

# Course Addendum

Semester**: Winter 2023** Subject Code: **SEP400** Section**: NAA**

Subject Title: **Operating Systems**

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Office Hours**:** **Monday 9:50am-11:35am, Thursday 9:50am-11:35am**

Approved by:

Kathy Dumanski, Chair, School of Software Design and Data Science

Please read this addendum to the general course outline carefully. It is your guide to the course requirements and activities.

Please refer to the course outline for learning outcomes, course description and text and materials.

Please also visit [sdds.senecacollege.ca](https://seneca-my.sharepoint.com/personal/laura_ojanen_senecacollege_ca/Documents/Course%20Materials/ict.senecacollege.ca) for key information on courses, graduation requirements, transfer credit, and more from the School of Software Design and Data Science.

**Assessment Summary**

Workshops - 20%

Assignments - 30%

Quizzes - 10% (1 bonus quiz)

Test - 20%

Final Exam - 20%

## Course Policies

Satisfactorily complete all assignments (they have to be working)

Achieve a weighted average of 50% or better for the midterm and final exam

Achieve a grade of 50% or better on the overall course (midterm, final, quizzes, Workshops and assignments)

**Academic Policies:**

<http://www.senecacollege.ca/about/policies/academics-and-student-services.html>

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**WEEKLY SCHEDULE**

**Semester Year**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week** | **Topic or Skill** | **Reading** | **Assessment** | **Weight** |
| **Week 1**  **Jan 9-13** | **Introduction, Makefiles**  Intro to Linux,  Windows vs Linux  Linux File-System  Linux System Functions  Makefile (lab) | **Oper Systems Ch 1**  **Linux Prog. Ch 1-3** |  |  |
| **Week 2**  **Jan 16-20** | **File-System Interface**  Static/shared libraries  File I/O  Gdb  Dup,dup2  cerr | **Oper Systems Ch 11**  **Linux Prog. Ch 4-5, 41** | **1 pre-lecture quiz,**  **Workshop 1 (due end of week 3)** | **1% Quiz** |
| **Week 3**  **Jan 23-27** | **I/O Systems, Device Drivers**  IOCTL’s  Device Drivers | **Oper Systems Ch 13**  **Linux Prog. Ch 4** | **1 pre-lecture quiz,**  **Workshop 2 (due end of week 4)** | **1% Quiz**  **2% Workshop 1** |
| **Week 4**  **Jan 30-Feb 3** | **Processes, Signals**  Fork,exec  signals | **Oper Systems Ch 3-4**  **Linux Prog. Ch 6,20,24-26** | **1 pre-lecture quiz,**  **Workshop 3 (due end of week 5)** | **1% Quiz**  **2% Workshop 2** |
| **Week 5**  **Feb 6-10** | **Inter-process Communication (sockets)**  Sockets  Makefiles, cont’d (lab) | **Oper Systems Ch 3**  **Linux Prog. Ch 56,57,59** | **1 pre-lecture quiz,**  **Workshop 4 (due end of week 6)** | **1% Quiz**  **2% Workshop 3** |
| **Week 6**  **Feb 13-17** | **Threads, Mutexes and Deadlocks**  Threads  Mutexes  Server design | **Oper Systems Ch 4,7**  **Linux Prog. Ch 29-30,60** | **1 pre-lecture quiz,**  **Workshop 5 (due end of week 7)** | **1% Quiz**  **2% Workshop 4** |
| **Week 7**  **Feb 20-24** | **Review,**  **MidTerm** |  |  | **2% Workshop 5**  **20% midterm** |
|  |  | **Study Week** |  |  |
| **Week 8**  **Mar 6-10** | **Inter-process Communication\_II**  Pipes, fifos, message queues, IPC comparison | **Oper Systems Ch 3**  **Linux Prog. Ch 43,44,46** | **1 pre-lecture quiz,**  **Workshop 6 (due end of week 9),**  **Assignment 1 (due end of week 10)** | **1% Quiz** |
| **Week 9**  **Mar 13-17** | **Process Synchronization, Shared Memory**  Semaphores  Shared memory | **Oper Systems Ch 3,6**  **Linux Prog. Ch 48,53** | **1 pre-lecture quiz,**  **Workshop 7 (due end of week 10)** | **1% Quiz**  **2% Workshop 6** |
| **Week 10**  **Mar 20-24** | **CPU Scheduling**  Nice Value  Process Scheduling  CPU affinity | **Oper Systems Ch 5**  **Linux Prog. Ch 35** | **1 pre-lecture quiz,**  **Workshop 8 (due end of week 11)** | **1% Quiz**  **2% Workshop 7**  **15% assign 1** |
| **Week 11**  **Mar 27-31** | **Memory Management**  Virtual Memory Man. | **Oper Systems Ch 8,9**  **Linux Prog. Ch 6,49,50** | **1 pre-lecture quiz,**  **Workshop 9 (due end of week 12),**  **Assignment 2 (due end of week 13)** | **1% Quiz**  **2% Workshop 8** |
| **Week 12**  **Apr 3-7** | **Storage Management** | **Oper Systems Ch 10**  **Linux Prog. Ch 13,14** | **1 pre-lecture quiz,**  **Workshop 10 (due end of week 13)** | **1% Quiz**  **2% Workshop 9** |
| **Week 13**  **Apr 10-14** | **Security** | **Oper Systems Ch 15,16**  **Linux Prog. Ch 38** | **1 pre-lecture quiz** | **1% Quiz**  **2% Workshop 10**  **15% assign 2** |
| **Week 14**  **Apr 17-21** | **Review,**  **Final Exam** |  |  | **20% final** |

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