



Arthur J. Bauernfeind College of Business

MURRAY STATE UNIVERSITY

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Office Hours: 8:00 - 10:30 M W F
8:00 - 9:30 T Th,
Other times available by appointment

DEPARTMENT: Computer Science and Information Systems

COURSE PREFIX: CSC COURSE NUMBER: 415 CREDIT HOURS: 3

I. TITLE: Programming Languages

II. COURSE DESCRIPTION AND PREREQUISITE(S): Formal definition of programming language syntax and semantics. Global properties of imperative and object-oriented languages including scope of declarations, binding times, simple data types, abstract data types, control structures, subprograms, concurrency, and exception handling. Introduction to functional, and logic programming paradigms.

Prerequisite(s): CSC 235, CSC 300, CSC 325, and 345.

III. COURSE OBJECTIVES: At the successful completion of this course, the student should be able to:

- A. Describe the major programming language design issues of data types and type checking, abstraction, encapsulation, object-orientation, concurrency, and exception handling.
- B. Evaluate programming languages and language constructs according to given language evaluation criteria.
- C. Report on analysis and research in both written and oral presentations.
- D. Read and write simple programs in Racket and Prolog.
- E. Select an appropriate programming language in which to implement a software solution to a real-world problem.

IV. CONTENT OUTLINE: The chapter titles in the required text are:

1. Preliminaries
2. Evolution of the Major Programming Languages
3. Describing Syntax and Semantics
4. Lexical and Syntax Analysis
5. Names, Bindings, and Scopes
6. Data Types
7. Expressions and Assignment Statements
8. Statement-Level Control Structures

9. Subprograms
10. Implementing Subprograms
11. Abstract Data Types and Encapsulation Constructs
12. Support for Object-Oriented Programming
13. Concurrency
14. Exception Handling and Event Handling
15. Functional Programming Languages
16. Logic Programming Languages

I intend to cover all of these chapters at the rate of about one chapter per class meeting. In addition, each student will conduct a research project about a particular programming language, write a term paper documenting the results of that research, and give an oral presentation to the class demonstrating results of the research and features of their chosen language.

V. INSTRUCTIONAL ACTIVITIES: Our classroom time will usually be spent in discussion of the major points raised in the textbook material, using questions from the end of each chapter to guide our discussions. **You are expected to have read the material prior to class** in order to contribute to the class discussion.

VI. FIELD, CLINICAL, AND/OR LABORATORY EXPERIENCES: None.

VII. TEXT(S) AND RESOURCES: Concepts of Programming Languages, Robert W. Sebesta, Tenth Edition, Addison- Wesley, 2013.

VIII. EVALUATION AND GRADING PROCEDURES:

Class Participation	15%
Term Research Project & Report	15%
Oral Presentation of Report	10%
Homework and Programming Assignments	10%
Mid-Semester Examination	25%
Final Examination	25%

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

Each of you is strongly discouraged from missing a scheduled examination. Should circumstances prevent you from taking a test at the scheduled time, your absence should be excused and a makeup 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 upon the above weights and a letter grade assigned according to a 10-point grading scale. I reserve the right to adjust this scale if the class average is either very high or very low.

IX. ATTENDANCE POLICY: You are expected and strongly encouraged to attend class regularly and on time in order to gain maximum benefit from the course. Class attendance will be checked and will be an explicit factor in the course grade as reflected in the class participation component. You are responsible for all material missed due to class absences. *Students are expected to adhere to the MSU Attendance Policy on page 10 in the 2014-2015 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 acknowledgement.

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: 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).

XII. Other: The College of Business 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:

- August 19 First day of classes. Absences will be recorded.
- August 25 Last day to add a full semester class. Last day to drop any full semester class with no grade. Last day to change any full semester class from AUDIT to CREDIT.
- September 1 Classes dismissed for Labor Day
- October 2 Fall Break Begins
- October 13 Midterm grades due
- October 15 Second half semester classes begin. Last day to change INCOMPLETE grades from Spring/Summer 2014 at Registrar's office.
- November 3 Deadline to submit baccalaureate and associate degree applications on MyGate for May 2015 graduation.
- November 10 Begin Advance scheduling for Spring 2014.
- November 17 Last day to drop a full or second half semester class. Last day to change CREDIT to AUDIT
- November 26 Classes dismissed for Thanksgiving Holiday, 7:30 a.m. Offices closed.
- December 5 Last day of classes
- December 10 8:00 am, Final exam period for CSC 415
- December 13 10:00 am, Commencement
- December 16 Grades are available on student's MyGate Academic tab.

Please fill out this page, detach it and return it to Dr. Lyle.

By my signature below, I certify that I have received a copy of the course syllabus for CSC 415 taught by Dr. William Lyle during the Fall Semester of 2014. 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 prefer that your grades are not posted, then enter "None".

My 4-digit code: _____