CMPT581 Course Outline

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Materials To Be Covered  Chapters 1, 2, 3, 5 and 6 of System software—an introduction to systems programming, by Leland L. Beck. After taking this class, students should feel comfortable writing an assembler, and have good ideas about how to construct compilers. Some issues about other system software such as operating systems will also be discussed.

- Introduction to the structure of Simplified Instructional Computer (SIC).
  Assembly programming for SIC.
- Design of assembler—basic assembler functions, machine-dependent and machine-independent features.
- Loader and linker design—basic functions and machine-dependent and machine-independent features.
- The construction of compilers: Bottom-up and top-down approaches.
- Introduction to operating system: Selected topics.
- Some other contents may be added. Students are advised to take class notes.

Class Schedule  Class meets on Wednesday at 8:15 PM, in Room RI-267.

Office Hours  7:00–8:00 PM, Wednesday. Other times by appointment.

Homework, Exams and Grades  There will be programming projects at appropriate stages of the course. (There may be two or three altogether.) Written homework may also be assigned. Students will be asked to implement the ideas and techniques of system software design, especially assembler design, discussed in the class. The finished programs will be emailed to my account (wang@pegasus.montclair.edu) and tested with my examples. The results will be graded and will be part of your final grade. All projects should be handed in on time. Late projects will receive discounted grades.

Final Examination will be held on Wednesday, May 11, 8:15–10:15 PM. Midterm test will be sometime around the spring break.

The course grades are decided based on projects/homework (30%), midterm (30%) and final exams (40%).