CS 3305A: Operating Systems

The University of Western Ontario
Course Outline – Fall 2017

1. General Course Information

Course Information

CS 3305A: Operating Systems
Monday: 10:30am – 11:30am, WSC-55; Wednesday: 4:30pm – 6:30pm, MC-110

Prerequisites

Either (Computer Science 2208A/B and 2211A/B) or (Computer Science 2101A/B and 2208A/B) or (Computer Science 2210A/B, 2211A/B, ECE 3375A/B, and registration in the fourth year of a BESc program in Computer Engineering or Mechatronic Systems Engineering.)

Unless you have either the prerequisites for this course or written special permission from your Dean to enroll in it, you will be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

Students who have special permission from their Dean to enroll in this course may not have been exposed to some of the background material expected for this course; It is the responsibility of these students to gain familiarity with the material on their own.

2. Instructor

Name – Dr. Anwar Haque
Office Location – Middlesex College: MC 415
Phone Number – 519-661-2111 Ext. 87428
E-Mail – ahaque32@uwo.ca

Office Hours (Instructor): Monday 11:30am – 12:30pm. Wednesday: 3pm-4pm
Office hours (Teaching Assistants- TAs): To be announced on the course website.

3. Course Description

This course presents fundamental concepts related to the design and implementation of operating systems. Topics includes basic operating system structure, process scheduling, process and thread synchronization and concurrency, memory management, file systems and storage servers, and if time permits a few "hot" topics.

4.   Course Materials

Suggested Textbook: One book is recommended for this course and is available for purchase from the University Bookstore.

- • A. Silberschatz, P. Galvin, and G. Gagne *Operating System Concepts (Ninth Edition)*, John Wiley & Sons. Inc, Dec 2012; ISBN: 978-1-118-06333-0

Lecture Notes: Lectures notes will be made available on the course website.

Course Website: Students should check the course website and OWL (https://owl.uwo.ca) on a regular basis for news and updates. Course website will be the primary method by which information will be disseminated to all students in the class. Students are responsible for checking the course website on a regular basis. The course website is http://www.csd.uwo.ca/courses/CS3305b/

E-mail contact: We will occasionally need to send email messages to the whole class, or to students individually. Email will be sent to your ITS email address (depending on which one comes with the class list). You must make sure that you read your email on ITS on a frequent and regular basis, or have it forwarded to an alternative email address if you prefer to read it there. However, you should note that email at ITS (your UWO account) and other email providers such as hotmail.com or yahoo.com may have quotas or limits on the amount of space they can use. If you let your email accumulate there, your mailbox may fill up and you may lose important email from your instructors. Losing email that you have forwarded to an alternative email address is not an excuse for not knowing about the information that was sent.

5.   Methods of Evaluation

- • There are two basic components that will be used to determine a student's mark in the course:

  - – A final exam worth 55% of the overall mark

  - – Three programming assignments worth 45% of the overall mark

- • The following rules are designed to ensure that students meet certain minimum standards:

  - – To be eligible to pass the course, a student must receive at least 40% in the final exam component and at least a 40% in the assignments.

  - – To be eligible to receive an overall grade of 60% or higher in the course, a student must receive at least 50% in the final exam component (i.e., 50% of 55) and at least 50% in the assignments (i.e., 50% of 45).

- **Exams**

  There is a final exam that is scheduled by the Registrar. This will be closed book / closed notes exam; and no electronic devices are allowed except regular calculator.

- **Assignments**

  - Students will submit their assignments through OWL systems

  - To be eligible for full marks, assignments must run on the departmental computing equipment. You may develop assignments on your home computer, but you must allow for the amount of time it will take to get the final product working on Computer Science's machines. Assignments that work on your own computer but not on departmental equipment will be eligible for part marks.

  - Assignments will be made available on the course home page. Students are responsible for checking the course web page on a regular basis.

  - There will be three assignments (worth 45% of the final mark). Submission instructions will be provided for each assignment.

Assignment	Due Date	Expected Load	Weight
1	Oct 6	Medium	15%
2	Oct 31	High	15%
3	Nov 30	High	15%

    Table 1: Programming Assignment Workload

  - The student evaluation procedure cannot be changed from that given in the course outline without prior consultation with the Undergraduate Chair and approval of the Dean of Science.

  - All assignments are due by midnight (electronically) of the due date. Late assignments may be handed in, but with a penalty of 5 marks a day. Saturday and Sunday together count as one day. Assignments more than 5 days late will not be accepted.

  - Every effort will be made to have assignments marked and handed back within 2 weeks of the hand-in date, preferably sooner.

  - To guard against the possibility of lost assignments and errors in recording marks, students are advised to retain all assignments that are handed back to them, as well as disk copies of all materials they hand in, at least until final marks for the course are posted.

  - Late Coupons: Each student is given 3 "late coupons". Each coupon can be thought of as a potential one-day assignment extension. It is entirely up to you to decide when to use your coupons; more than one coupon may be used per assignment. You will hand in the coupon(s) together with the assignment, and the number of coupons you use will be recorded. The intent of late coupons is to give you some "free" days in case of minor

illness, work overload, etc.; no extensions will be given in such cases. The rules for late coupons are the following:

* Coupons are not transferable to another student.
* Once a coupon has been used, you cannot "take it back" to use for another assignment instead.
* Coupons cannot be redeemed retroactively. (If an assignment has been marked, a coupon cannot later be used to reduce the late penalty.)
* Unused coupons are not redeemable for extra marks.
* Using a late coupon does not change the final date on which an assignment will be accepted. Whether or not coupons are used, the assignment must be handed in within 5 days of the original due date.

6.   Accommodation and Accessibility

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or supporting documentation to the Academic Counselling Office of your home faculty as soon as possible. If you are a Science student, the Academic Counselling Office of the Faculty of Science is located in WSC 140, and can be contacted at scibmsac@uwo.ca.

For further information, please consult the university's medical illness policy at http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf

If you miss the Final Exam, please contact your faculty's Academic Counselling Office as soon as you are able to do so. They will assess your eligibility to write the Special Exam (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" (see http://www.registrar.uwo.ca/examinations/exam_schedule.html).

7.   Academic Policies

The website for Registrarial Services is http://www.registrar.uwo.ca.

In accordance with policy, http://www.uwo.ca/its/identity/activatenonstudent.html, 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.

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 Web site: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

Students must write their essays and assignments in their own words. Whenever students take an idea, or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence.

If assignments are to be individual assignments: You may discuss approaches to problems among yourselves; however, the actual details of the work (assignment coding, answers to concept questions, etc.) must be an individual effort.

The standard departmental penalty for assignments that are judged to be the result of academic dishonesty is, for the student's first offence, a mark of zero for the assignment, with an additional penalty equal to the weight of the assignment also being applied. You are responsible for reading and respecting the Computer Science Department's policy on Scholastic Offences and Rules of Ethical Conduct at the following Web site http://www.csd.uwo.ca/current_students/undergraduate_students/scholastic_offences.html

The University of Western Ontario uses software for plagiarism checking. Students may be required to submit their written work and programs in electronic form for plagiarism checking.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com). Computer-marked, multiple-choice tests and exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

8.   Support Services

The policy on Accommodation for Students with Disabilities can be found here:
www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_disabilities.pdf.

The policy on Accommodation for Religious Holidays can be found here:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to your Dean's office as soon as possible and contact your instructor immediately. It is the student's responsibility to make

alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed. In the event of a missed final exam, a "Recommendation of Special Examination" form must be obtained from the Dean's Office immediately. For further information please see: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf

Learning-skills counsellors at the Student Development Centre (http://www.sdc.uwo.ca) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Students who are in emotional/mental distress should refer to Mental Health@Western (http://www.health.uwo.ca/mental_health) for a complete list of options about how to obtain help. Additional student-run support services are offered by the USC, http://westernusc.ca/services.