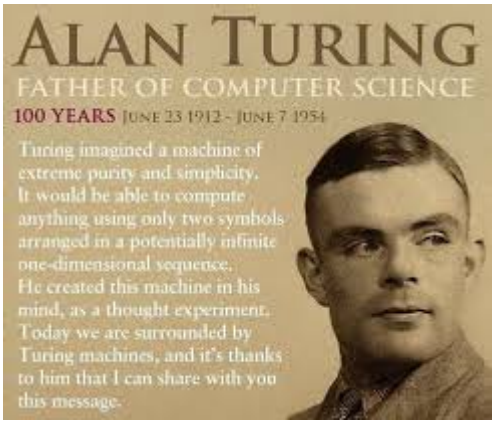
# Course Syllabus

Jump to Today




This course is an introduction to finite automata, regular languages, pushdown automata, turing machines, and context-free grammars. It also covers counting and combinatorics with applications to the analysis of algorithms. **COSC 311/317 is a prerequisite for this class.** The course grade will be determined from homework (20%), clicker quiz points (20%), two regular exams (20% each), and the final exam (20%). **Excused absences for exams will only be granted by approved absences from the Office of the Dean of Students.** Click **here (http://dos.utk.edu/absence-notifications/)** to access the Dean of Students website for excused absence requests.

**Course Schedule**: The **course schedule page (https://utk.instructure.com/courses/139839/pages/course-schedule-and-deadlines)** contains all the deadlines for exams and homework as well as the material covered each week. Consult this Canvas page on a regular basis in order to plan your study time appropriately.

**ZyBook**: Similar to COSC 311/317, COSC 312 will exploit a chapter or two of the Discrete Structures **zyBook (https://learn.zybooks.com/zybook/UTKCOSC312BerryFall2021)**. Students who have paid for access to the COSC 311/317 zyBook (from a previous term) will only be charged (**$23. 85**) for accessing the new (additional) chapters that are relevant to COSC 312. Contact **Shirley Streeter** (**sstreete@utk.edu (mailto:sstreete@utk.edu)**) for questions regarding the inclusive access charge for these additional chapters. Some of the COSC 312 homework assignments will be based on the Participating/Challenge Activities in these new chapters. If you could not access the zyBook by the link above do the following:

- Sign in or create an account at learn.zybooks.com (use your **netid@tennessee.edu (mailto:netid@tennessee.edu)** login for this)
- Enter zyBook code **UTKCOSC312BerrySpring2022**

**Clicker Quizzes:** To assess student comprehension of course material, the instructor will periodically use interactive quizzes that consist of 3 questions answered via clickers. Students **are required** to participate in these clicker questions (20% of the course grade). Each student enrolled is responsible for

registering their device (smartphone) with **Turning** explicitly for COSC 312 (each class you have that uses clickers requires a separate registry). A correct answer to a quiz question earns 3 points and an incorrect answer earns 1 point with the goal of accumulating **110** points for a perfect (100%) clicker quiz average. There will be a sufficient number of clicker quizzes given to allow for any unexpected absence. Hence, there will be **no makeup clicker quizzes offered during the term.**

In order to participate interactively for the COSC 312 in-class quizzes, you must register with **Turning** and create an account allows you to tie together all software platforms and clickers. An **account is required** for use with Turning products (we will be using **Point Solutions**). Here are the simple steps:

1. Go to **www.turning.com (https://www.turning.com/)** .
2. Select **Login** from the top navigation with the **Point Solutions** option.
3. Click on North/South America Log In box.
4. Use **netid@tennessee.edu** as your login with your UTK **netid** and authenticate with Duo Mobile.
5. Click on the box for **COSC 312** to link your Canvas account with the Turning software.

If you already have an account with Turning and just need to activate this course on your smartphone app, just follow the link for **Turning Account Registration** provided under the **Modules** tab (on the left)..

**Final Exam (**Exam 3) for COSC 312 is scheduled for 3:30-6:00pm on **Monday, May 16**.

**Homework Submission**: All homework problems will be provided on Canvas (in a take-home quiz format) so that students can either edit the handout or print it out and write their solutions on the handout. The handout will be provided in three formats: **docx, tex,** and **pdf** file formats. Student are required to upload their docx or pdf file to Canvas by the designated due date and time. **No late submissions to Canvas will be accepted for grading and no hardcopies delivered to the instructor or GTA will be accepted for grading.** Failure to follow these instructions will result in a grade of zero for any assignment. **Solutions to homework problems will be provided in lecture or via Piazza.** For Q&A related to homework assignments, class discussions, exam preparation, etc. we will use **Piazza** (see menu item on the left panel of Canvas or click **here (http://piazza.com/utk/spring2022/cosc312)** ).

Links to helpful resources for using LaTeX (**tex** file extension) are provided below:

- **Overleaf (https://www.overleaf.com/)** - on online LaTeX editor
- **The LaTeX Project (https://www.latex-project.org/)** - overview, references, and software distributions
- **TeXdoc (http://www.texdoc.net/)** - online documentation and querying system for TeX and LaTeX.

**Announcements**: There will be periodic course announcements made in lecture that may or may not also be posted on Canvas. **Students are responsible for any announcements made in lecture (regardless of whether or not they are in attendance).**

**Lecture Notes** (M. Berry, © 2022): These **notes** provide an outline for class discussions with some details to be completed during class. Click **here (https://utk.instructure.com/courses/139839/files/11277693?wrap=1)** **(https://utk.instructure.com/courses/139839/files/11277693/download?download_frd=1)** to access the lectures notes (workbook) for COSC 312/Spring 2022.

**Reference Book** (not required): Introduction to the Theory of Computation, Third Edition by M. Sipser (Cengage Learning). This book has been **missing** from the shelves in Hodges Library for some time; when a replacement is available, students will be notified. Click **here (https://www.cengage.com/c/introduction-to-the-theory-of-computation-3e-sipser/9780357670583PF/)** to purchase access to the e-book version of the Sipser book (from Cengage Learning).

**Topics Covered**: regular languages, context-free languages, Church-Turing thesis, decidability, reduciblity, computability, and complexity (P, NP).

**Academic Standards of Conduct**: All students are expected to abide by the University Honor Statement (*An essential feature of the University of Tennessee is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the University, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity*).

**Grade Assignments**: Here is a rough distribution of letter grades that may be modified according to gaps in the final distribution of course grades: **A: 100-93, A-: 92-90, B+: 89-88, B: 87-83, B-: 82-80, C+: 79-78, C: 77-70, C-: 69-68, D+: 67-66, D: 65-60, F: 59-0.**

**Office Hours**

**M. Berry** will hold an online Zoom-based office hours (upon request via Piazza post). **Tom Hills** (GTA) will monitor the COSC 312 Piazza site on a regular basis for Q&A.

Click **here (https://utk.instructure.com/courses/139839/pages/faculty-and-gta-information)** for more contact information on your instructor and GTA.

# Course Summary: