# CS 445: Compiler and Translator Design

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| Professor: | Clinton Jeffery | Class Meets: MTWR 1:30pm in JEB 026. The class is also run as an EO video (recorded) class |
| Office: | JEB 237 | Office Hours: Mon/Wed 2:30-3:20pm, and by appointment. |
| Phone: | 208-885-4789 | Web: http://www2.cs.uidaho.edu/~jeffery/courses/445/ |
| E-mail: | jeffery@cs.uidaho.edu | Required Text: Louden, Compiler Construction |
| Prerequisites: | CS 210 and CS 385 | Recommended Text: Levine, Flex+Bison |

## Course Description and Goals

Algorithms used by the following system software: assemblers, macro-processors, interpreters, and compilers; compiler design options and code optimization; all concepts implemented in major programming assignments.

Goals include: learn how to write and connect a scanner, parser, semantic analyzer and code generator into a simple working compiler. Learn notations and tools used by developers of compilers. Understand symbol tables and type checking. Know primary challenges associated with code generation.

## Attendance and Grading

Attendance is required. The grading will be proportioned as follows: 50% for homeworks/quizzes, 25% for the midterm exam, 25% for the final exam. Expect course content to be added on-line as we go. Check the course web page for updates at least once a week.

## Exams, Homeworks, and Quizzes

We will have exams and homeworks. Occasionally I might give a quiz that tests your reading comprehension. Exams test your mastery of concepts; homeworks allow you to demonstrate that you can put ideas into practice.

## Student Outcomes

This course develops student proficiency and assesses student outcomes in areas such as the following:

- Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
- Apply computer science theory and software development fundamentals to produce computing-based solutions.

## Policy Statements

Cheating in all forms is strictly forbidden, with severe penalties. For homeworks you are required to work alone unless the assignment states explicitly otherwise. You are encouraged to seek assistance from your instructor on-line or in person. You may discuss assignments with classmates, but Do Not Share Code.

University of Idaho Classroom Learning Civility Clause In any environment in which people gather to learn, it is essential that all members feel as free and safe as possible in their participation. To this end, it is expected that everyone in this course will be treated with mutual respect and civility, with an understanding that all of us (students, instructors, professors, guests, and teaching assistants) will be respectful and civil to one another in discussion, in action, in teaching, and in learning. Should you feel our classroom interactions do not reflect an environment of civility and respect, you are encouraged to meet with your instructor during office hours to discuss your concern. Additional resources for expression of concern or requesting support include the Dean of Students office and staff (5-6757), the UI Counseling & Testing Center's confidential services (5-6716), or the UI Office of Human Rights, Access, & Inclusion (5-4285).

Disability Support Services Reasonable Accommodations Statement: Reasonable accommodations are available for students who have documented temporary or permanent disabilities. All accommodations must be approved through Disability Support Services located in the Idaho Commons Building, Room 306 in order to notify your instructor(s) as soon as possible regarding accommodation(s) needed for the course. DSS phone: 885-6307 email: dss@uidaho.edu website: www.access.uidaho.edu