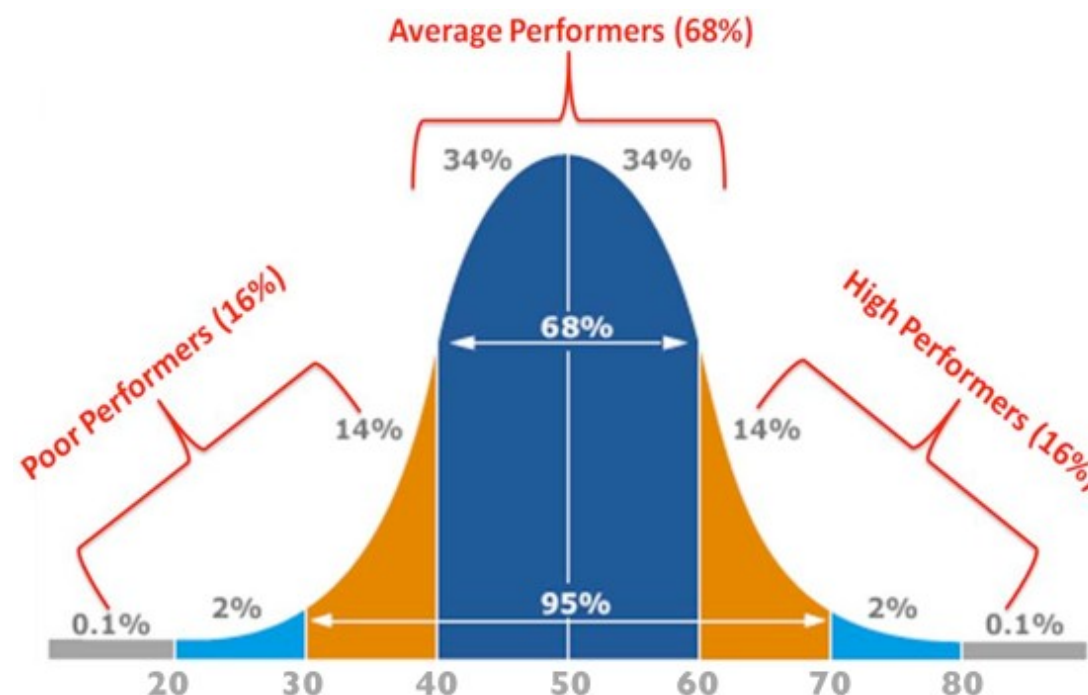
G 0-9 Bad Fail



Common Marking Scheme

3/4 on tutorials is an A

Optional questions are optional!



Good Scholarly Practice

You may collaborate, but you are responsible for knowing the material

You must pass Inf1A to progress

The School Academic Misconduct Officer will contact you if you break the rules. It will go into your record

Good Scholarly Practice

Your *mark* in Inf1A has *no* effect on your final degree classification

What you *learn* in Inf1A has a *huge* effect on your final degree classification