

COURSE SYLLABUS

COLLEGE OF BUSINESS

SPRING SEMESTER, 2018



CIS 651-01

SPECIAL TOPICS - ADVANCED PROGRAMMING TECHNIQUES WITH PYTHON

INSTRUCTOR:

Jason Watson, Ph.D.
Assistant Professor
Department of Computer Science
and Information Systems

OFFICE HOURS:

Monday 8:30 - 9:30 a.m.
Tuesday 8:30 - 9:30 a.m.
Wednesday 8:30 - 9:30 a.m. & 11:00 - 2:00 p.m.
Thursday 8:30 - 9:30 a.m.
Additional hours by appointment.

OFFICE LOCATION:

Keller Hall, 2nd Floor, Office #248

OFFICE TELEPHONE:

256-765-4689 (please leave message)

E-MAIL:

Canvas CIS 651-01 Course Inbox (preferred)
UNA Portal: jwatson5@una.edu (emergency)

FAX:

256-765-4811 (CSIS Department Office)

CLASS HOMEPAGE:

Go to www.una.edu. At the top of the webpage, click the Canvas hyperlink (or you may go directly to <https://una.instructure.com/login/ldap>). Sign in to Canvas using your UNAPortal username and password. On your Dashboard, click CIS 651-01.

CLASS LOCATION:

Raburn 210

COURSE TIME:

Tuesday/Thursday 9:30 p.m. - 10:45 a.m.

COURSE DESCRIPTION: Select topics varying according to the need and interest of students. Prerequisite: approval of instructor. (Offered on sufficient demand)

SECTION NUMBER: 01

CREDIT HOURS: 3

PREREQUISITE: CIS 225 or CS 155 (with a grade of "C" or higher)

COURSE DELIVERY METHOD: Traditional Classroom

COURSE OBJECTIVES:

The student will be able to:

1. Improve creating basic computer programs in Python [CIS Program Outcome a][COB Goals 2,3].
2. Explain programming theory related to python [CIS Program Outcomes a,b,i][COB Goal 3].
3. Use complex python application programming interfaces (APIs) to [CIS Program Outcomes a,b,i][COB Goal 3]:
 - (a) create a data-driven web application
 - (b) create a graphical user interface
 - (c) create a geographic information systems (GIS) program to perform advanced functions or automate common GIS tasks
4. Develop mechanisms for accessing relational databases from various types of application development environments [CIS Program Outcomes a,b,c,i] [COB Goal 3].
5. Develop object-oriented programs using python [CIS Program Outcomes a,b,i][COB Goal 3].
6. Explain object-oriented programming concepts [CIS Program Outcomes a,b,i][COB Goal 3].
7. Communicate and work in teams [CIS Program Outcome d][COB Goal 1].
8. Engage in continuing professional development [CIS Program Outcome h][COB Goals 3,4].

TOPICS COVERED:

- Python programming basics
- Object-oriented python concepts
- Using python APIs
- Programming graphical user interfaces with python toolkits

- Programming web-based applications
- Programming GIS applications using python scripts

COURSE EVALUATION PROCESS (Grade Components):

Subject exams (2 exams @ 10% each).....	20%
Project work.....	20%
Final project (presentation and artifacts).....	20%
Graduate project.....	10%
Final exam.....	30%

Final grades will be assigned on the basis of the following grading scale:

90 to 100%	A
80 to 89%	B
70 to 79%	C
60 to 69%	D
Below 60%	F

REQUIRED TEXTBOOK, SOFTWARE, AND SUPPLIES:



Textbook: Tellez, M., Python Power!: The Comprehensive Guide (1st Edition). Cengage Learning PTR. ISBN-13: 978-1598631586 • ISBN-10: 1598631586.



Textbook: Sherman, G. (2014). The Pyqgis Programmer's Guide. Locate Press. ISBN-10: 0989421724 • ISBN-13: 978-0989421720.

IMPORTANT TECHNICAL SUPPORT CONTACT INFORMATION:

UNA Technical Support:

- Canvas Support: Click the Help icon on your navigation menu and then click Report a Problem to submit a ticket to Canvas Tech Support. If you cannot log-in to Canvas, then please e-mail UNA Information Technology Services (ITS) Support at helpdesk@una.edu. In this email, include your full name, UNA email address, an alternative email address (if applicable), and a phone number where you can be reached.
- Canvas FAQ: www.una.edu/distance/help/canvas.html.

- UNAPortal FAQ: www.una.edu/faq/ .
- UNA Information Technology Services Support: helpdesk@una.edu (from your UNA portal e-mail if possible).

ACADEMIC HONESTY–UNIVERSITY POLICY:

Students are expected to be honorable and observe standards of conduct appropriate to a community of scholars. Additionally, students are expected to behave in an ethical manner. Individuals who disregard the core values of truth and honesty bring disrespect to themselves and the University. A university community that allows academic dishonesty will suffer harm to the reputation of students, faculty and graduates. It is in the best interest of the entire university community to sanction any individual who chooses not to accept the principles of academic honesty by committing acts such as cheating, plagiarism, or misrepresentation. Offenses are reported to the Vice President for Academic Affairs and Provost for referral to the University Student Discipline System for disposition. The Academic Dishonesty Incident Report form may be viewed at <https://www.una.edu/student-conduct/docs/Academic%20Honesty%20PolicyAcademic%20Honesty%20Incident%20Form.pdf> .

STUDENTS WITH DISABILITIES–UNIVERSITY POLICY:

In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documented learning, physical and/or psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Amendment Act of 2008, a disability is defined as a physical or mental impairment that substantially limits one or more major life activities as compared to an average person in the population. It is the responsibility of the student to contact Disability Support Services to initiate the process to develop an accommodation plan. This accommodation plan will not be applied retroactively. Appropriate, reasonable accommodations will be made to allow each student to meet course requirements, but no fundamental or substantial alteration of academic standards will be made. Students needing assistance should contact Disability Support Services. Complete guidelines and requirements for documentation can be found on the DSS web pages at <https://www.una.edu/disability-support> .

INFORMATION TECHNOLOGY ACCEPTABLE USE–UNIVERSITY POLICY

This acceptable use statement governs the use of computers, networks, and other information technologies at the University of North Alabama. This statement applies to all students and employees of the University, and to all other persons who may legally or illegally use or attempt to use a computer resource owned by the University, and/or is connected by any means to the campus computing network. As a user of these resources, you are responsible for reading and understanding this document. To view the entire Information Technologies Acceptable Use Statement, please see <https://www.una.edu/its/una-it-policy.html> .

WITHDRAWAL FROM A COURSE–UNIVERSITY POLICY:

During the W - Grade Withdrawal Period:

Students may withdraw online through their Portal Self-Service Registration account. Under Registration - Add/Drop Courses, select "Web Withdraw" in the Action drop down for the class. Then, click Submit.

During the WP/WF - Grade Withdrawal Period:

Students may request a withdraw from a class through their Portal Self-Service Registration account. Under Registration - Add/Drop Courses, select "Request a Withdraw" in the Action drop down for the class. Then, click Submit. The instructor of the course will be notified of the request, and if approved, he or she will assign a grade of WP or WF. Once the grade has been officially recorded, the student will receive notification that the withdrawal request has been approved and processed.

Withdrawing from a course before the deadline will not affect a student's GPA or academic standing. A notation of W, WP or WF is made on a student's transcript depending on the timing of course withdrawal. See Schedule of Classes for dates.

Students are strongly advised not to withdraw from courses unless absolutely necessary. **Students receiving Financial Aid** should check with the Student Financial Services before withdrawing from classes. Student progress toward degree completion is checked every semester for students receiving federal grants and loans. Students must pass and complete 75% of all work attempted to maintain financial aid. **Student Athletes** should check with the Athletic Department as course withdrawal could affect eligibility for competition.

TITLE IX–UNIVERSITY POLICY

The University of North Alabama has an expectation of mutual respect. Students, staff, administrators, and faculty are entitled to a working environment and educational environment free of discriminatory harassment. This includes sexual violence, sexual harassment, domestic and intimate partner violence, stalking, gender-based discrimination, discrimination against pregnant and parenting students, and gender-based bullying and hazing.

Faculty and staff are required by federal law to report any observation of harassment (including online harassment) as well as any notice given by students or colleagues of any of the behaviors noted above. Retaliation against any person who reports discrimination or harassment is also prohibited. UNA's policies and regulations covering discrimination and harassment may be accessed at <https://www.una.edu/titleix/> . If you have experienced or observed discrimination or harassment, confidential reporting resources can be found on the website or you may make a formal complaint by contacting the Title IX Coordinator at 256-765-4223.

UNA PORTAL–UNIVERSITY POLICY

The University of North Alabama's official communication vehicle is UNA Portal. You may access your UNA Portal email through the University's homepage at <https://www.una.edu/> . The link to Portal is at the top of the page. It is important for students to read their UNA Portal e-mail on a regular basis for information regarding University deadlines, policies, and events. These messages are outside your Canvas courses and relate to ALL University communication. Please understand the importance of each communication vehicle and the distinction between the two.

COMMUNICATION AND NETIQUETTE–COLLEGE OF BUSINESS POLICY

Students are encouraged to communicate with their instructors throughout the semester. Please allow up to 48 hours for a reply to your email or phone messages. Correspondence received on Fridays and University Holidays will not be addressed until the next regularly scheduled business day at UNA. In circumstances where a longer response time is needed, faculty will notify the student.

- Email Communication: Please use the Canvas Inbox when possible. In case of emergencies use the following email address jwatson5@una.edu . This email should be sent from your UNA Portal email account, if possible.
- Phone Communication: When leaving a voicemail, leave your name, phone number, and message. Please speak slowly and clearly.
- Face-to-face Communication: You may drop by during posted office hours or you may email to request an appointment that is more convenient to your schedule.

When communicating in an online format (i.e., email, chat, discussions, etc.) please adhere to the standard rules of netiquette. The following summary is taken from <https://www.education.com/reference/article/netiquette-rules-behavior-internet/> .

- Identify yourself. Begin messages with a salutation and end them with your name.
- Include a subject line. Give a descriptive phrase in the subject line of the message header that tells the topic of the message.
- Avoid sarcasm. People who don't know you may misinterpret its meaning.
- Respect others' privacy. Do not quote or forward personal email without the original author's permission.
- Acknowledge and return messages promptly.
- Copy with caution. Don't copy everyone you know on each message.
- No spam (a.k.a. junk mail). Don't contribute to worthless information on the Internet by sending or responding to mass postings of chain letters, rumors, etc.
- Be concise. Keep messages concise—about one screen, as a rule of thumb.
- Use appropriate language. Avoid coarse, rough, or rude language. Observe good grammar and spelling.
- Use appropriate intensifiers to help convey meaning. Avoid “flaming” (online “screaming”) or sentences typed in all caps. Use asterisks surrounding words to indicate italics used for emphasis.

ATTENDANCE AND PARTICIPATION

UNIVERSITY POLICY: Regular and punctual attendance at all scheduled classes and activities is expected of all students and is regarded as integral to course credit. Each student is directly responsible to the individual professor for absences and for making up work missed. Particular

policies and procedures on absences and makeup work are established in writing for each class, are announced by the professor at the beginning of the term, and for excessive absences, may provide for appropriate penalties including reduction in grades or professor-initiated withdrawal from class. Official written excuses for absences are issued only for absences incurred in connection with university-sponsored activities. For all other types of group or individual absences, including illness, authorization or excuse is the province of the individual professor.

CSIS POLICY: Whenever a student's cumulative absences for any reason—excused or unexcused—exceed the equivalent of three weeks of scheduled classes and activities (one week in each four-week session or two weeks in the eight week summer term), no credit may be earned for the course at the discretion of the professor.

LATE ASSIGNMENTS

No makeups will be offered for the assignments portion of your grade.

MAKE-UP EXAMS

You must inform your instructor ***prior to an exam*** if you have to miss the exam. If the instructor determines that you have a valid excuse for missing the exam, a makeup exam will be scheduled within one week of the missed exam. If you do not contact your instructor within one week of the exam, you will receive a zero for the missed exam.

GRADES

Every effort will be made to treat each student equally. Students will be graded solely on course performance—not on unrelated factors.

All materials, projects, and tests submitted during the course become the property of the University.

QUESTIONS ABOUT GRADES

If you feel there is an error in the grading of your assignments and/or exams, you must contact your instructor within one week after the assignment/exam was graded. Your instructor will re-evaluate the assignment/exam and communicate with you the status of the re-evaluation. Inquiries made after a week has passed will not be re-evaluated.

STUDENT RESPONSIBILITY

You are responsible for the grade earned in this class. Your instructor is not responsible for your personal obligations, your maintaining a certain grade point average, or, for international students, ensuring that immigration requirements related to your continued enrollment at the university are met. It is important for students to communicate the need for support with course-related activities throughout the semester rather than only at the end of the semester after final course grades have been determined. The course evaluation guidelines will be uniformly applied, with no exceptions, to all students.