Computer Science (TACS) 2B
Syllabus

Course Name

TACS 2B

Computer Science II – Semester B

Course Information

TACS 2B is the second semester of this two-semester course.

Get ready to take your programming abilities to the next level! You will start by developing a simple web page using HTML, CSS, and JavaScript and then you'll practice your Python skills, making your own photo editor and sound player! Using API, you'll practice adding a weather widget to a website and you'll ensure page safety using encryption techniques through Python. You'll test, you'll inspect, you'll collaborate, and for your finale, you'll craft a graphical user interface for an app using Python's Tkinter! Let's get ready to program!

Course Delivery Method

Online

Contacting Your Instructor

You may contact your instructor through the Blackboard messaging system. Technical support is available 24/7 at TTU K-12.

Course Objectives

After completing this course, you should be able to:

1. understand HTML tags and use them to create a basic webpage;
2. apply interactivity to a webpage using JavaScript and use CSS to apply style;
3. discuss the ways that images and audio and audio enhance interfaces and program functionality;
4. discuss how user interface design affects user behavior;

5. differentiate between software correctness and reliability testing;
6. use and test an API;
7. analyze the impact of data breaches and cyberattacks;
8. create advanced GUIs using different layouts; and
9. create a personal career plan.

TACS 2 addresses the required Texas Essential Knowledge and Skills (TEKS). These can be found at the [Texas Education Agency](#) website.

Textbook and Materials

Textbook(s)

There is not a required textbook for this course.

Materials

Students will need to create a free account for the following sites:

- [PythonAnywhere](#)
- [Trinket](#)
- [Replit.com](#)
- [AppInventor](#)
- [Canva](#)
- [Visual Crossing](#)

Students will use the following site to create flowcharts:

- [app.diagrams.net](#)

Technical Requirements

- Internet access – preferably high speed (for accessing Blackboard)
- Email
- Word processing software such as Microsoft Word
- Spreadsheet software such as Microsoft Excel
- Presentation software such as Microsoft PowerPoint
- Adobe Reader (download from [Adobe.com](#))
- Audio and video capabilities (for watching/listening to course content)
- PDF app (free options available)

Technical Skill Requirements

Be comfortable with the following:

- using a word processor

- Internet search engines and browsers
- creating PDFs (see **Requirements for Creating PDFs** in the Syllabus section of your course)

Course Organization

This course is organized into eight Units and a final examination. Each Unit contains the following:

- Introduction and Instructions
- Learning Objectives and Curriculum Standards
- Learning Activities
- Assignments

Each Unit includes several activities that present content knowledge. Each Unit also includes multiple graded assignments to ensure that you learn the content that has been presented in the activities. Some of the assignments are automatically-graded quizzes, and some are written assignments or activities that your instructor will grade. Be sure you read all instructions carefully and ask your instructor for help if something is not clear.

Course Outline

Please note that some assignments will be hidden from you when you start the course. As you move through the lessons and complete assignments, more will unlock for you.

Unit	Topic	Approximate Time for Completion
Unit 1	Spotlight: Web Programming	Two weeks
Unit 2	Spicing It Up with Multimedia	Two weeks
Unit 3	Focus on the User: Improving UI	Two weeks
Unit 4	Testing and Quality Assurance	Two weeks
Final Exam	Covers Units 1-4	
Unit 5	Communicating in Teams	Two weeks
Unit 6	Taking Control: Security and Ethics	Two weeks
Unit 7	Graphical User Interfaces	Two weeks
Unit 8	Go Team!	Two weeks
Final Exam	Covers Units 5-8	

Assignment Schedule

Each of the following must be completed to complete the course. Items with an asterisk (*) indicate that these are summative assessments for the course.

Unit	Weeks	Assignments
1	1-2	Checkpoint 1 (Non-graded) Unit 1 Critical Thinking Questions Unit 1 Activity 1 Unit 1 Activity 2 Unit 1 Activity 3 Unit 1 Activity 4 Unit 1 Quiz Unit 1 Discussion
2	3-4	Unit 2 Critical Thinking Questions Unit 2 Activity 1 Unit 2 Activity 2 Unit 2 Quiz Unit 2 Discussion
3	5-6	Unit 3 Critical Thinking Questions Unit 3 Activity 1 Unit 3 Activity 2 Unit 3 Quiz Unit 3 Discussion Checkpoint 2 (Non-graded)
4	7-8	Unit 4 Critical Thinking Questions Unit 4 Activity 1 Unit 4 Activity 2 Unit 4 Quiz Unit 4 Discussion
Midterm		Midterm Discussion *Midterm Exam
5	9-10	Unit 5 Critical Thinking Questions Unit 5 Activity 1 Unit 5 Activity 2 Unit 5 Quiz Unit 5 Discussion
6	11-12	Unit 6 Critical Thinking Questions Unit 6 Activity 1 Unit 6 Activity 2

Unit	Weeks	Assignments
		Unit 6 Quiz Unit 6 Discussion
7	13-14	Unit 7 Critical Thinking Questions Unit 7 Activity 1 Unit 7 Activity 2 Unit 7 Quiz Unit 7 Discussion
8	15-16	Unit 8 Critical Thinking Questions Unit 8 Activity 1 Unit 8 Activity 2 Unit 8 Quiz Unit 8 Discussion Checkpoint 2 (Non-graded)
Final		Final Exam Discussion *Final Exam

Course Credit

The course grade will be calculated as follows:

- 50% coursework average;
- 50% summative assessment average, including the final exam;
- A passing course grade is 70 or higher.

Students must attempt all assignments in the course. The final exam will not be available until all assignments have been accepted and graded by the teacher.

Students who score below 70% on the final exam will be eligible for one re-exam opportunity.

Coursework

The graded assignments within each lesson are formative in nature. This means that they are designed to assist you in applying and demonstrating the lesson concepts, as well as identifying areas in which you need additional review. You may use all the lesson's learning activities to assist you as you complete the graded assignments.

Summative Assessments

Summative assessments are those that allow you to demonstrate mastery of the course objectives. For summative assessments, you will NOT be allowed to use the learning

materials. These are opportunities for you to show what you have learned by that point in the course.

Summative assessments may be proctored using the online proctoring system Proctorio. Information about Proctorio is provided in **Remote Proctoring** in the Syllabus section of your course. The summative assessments for this course are as follows:

- Summative Assessments **(20% of Course Grade)**
  - Midterm Exam
- Summative Final Exam **(30% of Course Grade)**

Course Completion

- Students may not complete the course in less than 30 days.
- All courses expire six months after the enrollment date.

Academic Integrity

It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and high standard of integrity. The attempt of students to present as their own any work not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offenders liable to serious consequences, possibly suspension.

"Scholastic dishonesty" includes, but is not limited to, cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, and any act designed to give unfair academic advantage to the student (such as, but not limited to, submission of essentially the same written assignment for two courses without the prior permission of the instructor) or the attempt to commit such an act.

Student Expectations

You will be expected to log into the Blackboard course regularly to be aware of possible announcements/reminders and to pace your progress in the course.

Students are expected to maintain an online environment conducive to learning, which includes "netiquette" (Internet etiquette). Please review the basic rules for Online Discussion Netiquette. Ensure that your email messages, discussion board postings, and other electronic communications are thoughtful and respectful. Diverse opinions are welcome in this course, and you are expected to demonstrate an open mind and courtesy when responding to the thoughts and ideas of others.

The following are prohibited:

- making offensive remarks in email or the discussion board;
- using inappropriate language or discussing inappropriate topics online;
- spamming;
- hacking;

- using TTU or Blackboard email or discussion boards for commercial purposes;
- using all caps (considered shouting in online communications); and
- cyber-bullying or online harassment of any type.

Inappropriate behavior shall result in consequences ranging from a request to correct the problem, to removal from the course or even the university, depending on the severity of the behavior. Disciplinary actions will be taken according to the TTU K-12 Student Handbook.

Communication

- You can expect a reply from your instructor within 2 business days.
- Use the Blackboard Course Messages tool for sending messages to your instructor.

Submitting Assignments

You will submit all assignments through the Blackboard Assignment Tool, rather than by mail or email.

Technical Difficulties

Getting Help

For student assistance with Blackboard, visit [TTU K-12 Support](#).

Computer Problems

A working computer is necessary for online coursework. Computer problems will not be accepted as a valid reason for failure to complete course activities within the allotted time frame. Identify a second computer, before the course begins, that you can use if you experience computer problems.

Server Problems

When the Blackboard server needs to be taken down for maintenance, the Blackboard administrator will post an announcement in your course informing you of the time and date. If the server experiences unforeseen problems, your course instructor will notify you.

Lost or Corrupted Files

You must keep/save a copy of every project/assignment on an external disk or personal computer. In the event of any kind of technology failure (e.g., Blackboard server crash or virus infection, students' own computer problems, loss of files in cyberspace, etc.) or any disputes, the instructor may request or require you to resubmit the files. In some instances, the instructor may need to open another attempt within Blackboard, so communication with your instructor is critical in these circumstances.