

CSCI 6312 Advanced Internet Programming
TR 3:05 pm to 6:50 pm – *ONLINE (with Synchronous Class Meeting Times)*
Summer I 2020
Syllabus and Policy

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Course Organization*

Jun	2	Overview of different components; HTML, CSS, and JavaScript
	4	Python, XML, JSONRequest and SQL embedded in Python <i>[June 4... Raspberry Pi kit and Webcam needed by this date]</i> <i>Raspberry Pi (RPI), networking, connecting RPI to laptop via VNC, and SQL</i>
	9	Creating a website, and transferring data between server & client; Exam #1 (4:45-5:45 pm)
	11	Creating a backend DB and populating it with data
	16	Interfacing hardware with RPI and transferring data to the server; Exam #2 (4:45-5:45 pm)
	18	Server updating a website via querying the database and authentication
	23	Visualizing data on a website; Exam #3 (4:45-5:45 pm)
	25	Android App Development <i>[June 25... Last day to drop a class or withdraw]</i>
	30	Android App Development (... continued)
Jul	2	Android App Development and Project Presentations <i>[July 6... Study Day – No classes]</i>
	7	Comprehensive Final Examination, Tuesday July 7, 2020, 4:00 pm – 5:45 pm

** The topics listed above are a general guideline of topics intended to be covered following the shown daily timeline through the duration of the course. Depending on the pace and progress during the semester, topics may be substituted or have their sequence changed. Classes are *online with synchronous class meeting times*. Exams and Quizzes are delivered through ONLINE mechanism, however, these are given *synchronously* to everyone at the cited times (and at the same time) with no exceptions.*

Besides the formal allotted time, a student is expected to spend a large number of hours working on projects, assignments, reading material, recorded lectures, and videos. *The general rule is that for every 1 hour in class a student is expected to put in 3 hours outside the class.*

Textbook and/or Resource Material

A. Textbook(s)/Reference(s):

1. Resources such as Internet platforms and tutorials/material on the Internet will be used.
2. Internet & WWW: How to Program (w/Bind in Access Code) by Deitel & Deitel & Deitel;
5th Edition (or later); 2012; ISBN-13: 9780132151009; Pearson; Price (new paperback) \$127.99;
Price (eTextbook (\$54.99); Not an Open Educational Resource

B. Required Software:

1. Windows and Linux (Raspbian), MySQL, Python, PHP, Android Studio/Kivy, and Kotlin/Java
2. Scripting etc.: HTML, CSS, and JavaScript

C. Required Hardware:

1. Webcam (with microphone) for presentations and taking Exams through Respondus (webcam needs to be separate from the computer so that it can be picked up for [environment check](#) before starting an exam/quiz). Below is a video for your reference:
<https://www.youtube.com/watch?v=App8tArU6JI&t=136s>
2. Windows laptop and network cable to connect to RPi (provided by the student)**
3. Raspberry Pi (provided by the student)**
4. Breadboard, wires, switches, and LEDs (provided by the student)***

(**Neither the instructor nor the course Teaching Assistant has expertise in non-Windows platforms. The material of this course has been tested on Windows platform. If you do not have a Windows laptop and still want to continue with the course, using e.g. an Apple laptop, you are responsible for resolving any issues that you may encounter.)

(***This course involves hardware electronic components and their interfacing with Raspberry Pi. The students are expected to be familiar with electronic components such as breadboards, wires, resistors and LEDs, their interfacing and basic associated electrical principles.)

Course Description and Prerequisites

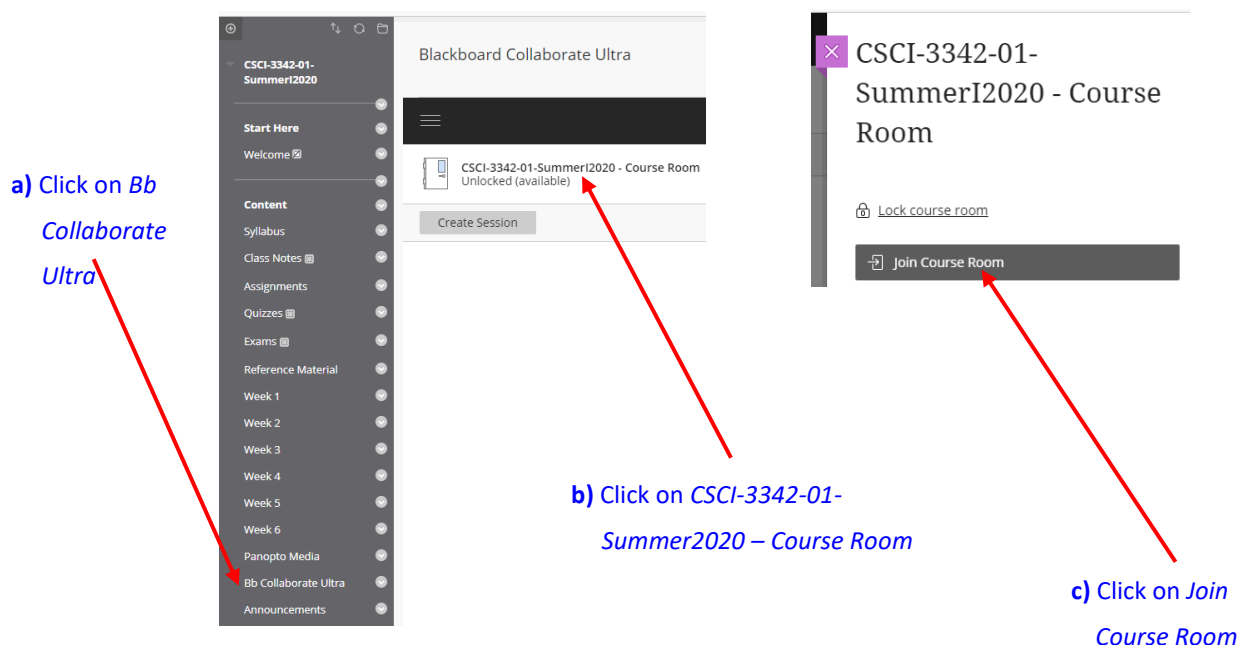
CSCI 6312 Advanced Internet Programming: Course covers theoretical and practical methods and techniques for programming on the Internet with a focus on the web server side. Students will be able to develop highly interactive web-based applications.

Course Delivery Method due to COVID-19 Situation

Even though the class is advertised as face-to-face with meeting days/times, considering the current situation regarding COVID-19, the delivery of the course, and interaction between students and instructor, will be via **online** tools. Below is a summary:

1) Class notes, recordings, and attending classes online: The class-notes, recordings, and other material will be available **online** posted on Blackboard. Students will be required to complete any assigned work before attending the class online. *Attending the online classes is mandatory.* Blackboard Collaborate Ultra needs to be used to attend the class online. Below are the instructions to join the class online at the scheduled time of your class (TR 3:05 pm - 6:50 pm):

- a) Open Blackboard using the *Chrome browser* and click on *Bb Collaborate Ultra* under *Course Tools*.
- b) Click on *CSCI-3342-01-SummerI2020 – Course Room* followed by clicking on *Join Course Room*.
- c) Follow on-screen instructions regarding microphone/camera etc. to join the online class.



Below are links to Blackboard Student Support:

Student Preparation Checklist (Technology):

<https://www.utrgv.edu/online/academic-continuity/students/index.htm>

How-To Guide and Tutorials:

<https://www.utrgv.edu/online/academic-continuity/resources/index.htm>

2) Syllabus, grading policy, and exam dates/times: Syllabus has the detail on grading policy and exam dates/times. There cannot be an exception. Of course, the exam dates/times may be changed due to unforeseen situation at the university level, which will be communicated to you as soon as the university announces any changes.

3) Assignments, Quizzes and Exams: Assignments, Quizzes and Exams are required to be submitted online through Blackboard. There will be quizzes and exams online during the class time. Note that a quiz or an exam will be conducted *synchronously* during an online class for everyone at the same time. Students may not take a quiz or an exam at different times.

4) Online tutoring: Teaching Assistants will be available through **online**. The [ONLINE Tutoring Schedule](#) (along with instructions of how to connect with a tutor online) will be available on Blackboard under **Reference Material** folder.

5) Online office hours: We will be meeting online at the scheduled class time, and I will be answering your questions about the recorded lectures/notes and conducting quizzes/exams. Additionally, you may request separate online appointment through email. Students may not visit the instructor or a Teaching Assistant in person at this time.

6) Visiting on-campus computer labs: As of March 20, 2020, the following computer labs are available on Brownsville campus for use by the students while practicing the required social-distancing protocol:

[BSETB 1.508](#)

BMAIN 1.312, BMAIN 1.508, BMAIN 1.514, BMAIN 1.524, BMAIN 2.518, and BMAIN 2.526

The above list may change in the coming weeks, so, please, contact Help Desk (956-882-2020) to know which labs are available for you to use, and any restrictions associated with your visit. If any students respond YES to any of the four (4) items listed below, they should not visit campus and be present in a social-distanced space with other individuals:

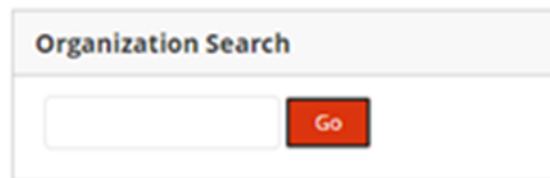
- Have you felt like you have a fever in past 48 hours?
- Do you have a cough?
- Have you been to Europe or Asia in the past 14 days?
- Have you been in personal contact with someone who has known or suspected coronavirus (COVID-19) infection?

Welcome and Computer Science Advising Material

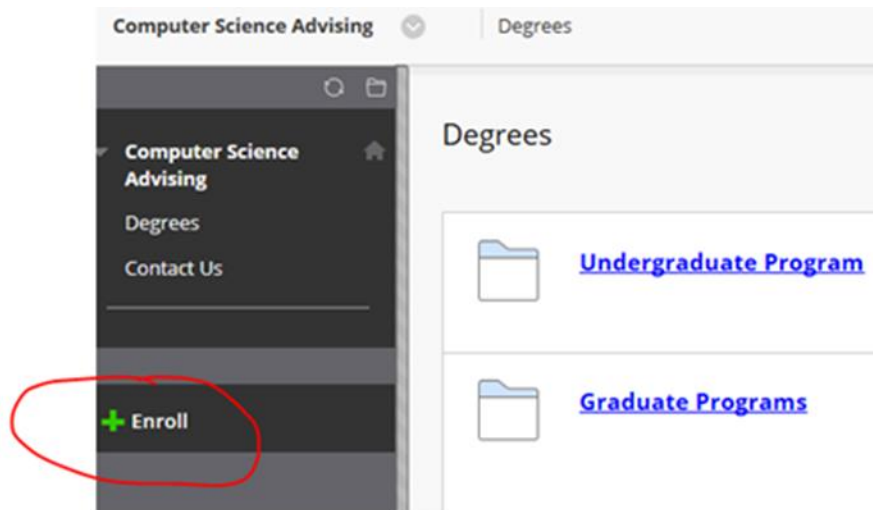
Welcome to yet another course offered by the Computer Science Department. This course includes working with Raspberry Pi to expose students to real-world systems by putting theory learned in the classroom into practice. One of the objectives of this course is to turn students into *self-learners*, so the students do not passively rely on the classes to gain knowledge.

Computer Science advising material is available on Blackboard. A student may self-enroll by entering “*Computer Science Advising*” in the search box under “*Organization Search*” and enrolling in it. Below are the instructions:

- 1) Type “Computer Science Advising” in the “Organization Search” box under Blackboard and click on “Go” button:



- 2) Once on Computer Science Advising page, make sure to enroll by clicking on “Enroll” link in order to have access to the material on the site, otherwise, the system will throw errors such as “Access Denied:”



Teaching Philosophy

The instructor encourages students to learn from variety of sources, especially, from resources available on the Internet. One of the objectives is to turn students into self-learners so the students do not passively rely on the classes to gain knowledge.

Learning Objectives/Outcomes for the Course

After completing this course the student should be able to:

- explain Internet programming, frameworks, and client/server architecture
- distinguish between client and server programming
- design client and server side components
- design backend databases
- design Android apps
- design hardware interfaces
- explain web application security and DB security

Learning Objectives for Core Curriculum Requirements

- To acquaint the student with client/server based Internet programming
- To familiarize the student with modern trends in Internet programming involving systems

ABET Learning Objectives/Outcomes for the Course

- ABET (1) An ability to analyze a problem, and to identify and define the computing requirements appropriate to its solution.
- ABET (2) An ability to design, implement, and evaluate a computer-based solution to meet a given set of computing requirements in the context of the discipline.
- ABET (4) An ability to make informed judgments in computing practice based on legal and ethical principles.
- ABET (5) An ability to function effectively on teams to establish goals, plan tasks, meet deadlines, manage risk, and produce deliverables.
- ABET (6) An ability to apply computer science theory and software development fundamentals to produce computer-based solutions.

Grading Policy

Exam #1 + Exam #2 + Exam #3 + Final Exam	= 15 + 15 + 15 + 15	= 60%
Assignments		= 20%
In-Class Projects/Quizzes		= 20%
Penalties		
Every tardy incident (absence, coming late to the class, leaving early from the class, or taking breaks during the class)		= - 1%

Grade A: 90% or higher
Grade B: 80% - 89%
Grade C: 70% - 79%
Grade D: 60% - 69%
Grade F: 59% or lower

Individual *make-up exams will not be given.** If a student does better on the final comprehensive exam, the lowest exam score (out of Exam #1, Exam #2, and Exam #3) will be dropped and its allocated percentage will be divided over the remaining two exams and the final (as shown in the example provided in “**Calculating your grade**” section below). [**Make-up includes requests to take the exam earlier or later should the student know in advance that he/she will not be able to take the exam on the assigned date.*]

Individual *make-up quizzes, assignments or projects will not be given.** The lowest quiz score will be dropped. Also, the lowest assignment/project score will be dropped (as shown in the example provided in “**Calculating your grade**” section below). [**Make-up includes requests to take the exam earlier or later should the student know in advance that he/she will not be able to take the exam on the assigned date.*]

Late assignments/projects will not be accepted. Submissions through email will not be accepted.

Attendance is required and exam/quiz material will cover lectures, text, assignments and projects.

The exam dates may be changed by the instructor per unforeseen situations. If a student misses a class, it is his/her responsibility to contact the instructor to acquire information on the scheduled exam and what was covered in the missed class. *This must be accomplished before coming to the next class.*

Any kind of grading disagreement must be initiated and settled within one week of the graded exam, project, quiz, or assignment in question. *The student needs to email the instructor a snapshot of the graded material in question, and explain what is being disputed.* The submitted material may be shredded/deleted by the instructor after four weeks of the submission deadline.

Copying from colleagues, lecture notes, books, past course material, electronic resources (such as Internet), etc. will be credited with 0. Such activity will be regarded as scholastic dishonesty and action will be taken as described under the section "Scholastic Dishonesty" herein.

Verbal agreements are not valid. All alterations, changes, modifications, or permissions are written and announced through email or Blackboard.

Calculating your grade:

- Each Exam is out of 100 points unless otherwise specified
- Each Project, assignment, or a quiz, is out of 10 points unless otherwise specified

Let's say that there have been 11 assignments/projects and 21 quizzes given during the semester. As an example, let's say that a student has received the following scores:

Exam #1: 78

Exam #2: 65

Exam #3: 89

Final Exam: 85

Assignments/projects (after dropping the assignment/project with the lowest score): 82 out of 100

Quizzes (after dropping the quiz with the lowest score): 180 out of 200

Tardy incidents: 6

The student's grade is calculated as follows:

$$78 \times .20 + 89 \times .20 + 85 \times 0.20 + 82 \times .20 + (180/200) \times 100 \times 0.2 - 6 = 78.8 \rightarrow C$$

NOTICE: Your enrollment in this course requires that you use Respondus Lockdown Browser and Respondus Monitor for online assessment proctoring. LockDown Browser is a custom browser that locks down the testing environment within Blackboard and replaces regular browsers such as Chrome, Firefox, and Safari. Respondus Monitor requires you to have a webcam and microphone as it will record you while taking your assessment. **YOUR ACTIVITIES ARE RECORDED WHILE YOU ARE LOGGED INTO OR TAKING YOUR ASSESSMENT(S). THE RECORDINGS SERVE AS A PROCTOR AND WILL BE REVIEWED AND USED IN AN EFFORT TO MAINTAIN ACADEMIC INTEGRITY.**

You can find more detailed information on Lockdown Browser and Monitor at [UTRGV.edu/online](https://www.utrgv.edu/online).

Blackboard Orientation

To actively participate in this course one needs to get familiar with the course environment. This course uses Blackboard tools. One can get familiar with these tools by self-enrolling and reviewing the orientation provided:

- In Blackboard, use the **Course Search** box and enter *Blackboard Orientation*
- Click on **Go**
- Click on the **Enroll** button to include the *orientation course* in your *Blackboard MyCourses* list

Contacting Instructor and Instructor's Response Time

Use instructor's email given above for contacting him regarding the course content. Normally, the instructor will respond within two working weekdays. Any exceptions will be announced through Blackboard announcement mechanism. Technical questions on Blackboard should be referred to Blackboard Support (see under Course Technology).

Grades are normally updated each time a grading session has been completed – typically within two working weekdays or before the next class session.

Course Technology

Click on <http://www.utrgv.edu/online/getting-support/course-technology/index.htm> to review information on course technology which covers technical requirements, expectations, Blackboard orientation, accessibility, privacy statement links, and contacting Blackboard Support.

UTRGV ID

Validated UTRGV ID is required for admission to a university lab and during an exam session.

UTRGV EMAIL

Only UTRGV email may be used in any communication with the instructor. Using any other email may not yield a response. Blackboard "Course Messages" may not be used to communicate with the instructor. Submissions (such as assignments) will not be accepted through email.

Electronics

Cell phones and other personal electronic equipment must be turned off and put away during class/exam/quiz sessions. Lab computers must be turned off unless explicitly requested by the instructor to use them.

Changes in the course content

Changes in the course content and topics may be made by the instructor as deemed necessary.

CALENDAR OF ACTIVITIES

Refer to Section “**Course Organization**” above for subject topics planned for each week.

The UTRGV academic calendar can be found at <https://my.utrgv.edu/home> at the bottom of the screen, *prior to login*. Some important dates for Summer I 2020 include:

June 1	First day of classes
June 2	Last day to add a course or register for Summer I 2020
June 25	Last day to drop (DR grade) a class or withdraw (grade of W)
July 4	Independence Day – NO classes
July 6	Study Day – NO classes
July 7	Final Exams
July 7	Summer I classes end; Official last day of the term

Other Course Information

The lab work required in the course is integrated with the course itself in the form of assignments/projects. Besides the formal allotted time, a student is expected to spend a large number of hours working on projects, assignments, reading material, recorded lectures, and videos. *The general rule is that for every 1 hour in class a student is expected to put in 3 hours outside the class.* You may only do work related with the class when in class. *Activities unrelated with the class (such as texting, talking, browsing, unless otherwise explicitly instructed by the instructor to do so) are prohibited during a class session.*

UTRGV Policy Statements

STUDENTS WITH DISABILITIES:

Students with a documented disability (physical, psychological, learning, or other disability which affects academic performance) who would like to receive academic accommodations should contact **Student Accessibility Services (SAS)** for additional information. In order for accommodation requests to be considered for approval, the student is responsible for providing sufficient documentation of the disability to SAS and participating in an interactive discussion

with SAS staff. Accommodations may be requested at any time but are not retroactive. Please contact SAS early in the semester/module for guidance. Students who experience a broken bone, severe injury, or undergo surgery may also be eligible for temporary accommodations.

Pregnancy, Pregnancy-related, and Parenting Accommodations

Title IX of the Education Amendments of 1972 prohibits sex discrimination, which includes discrimination based on pregnancy, marital status, or parental status. Students seeking accommodations related to pregnancy, pregnancy-related condition, or parenting (reasonably immediate postpartum period) are encouraged to contact Student Accessibility Services for additional information and to request accommodations.

Student Accessibility Services:

Brownsville Campus: Student Accessibility Services is located in 1.107 in the Music and Learning Center building (BMSLC) and can be contacted by phone at (956) 882-7374 or via email at ability@utrgv.edu.

Edinburg Campus: Student Accessibility Services is located in 108 University Center (EUCTR) and can be contacted by phone at (956) 665-7005 or via email at ability@utrgv.edu.

MANDATORY COURSE EVALUATION PERIOD:

Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (<http://my.utrgv.edu>); you will be contacted through email with further instructions. Students who complete their evaluations will have priority access to their grades. Online evaluations will be available on or about:

Summer Module 1	June 10-16, 2020
Summer Module 2	August 5-11, 2020
Summer I Full	June 29- July 6, 2020

ATTENDANCE:

Students are expected to attend all scheduled classes and may be dropped from the course for excessive absences (**three or more**). UTRGV's attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics; for observance of religious holy days; or for military service. Students should contact the instructor in advance of the excused absence and arrange to make up missed work or examinations.

SCHOLASTIC DISHONESTY:

As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism (including self-plagiarism), and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations, STU 02-100, and UTRGV Academic Integrity Guidelines). **All scholastic dishonesty incidents will be reported to Student Rights and Responsibilities.**

SEXUAL MISCONDUCT and MANDATORY REPORTING:

In accordance with UT System regulations, your instructor is a "Responsible Employee" for reporting purposes under Title IX regulations and so must report to the Office of Institutional Equity & Diversity (oiie@utrgv.edu) any instance, occurring during a student's time in college, of sexual misconduct, which includes sexual assault, stalking, dating violence, domestic violence, and sexual harassment, about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at www.utrgv.edu/equity, including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect that is free from sexual misconduct, discrimination, and all forms of violence. If students, faculty, or staff would like confidential assistance, or have questions, they can contact OVAVP (Office for Victim Advocacy & Violence Prevention) at (956) 665-8287, (956) 882-8282, or OVAVP@utrgv.edu.

COURSE DROPS:

According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the “3-peat rule” and the “6-drop” rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.

STUDENT SERVICES:

Students who demonstrate financial need have a variety of options when it comes to paying for college costs, such as scholarships, grants, loans and work-study. Students should visit the Students Services Center (U Central) for additional information. U Central is located in BMAIN 1.100 (Brownsville) or ESSBL 1.145 (Edinburg) or can be reached by email (ucentral@utrgv.edu) or telephone: (888) 882-4026. In addition to financial aid, U Central can assist students with registration and admissions.

Students seeking academic help in their studies can use university resources in addition to an instructor’s office hours. University Resources include the Advising Center, Career Center, Counseling Center, Learning Center, and Writing Center. The centers provide services such as tutoring, writing help, counseling services, critical thinking, study skills, degree planning, and student employment. In addition, services such as the Food Pantry are also provided. Locations are listed below.

Center Name	Brownsville Campus	Edinburg Campus
Advising Center AcademicAdvising@utrgv.edu	BMAIN 1.400 (956) 665-7120	ESWKH 101 (956) 665-7120
Career Center CareerCenter@utrgv.edu	BCRTZ 129 (956) 882-5627	ESSBL 2.101 (956) 665-2243
Counseling Center Counseling@utrgv.edu Counseling and Related Services List	BSTUN 2.10 (956) 882-3897	EUCTR 109 (956) 665-2574
Food Pantry FoodPantry@utrgv.edu	BCAVL 101 & 102 (956) 882-7126	EUCTR 114 (956) 665-3663
Learning Center LearningCenter@utrgv.edu	BMSLC 2.118 (956) 882-8208	ELCTR 100 (956) 665-2585
Writing Center WC@utrgv.edu	BUBLB 3.206 (956) 882-7065	ESTAC 3.119 (956) 665-2538

DISCLAIMER:

The instructor reserves the right to alter this syllabus.