CMPS 512 --- Theory of Computing
Fall 2019
Credit: 3.0 hrs, Time: TR: 12:30-1:50pm, Location: N209, Thurman Hall

Instructor:

Professor:	Shuju Bai, Ph.D.
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Catalog Description:
The course covers theoretical topics including Turing Machines, algorithmic languages and recursive functions. Coding schemes are used for universal machines and programs, and to show that some problems, including the Halting problem, are unsolvable. Polynomial and exponential time algorithms are discussed.

Prerequisites:
Knowledge of Discrete Structures.

Audience:
This course is designed for students in the graduate program in computer science.

Required textbook:
- Peter Linz, An introduction to Formal Languages and Automata, sixth edition, ISBN: 9781284077247
- Other references

Topics:

- Regular languages
- Context-free languages
- Pushdown automata
- Turing machines
- Computability
- Complexity

Course requirements:
Students are expected to attend all lectures, attempt all assignments, and take all tests. Excessive absences will affect your final grade. Assigned tests can only be made up after documented medical excuses are presented. No late submission.

Course Work:

	Approx. weight in grade
Assignments	40%
Midterm (In class, close book)	30%
Final (according to schedule, comprehensive)	30%

Grading Scale:

90-100	A
80-89	B
70-79	C
60-69	D
59 and below	F

LIVETEXT Subscription:

Southern University and A&M College-Baton Rouge has entered into partnership with LiveText, Inc. to provide online academic resources for student collaboration and learning outcomes assessment. Therefore, all students enrolled in this course are required to purchase a subscription from LiveText, Inc. through the Southern University Bookstore. LiveText, Inc. provides students with the electronic tools and services needed to serve them in their courses and in their career or academic pursuits beyond graduation.

LiveText is a dynamic tool that will enable you to:

- Create electronic portfolios for storing and displaying coursework for use anytime and anyplace.

- Share your resumés, professional portfolios and virtually any projects that can be photographed, video recorded, and uploaded to prospective employers and others who need or want to know about your accomplishments.

- Engage in discussion boards with other students, exchange feedback, and create study groups and other types of social networks.

- Complete assignments in key/required courses where LiveText has been embedded (without LiveText, you will not be able to complete these assignments).

- Create a complete record of your academic career that is malleable and easily accessible. Engage in developing a results-driven culture of assessment at Southern University.

- Participate in a process that will allow for data-driven curricular improvements that foster improved student learning and performance.

MOODLE Access:

Southern University and A&M College at Baton Rouge will used Moodle extensively in this course. Moodle is a learning management system designed to help teachers and students communicate effectively online. The course syllabus, class materials (e.g., handouts, PowerPoint slides, journal articles, assignments, readings, etc.) will be placed on Moodle. The student should check Moodle DAILY for all assignments submitted via Moodle. If the student has problems with his Moodle account, he/she should contact Ms. Chrisena Williams-Brown in the Division of Information Technology via email at chrisena_williams@subr.edu or via phone at (225) 771-5017.

Academic Dishohesty:

The University defines academic dishonesty as premeditated and un-premeditated fraudulent behavior. Premeditated fraud is defined as conscious, pre-planned, deliberate cheating with materials prepared in advance.

Unpremeditated fraud is defined as cheating without the benefit of materials prepared in advance. See the Southern University and A & M College Catalog for a more detailed definition of academic dishonesty. In addition, administrative regulations governing the conduct of students enrolled at the University are contained in the Code of Student Conduct. A copy of the Code of Student Conduct may be obtained from the Office for Student Affairs.

ADA Compliance:
Students with documented disabilities who believe that they may need accommodations in this class are encouraged to contact the Disability Services Coordinator in the Office of Disability Services, 234 A.C. Blanks Hall, 225-771-3950 (Voice/TTD), 225-771-5652 (Fax), as soon as possible to ensure that such accommodations are implemented in a timely fashion. Students who need accommodations must be registered with the Office of Disability Services. Students are responsible for informing the instructor of any instructional accommodations and/or special learning needs at the beginning of the semester. All discussions will remain confidential.