



Arthur J. Bauernfeind College of Business

MURRAY STATE UNIVERSITY

Instructor: William F. Lyle

Office: BB 652L

Phone: 809-6217, 2094

E-Mail: wlyle@murraystate.edu

Web Page: <http://campus.murraystate.edu/academic/faculty/wlyle>

Office Hours: 8:30 – 11:00 M W F,
9:30 – 11:00 T Th,
Other times available by appointment

DEPARTMENT: Computer Science and Information Systems

COURSE PREFIX: CSC COURSE NUMBER: 300

CREDIT HOURS: 3

I. Title: Discrete Structures

II. Course Description and Prerequisites: Course introduces the discrete mathematical foundations of computer science, providing the appropriate theoretical background for advanced courses. Topics include sets, relations and functions, basic logic, proof techniques, basics of counting, graphs and trees, and discrete probability. Prerequisites: CSC 145 and MAT 150 or equivalent.

III. Course Objectives: At the successful completion of this course the student should be able to use appropriate discrete mathematical structures, tools, and techniques for modeling problems in advanced computer science courses.

IV. Content Outline: We will cover part or all of the following chapters in the textbook:

Chapter 1	The Foundations: Logic and Proofs
Chapter 2	Basic Structures: Sets, Functions, Sequences, Sums, and Matrices
Chapter 4	Number Theory and Cryptography
Chapter 5	Induction and Recursion
Chapter 6	Counting
Chapter 8	Advanced Counting Techniques
Chapter 9	Relations
Chapter 12	Boolean Algebra
Chapter 13	Modeling Computation

V. **Instructional Activities:** The majority of our class time will be devoted to lectures, discussion, and applications of discrete mathematical topics in computer science.

VI. **Field, Clinical, and/or Laboratory Experiences:** None.

VII. **Texts and Resources:** *Discrete Mathematics and Its Applications*, Seventh Edition, Kenneth H. Rosen. McGraw-Hill, 2012.

VIII. **Evaluation and Grading Procedures:**

Homework Assignments	40%
Scheduled Tests (2)	60%

This is tentative and subject to changes as announced in class.

Each of you is discouraged from missing a scheduled test. Should circumstances prevent you from taking a test at the scheduled time, your absence should be excused by me and a make-up time agreed upon at least 24 hours in advance. Failure to make such arrangements may result in a grade of zero for that test. No additional work will be accepted for "extra credit" or "grade improvement".

A numerical score will be computed based on the weights above and a letter grade assigned according to a 10-point grading scale. I reserve the right to adjust the scale if the class average is either very high or very low.

IX. **Attendance Policy:** You are expected and strongly encouraged to attend all class meetings on time in order to gain maximum benefit from the course. Class attendance will be checked, but is not a factor in the course grade. You are responsible for all material missed due to class absences. You are expected to adhere to the MSU Attendance Policy outlined in the current *MSU Bulletin*.

X. **Academic Honesty Policy:** Murray State University takes seriously its moral and educational obligation to maintain high standards of academic honesty and ethical behavior. Instructors are expected to evaluate students' academic achievements accurately, as well as ascertain that work submitted by students is authentic and the result of their own efforts, and consistent with established academic standards. Students are obligated to respect and abide by the basic standards of personal and professional integrity.

Violations of Academic Honesty include:

Cheating - Intentionally using or attempting to use unauthorized information such as books, notes, study aids, or other electronic, online, or digital devices in any academic exercise; as well as unauthorized communication of information by any means to or from others during any academic exercise.

Fabrication and Falsification - Intentional alteration or invention of any information or citation in an academic exercise. Falsification involves changing information whereas fabrication involves inventing or counterfeiting information.

Multiple Submission - The submission of substantial portions of the same academic work, including oral reports, for credit more than once without authorization from the instructor.

Plagiarism - Intentionally or knowingly representing the words, ideas, creative work, or data of

someone else as one's own in any academic exercise, without due and proper acknowledgment.

Instructors should outline their expectations that may go beyond the scope of this policy at the beginning of each course and identify such expectations and restrictions in the course syllabus. When an instructor receives evidence, either directly or indirectly, of academic dishonesty, he or she should investigate the instance. The faculty member should then take appropriate disciplinary action.

Disciplinary action may include, but is not limited to the following:

- 1) Requiring the student(s) to repeat the exercise or do additional related exercise(s).
- 2) Lowering the grade or failing the student(s) on the particular exercise(s) involved.
- 3) Lowering the grade or failing the student(s) in the course.

If the disciplinary action results in the awarding of a grade of E in the course, the student(s) may not drop the course.

Faculty reserve the right to invalidate any exercise or other evaluative measures if substantial evidence exists that the integrity of the exercise has been compromised. Faculty also reserve the right to document in the course syllabi further academic honesty policy elements related to the individual disciplines.

A student may appeal the decision of the faculty member with the department chair in writing within five working days. Note: If, at any point in this process, the student alleges that actions have taken place that may be in violation of the Murray State University Non-Discrimination Statement, this process must be suspended and the matter be directed to the Office of Equal Opportunity. Any appeal will be forwarded to the appropriate university committee as determined by the Provost.

XI. Non-Discrimination Policy Statement and Students with Disabilities:

Policy Statement:

Murray State University endorses the intent of all federal and state laws created to prohibit discrimination. Murray State University does not discriminate on the basis of race, color, national origin, gender, sexual orientation, religion, age, veteran status, or disability in employment, admissions, or the provision of services and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities equal access to participate in all programs and activities. For more information, contact the Executive Director of Institutional Diversity, Equity and Access, 103 Wells Hall, (270) 809-3155 (voice), (270) 809-3361 (TDD).

Students with Disabilities

Students requiring special assistance due to a disability should visit the Office of Student Disability Services immediately for assistance with accommodations. For more information, students should contact the Office of Student Disability Services, 423 Wells Hall, Murray, KY 42071. 270-809-2018 (voice) 270-809-5889(TDD).

- XII. Other:** The College of Business and Public Affairs Code of Ethics is available at http://www.murraystate.edu/Libraries/COB_Documents/Code_of_Ethics.sflb.ashx. The collegiate Appeals and Grievance Procedure is available at http://www.murraystate.edu/Libraries/COB_Documents/Appeals_and_Grivance_Procedure.sflb.ashx

Important University Dates:

January 12	Classes begin
January 16	Last day to enroll in full semester classes Last day to drop with no grade
January 19	University closed for Martin Luther King Day
March 4	Mid-semester grades due
March 14-22	Spring Break
April 14	Last day to drop with a "W" Last day to change from CREDIT to AUDIT
May 1	Last day of classes
May 7	1:30 p.m., Final Exam period for CSC 300
May 9	10:00 a.m., Commencement

Please fill out this page, detach it, and return it to the instructor.

By my signature below, I certify that I have received a copy of the course syllabus for CSC 300 taught by Dr. William F. Lyle during the Spring Semester of 2015. Furthermore, I certify that I have read and understand the contents of the course syllabus.

Printed Name _____

Signature _____

Date _____

If you want your grades to be posted, please enter a 4-digit number to identify yourself. If you would prefer that your grades not be posted, then enter "None".

My 4-digit code: _____