

MGMT 2032: Introduction to Programming for Business

Course Information

Credit Hours:

UNI adheres to the federal definition of the credit hour in all courses, regardless of instruction mode, meeting pattern, or course format. A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that reasonably approximates not less than:

- One hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester; or,
- The equivalent amount of work in item (1) over a different amount of time; or,
- At least an equivalent amount of work in item (1) for other activities, including laboratory work, internships, practica, studio work, and other academic work leading toward the award of credit hours/units of credit.

Course Description

Introduction to business programming concepts and methodologies. Design and documentation of typical business applications using a business programming language. Prerequisites: Introduction to Information Systems (MGMT 2080).

Learning Objectives

University Level Outcomes

- **Critical Thinking** - Students will demonstrate critical thinking through the ability to evaluate, analyze, and integrate information from a variety of sources in order to develop reasoned positions and solutions to problems.
- **Communication** – Students will display competence in oral, written, and visual communication, as appropriate for their discipline.
- **Program Content Knowledge** – Students will demonstrate discipline-specific knowledge and skills in their major.

Course Level Outcomes

This course is designed to be an introduction to computer programming using the Python language. It is suitable for students in Management Information Systems, Business Analytics, and other majors who seek to learn how to convey instructions to a computer and develop a computer-based problem solution.

This course introduces essential programming basics—including data types, control structures, and algorithm development—via the Python programming language. The course discusses the fundamental principles of Object-Oriented Programming, as well as in-depth data and information processing techniques. Students will problem solve, explore real-world software development and data analysis challenges, and be capable of writing computer programs that will solve business-related problems. The use of the Python programming language allows us to develop a solid foundation in programming fundamentals that will be useful for MIS, Business Analytics, and other students.

- Students can describe the hardware and software environment that enables the creation and execution of Python programs.
 - Students can describe the way that computers store data.
 - Students can describe the way a higher-level program is created and executed.
 - Students can apply the Python interpreter in interactive mode and script mode to execute Python programming statements.
- Students can create well-structured sequential programs that perform calculations.
 - Students can describe and apply tools used in designing a computer program.
 - Students can describe and apply the I-P-O structure implemented in most computer programs.
 - Students can create programs that display output, formatted for readability.
 - Students can create programs that use variables and named constants.
 - Students can create programs that obtain keyboard input from user.
 - Students can create programs that perform math calculations correctly.
- Students can describe and apply decision logic structures in the Python language.
 - Students can describe and apply single alternative decision structures.
 - Students can describe and apply dual alternative decision structures.
 - Students can describe and apply multiple alternative decision structures.
 - Students can describe and apply logical operators.
 - Students can describe and apply Boolean variables as program state flags.

- Students can describe and apply repetition structures in the Python language.
 - Students can describe and apply condition-controlled repetition structures.
 - Students can describe and apply count-controlled repetition structures.
 - Students can describe and create a loop that calculates the running total.
- Students can create programs that process segmental access files.
 - Students can describe and create programs that read sequential access files.
 - Students can describe and create programs that write sequential access files.
- Students can describe and create Python program that process sequence objects.
 - Students can describe and create programs that process and manipulate lists.
- Students can describe and create Python programs that process and manipulate strings.
 - Students can describe and create programs that process characters in a string.
 - Students can describe and create programs that extract character subsets from strings.
 - Students can describe and create programs that can search strings for substrings.

Required Materials

- Gaddis, Tony. Starting Out with Python, 6th Edition, 2023, Pearson Education.

Instructional Methods and Evaluation of Performance

This course consists of the following activities and assessments to assist you in achieving the course and instructional modules objectives. This course is a combination of lecture/discussion and hands-on learning using the textbook as a guide.

Panopto Recordings

Panopto recordings will be posted after each class period of the class session. These are NOT substitutes for attending class. These are for reinforcement, review, or to use if you are ill.

Assignments

Hands-on programming assignments will be given for most chapters to demonstrate independent problem-solving by creating a solution for a given scenario/problem.

Quizzes

Quizzes will be given after most chapters. Quizzes can be a combination of multiple choice, short answers, and hands-on questions to demonstrate your understanding of the content of the chapter.

Exams

There will be two examinations covering the textbook material. The exams will be comprehensive as the material in the class builds throughout the semester.

Evaluation Methods (subject to change with notice)

Graded Material	% of Grade
Assignments	25%
Quizzes	35%
Exams	40%

Tentative Grade Scale (the instructor reserves the right to assign plus (+) and minus (-))

Letter Grade	Perecent
A	90%
B	80%
C	70%
D	60%
F	59% and below

Instructor Expectations

Each week a "To-Do" list will be posted on the course Blackboard site that outlines the learning objectives, readings, and activities planned for that week. Students are expected to read the assigned material prior to the class period. Preparation prior to class is essential to your success in this class. Class sessions will be designed to help students through the more difficult sections of the text, provide examples and extended illustration of concepts, and to integrate course materials. While most of the text material will generally be covered in class, it may not be possible for me to cover everything necessary to complete an assignment. In some instances, students may need to refer to their text for guidance. Students falling behind will find it very difficult to catch up.

This class will require work outside of class to be successful. As stated in the previous paragraph, studying the assigned portion of the textbook before class will

help you prepare for success in the classroom. You will also need to spend time outside of class developing solutions to assigned and practice problems. In a course such as this, you should plan on spending two to three hours outside of class for each hour of class, studying course material, developing solutions to programming problems, and practicing with end of chapter exercises. Similarly, the lab will be used whenever appropriate for “hands on” exercises designed to illustrate lecture and text material. Use in-class lab time constructively. While all exercises may not be completed during scheduled lab periods, you will be responsible for performing and understanding all assigned exercises.

The MIS and Business Analytics majors are demanding and rewarding. Now is the time for you to develop work habits that will serve you well throughout all your MIS/BA courses. Procrastination will seriously impair your ability to be successful in these majors. **DO NOT** wait until the night before a programming assignment is due to begin working on the assignment. Programming requires an unpredictable amount of time, especially for novice programmers. Give yourself a break and allow plenty of time to do the assignments in this course. Another important practice you should develop is to devote time to answering the Checkpoint questions found at the end of each section of the textbook chapters, answering the Review Questions at the end of each chapter, and creating your own sample programs that allow you to practice the course concepts.

Software is available in our classroom that enables me to view each student workstation from the instructor station. You should expect that I will monitor your activities on the computer during class time. Students who are surfing the Web, emailing, playing games, etc. during class will be asked to stop and may have points deducted in chronic cases. All electronic devices should be turned off and in your book bag during class. Please do not read or send text messages during class time.

Attendance

Points will not be explicitly awarded or deducted for class attendance. I will, however, monitor class attendance each class period. While it is entirely up to each individual student as to whether he/she attends class, unexcused and excused absences are treated differently. When a student misses class, he/she is expected to take full responsibility for getting class notes from other students in the class. Quizzes and hands-on lab exercises may not (may NOT) be announced, and students without an excused absence the day the exercise is given AND the day it is due WILL NOT be given an opportunity to make up those points. Excused absences are granted for legitimate reasons as long as I am notified **prior** to the absence.

Points will also be deducted for leaving class early (without excuse), failure to bring the materials necessary to work on assignments or exercises, and/or not using lab time appropriately (working on homework or assigned exercises). Emailing, surfing the Web, or playing games is viewed as inappropriate use of class time.

Testing Policy

During quiz and exam sessions, students may have only the materials that are required to complete the quiz or exam at their desks. Usually this will just be writing utensils (pens/pencils/erasers). All other materials, such as books, notebooks, papers, USB drives, etc. must be placed in students' backpacks. Cell phones, smartphones, iPods, iPads, or like devices, and any other electronic equipment must be turned off during an examination and left in students' backpacks. All coats, jackets, backpacks, handbags, notebooks, etc. must be stacked at the front of the room before the exam begins.

If you are seen using a prohibited electronic device at any time during the quiz or examination, you will be dismissed from the quiz/exam immediately and you will automatically FAIL the course. Your device may be confiscated, and its contents inspected. If you leave the room for any reason (to answer a phone call or text or go to the restroom) your exam is considered complete and will be collected immediately.

During the administration of a quiz or hands-on exercise that involves the computer, you are expected to utilize only the software and files described on the exam. During your exam session, I will utilize software that enables me to monitor your actions at your workstation. If a student is observed opening other files, other software, or accessing other Web sites, you will be dismissed from the quiz immediately and you will automatically FAIL the course.

Cheating Policy

Any student who cheats during an examination or quiz, or who assists another student in cheating during an examination or quiz will automatically FAIL the course. The case may also be forwarded to the Office of Academic Affairs for University disciplinary action. Cheating includes, but is not limited to plagiarism, unauthorized use of crib sheets, copying answers from another student's exam, submitting another student's work as if it was your own, use of electronic devices such as cell phones, smart phones, etc., referring to any unauthorized electronic resource during an exam, use of calculators capable of storing alphanumeric data, and gaining unauthorized prior access to exams or answers. All electronic devices must be turned off and stored in your bookbag during an exam. Please note that

all your work on the computer during an exam or hands-on exercise will be monitored from the instructor's station in the classroom.

Any student who cheats on a quiz, assignment, case, or lab exercise; or any student who assists another student to cheat on a quiz, assignment, case or lab exercise will be subject to a penalty determined at the instructor's discretion. Penalties may include, but are not limited to, a reduction in points awarded, zero points awarded, and automatic FAILURE of the course. The case may be forwarded to the Office of Academic Affairs for university disciplinary action. Cheating includes but is not limited to: submitting any other person's work as your own (or any portion thereof), submitting any previous semester's assignment, case, or lab exercise, copying another project or portion of a project, or similar offenses. If you have any doubt, ask your instructor before you submit the work as your own. After you submit the work, it is too late to ask!

Approved Statements for Non-discrimination and Accessibility

Office of Compliance and Equity Management

The University of Northern Iowa does not discriminate in employment or education. Visit [13.03 Equal Opportunity Statement](#) for additional information.

Student Accessibility Services

The University of Northern Iowa (UNI) complies with the Americans with Disabilities Act Amendments Act of 2008 (ADAAA), Section 504 of the Rehabilitation Act of 1973, the Fair Housing Act, and other applicable federal and state laws and regulations that prohibit discrimination on the basis of disability. To request accommodations please contact Student Accessibility Services (SAS), located at ITTC 007, for more information either at (319) 273-2677 or send an email to accessibilityservices@uni.edu. Visit [Student Accessibility Services](#) for additional information.

Academic Integrity

To ensure academic integrity and to follow [UNI Policies on Student Academic Ethics](#) (see: 4. Academic Ethics Violations), students will not plagiarize, misrepresent, fabricate, or cheat. Unless otherwise instructed and approved by the instructor, students will take quizzes and exams **individually**, without collaboration with other parties and/or using notes or other texts. Similarly, students will submit work (papers, presentations, and other assessments) that is their own work (in regard to violations of these ethics policies, see: 5. Academic Ethics Sanctions).

Course Communication and Technology

Communication with Instructor

I will primarily communicate with students via email, but I will be available by appointment as well for discussion by Zoom. Students can also stop by my office during office hours or anytime my office door is open.

Attendance, Late Work, and Make-up Work

[See UNI Policy on Class Attendance and Make-up Work](#)

Late work is NOT accepted. Due dates will be clearly communicated, and submission is expected by the due date.

Technology Requirements

A laptop or desktop is not required for this class. Computer labs in Curris are equipped with the necessary software. If you wish to use your own device for homework, links will be provided to download and install the software.