

# COMPSCI 2120A/9642A/DIGIHUM 2220A Course Outline - Fall 2021

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## **Course Information**

#### Course Information - Fall 2021

COMPSCI 2120A/9642A - Coding Essentials DIGIHUM 2220A - Computing & Informatics I

Component	Day	Start Time End Time		Location
Lecture 001	Tuesday	10:30 AM	12:20 PM	NSC-1
	Thursday	1:30 PM	2:20 PM	NSC-1
Tutorial 002	Thursday	10:30 AM	12:20 PM	HSB-236
Tutorial 003	Thursday	3:30 PM	5:20 PM	AHB-1B08
Tutorial 004	Wednesday	10:30 AM	12:20 PM	AHB-1B02

#### **List of Prerequisites**

No previous programming background assumed.

## **Contact Information**

#### **How to Contact Instructors**

Instructors	Email	Office	Office Hours - via Zoom
Duff Jones - Lecturer	djone5 <at>uwo.ca</at>	MC 26	Tuesdays: 1pm - 2pm
Rory Campbell - TA	rcamp <at>uwo.ca</at>	-	Wednesdays: 9am – 10am
Marios Grigoriou – TA	mgrigori <at>uwo.ca</at>	-	Thursdays: 9:30am – 10:30am
Nader Naghavi - TA	nhosse2 <at>uwo.ca</at>	-	Mondays: 12:30pm – 1:30pm

### **Topics Specific to You**

Students must use their Western (@uwo.ca) email addresses when contacting their instructors. Please include the course code in the subject line of the email to avoid the possibility of your email being overlooked (e.g., DIGIHUM 2220 – Self-Reported Absence). An example of a topic specific to you would be a question regarding your use of a self-reported absence (SRA).

## **Topics Impacting Everyone**

Please use the OWL Forums. Any question you have about course content has almost certainly come up for your classmates. By using the Forums instead of an email, everyone can benefit from the answer. If you know an answer to a classmate's question, please go ahead and answer it. If you see a mistake, offer a fix. Computer science and programming, like other areas of science, are collaborative, and the Forums should allow for a level of collaboration with your classmates. It should go without saying, but you may be surprised: **the OWL** 

**Forums aren't Reddit**, so let's stick to the subject matter of the course and be courteous to each other.

Forums will be arranged into a variety of topics, so please try to post to the right place. If it could go in two places, flip a coin to make the choice. Or, better yet, write a small program to flip a coin for you.

# Course Syllabus, Schedule, Delivery Mode

From the Academic Calendar: "Essential information processing and coding skills for students. Includes core concepts of algorithms and data structures; creating programs and scripts to address problems that arise in applied research; examples of data sets and analyses drawn from a variety of disciplines. No previous programming background assumed."

### **Learning Outcomes**

Upon completion of the course, students will:

- be able to write scripts and programs using the Python programming language;
- know how to debug scripts and programs written in Python;
- understand how to implement and manipulate basic data structures like lists, tuples and dictionaries;
- understand basic algorithms (e.g., searching, counting) and how to apply them to a variety of problems;
- be comfortable using Python to read from, and write to, files; and
- understand the object-oriented programming paradigm.

Please refer to "COMPSCI 2120A/9642A/DIGIHUM 2220A: Suggested Study Schedule – Fall 2021" for a week-by-week breakdown of the topics to be covered and the required readings for each week.

## **Delivery Mode**

All lectures and tutorials will be delivered in-person. The instructor and TAs will hold office hours via Zoom. (See "Contingency Plan..." on page 11 for more information.)

Students may make Zoom or in-person appointments with the instructor if they are unable to attend office hours.

## **Course Materials**

#### **Required Textbook**

## Think Python, 2<sup>nd</sup> Edition by Allen B. Downey

This book can be purchased as a paper textbook if you so choose, but it is a free textbook that can be accessed as a PDF or HTML document via the publisher's website: <a href="https://greenteapress.com/wp/think-python-2e/">https://greenteapress.com/wp/think-python-2e/</a>.

### **Required Software**

#### **Anaconda Individual Edition**

This software manages a lot of the more complicated aspects of Python, allowing you to focus on learning how to program rather than on how to set up a programming environment. You can download it here: <a href="https://www.anaconda.com/products/individual">https://www.anaconda.com/products/individual</a>.

## **PyCharm (Community or Professional)**

We will be using this as the integrated development environment (IDE). An IDE makes life a little easier for us when programming, as it will give us useful features like syntax highlighting, debugging, language support and more. (It's okay if that all sounds meaningless to you right now – it will make more sense as we delve into the course.) You can download it here: <a href="https://www.jetbrains.com/pycharm/">https://www.jetbrains.com/pycharm/</a>. Your student information will give you access to the professional edition if you want that edition.

### **Using OWL**

Students are responsible for checking the course OWL site (<a href="https://owl.uwo.ca/">https://owl.uwo.ca/</a>) on a **regular basis** for news and updates. This is the primary method (outside of lectures) by which information will be disseminated to all students in the class. **All course material will be posted to OWL**: <a href="https://owl.uwo.ca/">https://owl.uwo.ca/</a>.

If students need assistance with the course OWL site, they can seek support on the OWL Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

## **Technical Requirements**

Students must have access to a computer onto which they can install the course software. A stable internet connection will also be important, particularly if we must shift to online learning at some point in the course. Given that office hours are being held via Zoom, it would be helpful to have a working microphone and/or webcam.

## **Methods of Evaluation**

#### **Course Grade**

The overall course grade will be calculated as follows:

Assignments (x4) 50% Quizzes (x10) 15% Final Exam 35%

#### **Assignments**

The table below includes the suggested timeline for assignments. If, for any reason, the assignment schedule cannot be adhered to, the assignment marks will be prorated (i.e., if an assignment must be removed for some reason, the remaining assignments will still be worth 50% of the course grade).

Assignment	Date Assigned	<b>Due Date</b>	<b>Course Weight</b>	Workload
Assignment #1	September 17	September 24	5%	Light
Assignment #2	September 24	October 15	12.5%	Medium
Assignment #3	October 15	November 12	12.5%	Medium
Assignment #4	October 27	December 3	20%	Heavy

Note: The due dates listed above are tentative. Final due dates will be officially assigned with each assignment, but you can assume that they will be very close to the tentative due dates listed above.

### **Submitting Assignments**

**Assignments will be submitted via OWL** and may be checked to ensure that the code is of your own creation (see *Academic Policies* below). Assignments may be tested by automated software prior to TAs evaluating them. It is important, therefore, that you follow assignment instructions carefully in terms of naming conventions. Failure to do so may cause the autograder to stop working, which will result in a **significant mark deduction**.

### **Late Assignments**

All assignments are **due at 11:55pm Eastern time** on the assigned due date. Assignments will be accepted up to three days (72 hours) after the assigned due date. **Assignments will not be accepted after the three-day late period.** For each day late, there will be a 10% deduction from the overall value of the assignment. For example, the highest grade an assignment that is two days late can receive is 80%.

### Request for Mark Adjustment

Any request for an assignment mark adjustment **must be made within one week** of the assignment being returned on OWL. After that, regrading will not be considered. Such a request must be submitted to the course instructor in writing or via email, and it must include specific reasons why you believe you deserve more marks. The request must be accompanied by all materials that were originally handed in, as well as the original marker's grade summary sheet. **Prior to requesting a mark adjustment, the student should speak to the TA** regarding the assignment to ensure that they have correctly understood the TA's comments. The instructor will inform you by email when the re-evaluation process is complete.

### **Assignment Backups**

It is each student's responsibility to keep up-to-date backups of assignment files in case of system crashes or inadvertently erased files. Students must keep copies of all material submitted, as well as the actual graded assignment, to guard against the possibility of errors in recording marks. It is not safe to discard these materials until you are satisfied that your final mark for the course has been computed properly.

#### Quizzes

There will be a quiz every week starting in the second week of the course. These quizzes will be delivered via OWL. Each quiz will open on Monday and close on Friday. You can start the quiz at any point during the week, but once you start, you'll have 30 minutes to finish it. You only get one attempt at each quiz.

There are 11 quizzes in total, but only the best 10 will be counted toward your final grade. These quizzes are worth 1.5% each.

Questions are based on the week's readings. The expectation is that you have read the assigned section of *Think Python* **prior** to the quiz. All quizzes are open book, but you are expected to complete them on your own.

#### **Final Examination**

The final exam will be scheduled by the Registrar during the final examination period. The final exam is a three-hour, cumulative, closed-book exam. No reference materials, calculators or other electronic devices are permitted. It will be composed of true/false, multiple choice, short answer and code writing questions.

#### **Accommodated Evaluations**

Excused absences will be handled as follows:

#### Missed Quiz

There are 11 quizzes during the semester, but only 10 are counted toward your final grade; thus, a quiz missed via an excused absence (e.g., SRA) will simply be dropped. If a second quiz is missed because of an **excused absence**, then that quiz's weight will be added to the weight of the final examination (i.e., your final exam would be worth 36.5% instead of 35%).

### **Missed Assignment**

Each assignment can be submitted up to three days late (see *Late Assignments* above). In the event of an excused absence (e.g., SRA), your assignment will still be accepted up to three days (72 hours) after the assigned due date. Late penalties that would have been incurred will be ignored for each day that is covered by an excused absence. An excused absence cannot, however, be used to extend the late period beyond the usual three days.

## **Student Absences**

#### **Academic Consideration for Student Absences**

Students who experience an extenuating circumstance (illness, injury or other extenuating circumstance) sufficiently significant to temporarily render them unable to meet academic requirements may submit a request for academic consideration through the following routes:

- (i) Submitting a Self-Reported Absence (SRA) form provided that the conditions for submission are met. To be eligible for a Self-Reported Absence:
  - an absence must be no more than 48 hours;
  - the assessments must be worth no more than 30% of the student's final grade;
  - no more than two SRAs may be submitted during the Fall/Winter term.
- (ii) For medical absences, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner to the Academic Counselling office of their Faculty of Registration.
- (iii) Submitting appropriate documentation for non-medical absences to the Academic Counselling office in their Faculty of Registration.

Note that in all cases, students are required to contact their instructors within 24 hours of the end of the period covered, unless otherwise instructed in the course outline.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. All documentation required for absences that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty.

For the policy on Academic Consideration for Student Absences – Undergraduate Students in First Entry Programs, see:

https://www.uwo.ca/univsec/pdf/academic\_policies/appeals/accommodation\_illness.pdf and for the Student Medical Certificate (SMC), see:

https://www.uwo.ca/univsec/pdf/academic\_policies/appeals/medicalform.pdf.

## **Religious Accommodation**

When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and/or the Academic Counselling office of their Faculty of Registration. Please consult the University's list of recognized religious holidays (updated annually) at

https://www.multiculturalcalendar.com/ecal/index.php?s=c-univwo.

#### **Absences from Final Examinations**

If you miss the final exam, please contact the Academic Counselling office of your Faculty of Registration as soon as you are able to do so. They will assess your eligibility to write the Special Examination (the name given by the University to a makeup final exam).

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (e.g., more than 2 exams in 23-hour period, more than 3 exams in a 47-hour period).

# Accommodation and Accessibility

#### **Accommodation Policies**

Students with disabilities work with Accessible Education (formerly SSD), which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

https://www.uwo.ca/univsec/pdf/academic\_policies/appeals/Academic%20Accommodation\_disabilities.pdf.

## **Academic Policies**

The website for the Registrar is <a href="https://www.registrar.uwo.ca/">https://www.registrar.uwo.ca/</a>.

In accordance with policy,

https://www.uwo.ca/univsec/pdf/policies\_procedures/section1/mapp113.pdf,

the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

All quizzes are open-book, but **the final exam is closed-book**. Electronic devices will **not be permitted** during the final examination.

**Scholastic offences** are taken seriously, and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following website:

https://www.uwo.ca/univsec/pdf/academic policies/appeals/scholastic discipline undergrad.pdf.

**Code Checking Software** (i.e., MOSS) may be used to ensure that all code submitted for evaluation is the original work of the student submitting that code.

In the event of a return to online learning due to the ongoing pandemic, the final exam in this course will be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide **personal information** (including some biometric data), and the session will be **recorded**. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at: <a href="https://remoteproctoring.uwo.ca/">https://remoteproctoring.uwo.ca/</a>.

# **Support Services**

Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: <a href="https://www.uwo.ca/sci/counselling/">https://www.uwo.ca/sci/counselling/</a>.

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Accessible Education at (519) 661-2147 if you have any questions regarding accommodations.

Western University is committed to a thriving campus as we deliver our courses in the mixed model of both virtual and face-to-face formats. We encourage you to check out the Digital

Student Experience website to manage your academics and well-being: <a href="https://www.uwo.ca/se/digital/">https://www.uwo.ca/se/digital/</a>.

Students who are in emotional/mental distress should refer to Mental Health@Western (<a href="https://uwo.ca/health/">https://uwo.ca/health/</a>) for a complete list of options about how to obtain help.

Additional student-run support services are offered by the USC: <a href="https://westernusc.ca/your-services/">https://westernusc.ca/your-services/</a>.

## **Policies Related to COVID-19**

#### **Masks**

Students will be expected to wear three-layer, non-medical masks at all times in the classroom, per Western policy and public health directives. **Students who are unable to wear a mask for medical or religious reasons** must seek formal accommodation through Accessible Education and present medical documentation.

Students unwilling to wear a mask as stipulated by Western policy and public health directives will be referred to the Dean, and such actions will be considered a violation of the Student Code of Conduct.

#### **Food and Drinks**

Students are not permitted to eat or drink while in class to ensure masks stay in place. Students will be able to eat and drink outside of the classroom during scheduled breaks.

### Course Absences Due to Daily COVID Screening Questionnaire

Missed assessments (e.g., presentations, essays, quizzes, tests, midterms, etc.) require formal **academic considerations** (typically self-reported absences and/or academic counselling). Methods for dealing with missed work and course content are at the discretion of the instructor(s) (see "Missed Quiz" and "Missed Assignment" above). Students should be aware that some learning outcomes cannot be easily made up and may need to be completed in a subsequent year. Your instructor will provide you with further information as to how this applies within this course.

Students who demonstrate a pattern of routinely missing coursework due to self-reported COVID symptoms, and therefore do not demonstrate mastery of the learning outcomes of the course, will not receive credit for the course.

### Contingency Plan for an In-Person Class Pivoting to 100% Online Learning

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, all remaining course content will be delivered

entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will not change. Any remaining assessments will also be conducted online as determined by the course instructor. In the event that online learning is required, a stable internet connection with working microphone and webcam will be required. As has been the case in the past, the decision to pivot to online learning will be made by Western, and not individual instructors or departments (excepting temporary online instruction in the event of instructor illness).