

Course Title: Formal Languages and Automata Theory, Fall 2019

Instructor: Dr. R. Paul Mihail, 2119 Nevins Hall, Email: rpmihail@valdosta.edu

Class Meeting Times and Location: Nevins Hall, Room 1121, Tuesday and Thursday from 2:00 PM to 3:15 PM

Office Hours: TR 11:00am-2:00pm.

Required Textbook: An Introduction to Formal Languages and Automata, 6th Edition, by Peter Linz. Publisher: Jones and Bartlett. ISBN-10: 1284077241, ISBN-13: 978-1284077247.

Course Description: Concepts pertaining to regular expressions, finite state machines, regular languages, regular grammars, non-regular languages, decidability, context-free grammars, and Turing machines.

Learning Outcomes: Students will understand basic programming terminology and techniques. More specifically students will:

1. Analyze and construct finite automata.
2. Analyze and construct regular grammars for regular languages.
3. Analyze and construct context-free grammars and languages.
4. Examine the relationship between formal languages and programming languages.
5. Analyze and construct pushdown automata.
6. Analyze and construct Turing Machines.
7. Identify the limits of algorithmic computations.

Course Prerequisites: CS 2620 and CS 3410, each with a grade of C or better.

Assessment:

The grade for this course will be calculated as follows:

- Attendance/participation: 10%
- Homework assignments: 10%
- Exam 1: 20%
- Exam 2: 20%
- Exam 3: 20%
- Final Exam (comprehensive):20%

Grades will be assigned according to the following scale:

90-100% = A
80-89.99% = B
70-79.99% = C
60-69.99% = D
Below 60% = F

Exams:

- 3 exams scheduled during the semester.
- Final exam: Wednesday, December 11th at 2:45PM-4:45PM.

What to do if you miss...

- **a lecture** - find out what the material covered was, read the book, borrow someone's notes, find out what any announcements or assignments were. If attendance was taken and you have a documented excuse as described in the attendance policy, contact your professor within one week of your absence.
- **a test or quiz** - there are no makeup quizzes or exams. If you missed an exam, you must provide the written documentation for your absence. If your absence is due to one of the following types, then upon review of the written documentation and instructor's approval, the score on your final exam would be used to fill in for the missed test. If your absence is not excused or if you miss more than one exam, a score of zero will be recorded for that test.
- **a deadline on an assignment** - see the late policy.

Late Assignments You are expected to complete all assignments in a timely fashion. Some assignments are for your benefit and will not be collected. Completing these exercises should greatly enhance your performance on tests and the final.

Academic Honesty:

Students are expected to do their own work. Cheating is considered a serious offense by the University. Any form of "seeking an unfair academic advantage" is considered cheating.

Withdrawing:

If you decide to leave the class, please do it officially. There is a date on the Academic Calendar past which you are not allowed to drop for academic reasons. We'd much rather give a W grade than an F. Don't just stop coming to class - you WILL get an F! Take care of your transcript! All policies associated with this course are subject to revision. Reasonable notification will be provided to students prior to any major changes.

New Withdrawal Policy (5 W Policy): Effective Fall 2010, all undergraduate students are limited to five course withdrawal (W) grades for their entire enrollment at Valdosta State University. Once a student has accumulated five W grades, all subsequent withdrawals (whether initiated by the student in BANNER or initiated by the instructor on the proof roll) will be recorded as WF. The grade of WF is calculated as an F for GPA purposes. To get more details about this policy, students are strongly recommended to check the following link:
<http://www.valdosta.edu/academic/WithdrawalPolicy.shtml>

Extra Help: Do not hesitate to come to my office during office hours or by appointment to discuss a homework problem or any aspect of the course. There are also tutors available Monday through Friday, see Dr. Said Fares (office in 1126 Nevins Hall) for more information. There is also the Student Success Center on campus located on the ground floor of the Langdale Residence Hall. The Student Success Center offers free one-on-one tutoring for core courses, success workshops, etc. You can find more information at <http://www.valdosta.edu/academics/student-success-center/>.

Attendance Policy: Please keep in mind that attendance is extremely important for this course. You are expected to show up for lectures and participate. In case you have to miss class, please make sure you ask for notes or see your professor. While not directly part of your course grade, in-class quizzes/labs/exams have a dramatic impact on your grade. If you have a valid university excuse, please notify your professor as soon as possible.

Accommodation for Disabilities: If you have a documented disability that requires academic accommodations, please contact your professor as soon as possible. In order to receive accommodations in this course, you must provide a Letter of Accommodation from the Access Office for Students with Disabilities located in Farver Hall. The phone numbers are 229-245-2498(V/VP) and 229-219-1348(TTY). Accommodations can be made for all parts of the course. We only make special arrangements for class activities after we receive the letter.

Student Opinion of Instruction: At the end of the term, all students will be expected to complete an online Student Opinion of Instruction survey (SOI) that will be available through SmartEvals. Students will receive an email notification through their VSU email address when the SOI is available (generally at least one week before the end of the term). SOI responses are anonymous to instructors/administrators, and they will be able to access results only after they have submitted final grades. Before final grade submission, instructors will not be able to see any responses, but they can see the percentage of students who have or have not completed their SOIs. While instructors will not be able to see student names, an automated system will send a reminder email to those who have yet to complete their SOIs. Students who withdraw or drop a course will also be sent invitations to complete the Dropped Course Survey. Complete information about the SOIs, including how to access the survey, is available on the SOI Procedures webpage: <https://www.valdosta.edu/academics/academic-affairs/sois/welcome.php>

Title IX Statement: Valdosta State University (VSU) is committed to creating a diverse and inclusive work and learning environment free from discrimination and harassment. VSU is dedicated to creating an environment where all campus community members feel valued, respected, and included. Valdosta State University prohibits discrimination on the basis of race, color, ethnicity, national origin, sex (including sexual harassment and sexual violence), sexual orientation, gender

identity, religion, age, disability, genetic information, or veteran status, in the University's programs and activities as required by applicable laws and regulations such as Title IX. The individual designated with responsibility for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination policies is the University's Title IX Coordinator: the Director of the Office of Social Equity, titleix@valdosta.edu, 1208 N. Patterson St., Valdosta State University, Valdosta, Georgia 31698, 229-333-5463.