CSCI 6370 / CRN 40709

Games & Computation

Instructor	Dr. Tim Wylie
Contact	Office: EIEAB 3.219 Phone: 956-665-2577 Email: timothy.wylie@utrgv.edu
Office Hours	TR 9:00 a.m. - 11:00 a.m.
Class	R, 6:30 p.m. - 9:00 p.m., EIEAB 1.208
Lab Schedule	
Final Exam	Dec 12th (R), 6:30 p.m. - 9:00 p.m., EIEAB 1.208
Course Website	collab.hackresearch.com

CSCI 6370: Games & Computation. This course provides an introduction and overview of Algorithmic Game Theory (AGT) Complexity and Combinatorial Game Theory (CGT). The topics include hardness results and complexity classes, game positions and trees, nimbers and surreal numbers, constraint logic, motion planning gadgets, and research/collaboration methodologies.

Course Overview

Modality. This is a Traditional Face-to-Face Course (R). The modality is subject to change based on recommendations and guidelines.

Organization. Parts of the course will be online. Class participitation will require the following online services and places that must be checked frequently.
- University email (utrgv.edu/mail)
- Course website
- Discord for the class (invite will be on BB)
- Coauthor

Outline of the Material. The topics you will be exposed to will vary quite substantially. However, a rough schedule is given to feed your fears.

Week 1	Intro to games and CGT
Weeks 2-3	Impartial combinatorial games
Weeks 4-5	Partizan combinatorial games
Weeks 6-7	Intro to Complexity and AGT
Weeks 8-9	Advanced Algorithmic Game Theory
Weeks 10-	Advanced topics, project work

Grading. aoeu

Grade Breakdown		Final Grade	
Group work	30	90 -100	A
Individual work	70	80 -89	B
	---	70 -79	C
Total possible score (max):	100	60 -69	D
		0 -59	F

Note: Grades may be adjusted to reflect the overall performance of the class.

Late Work Policy. In-class exercises and quizzes will not be accepted late. Assignments must be turned in at the specified time on the given due date for full credit. Any assignment turned in late will receive 50 credit.

Course Work

This course is designed to facilitate exploration and collaboration. As such, your grade in the course is largely based on your contributions in the final projects. All work is expected to be done in Coauthor, and turned in as described in that section.

Group Work.

Notes. Each week a group will be assigned to be a scribe for the class. The notes should encompass the lecture material, group discussion, and the lab time. They must be written in LaTeX and on the Coauthor thread. When the class has agreed they are adequate, a final pdf must be attached to coauthor thread.

Individual Work.

Final Project. The majority of your grade is the individual work judged through the final projects. Rather than each person or group having a specific project, the projects will be defined and anyone is allowed to work on any of them. Your grade will reflect the amount of combined work. Small projects are also encouraged if no further results are obtained, even if they are not substantial enough for a final project. Grading is based solely on finished projects. To be considered finished, a project must have the parts listed below, with the final documents added to the coauthor thread.

Each project will have these aspects:

- Discussion. There is a coauthor thread for each project. Discussions, problems, and results should be written there with LaTeX markup. This should be kept up-to-date since grading will be based off the threads.

- Paper. Every project must have a final report written as a standard research paper. As such, it must have an abstract and sections for the introduction, background, definitions, various results, and conclusion. A LaTeX template will be provided and the citations must be formatted with bibtex. This should be fairly straightforward from the coauthor material.

  - Each paper must have at least two rounds of review before a final is allowed to be submitted. A paper reviews requires the contributors to agree and submit on a draft of the paper. The pdf should be uploaded to coauthor by the deadline as the draft. A review will be conducted and notes will be given. The next draft must also include a separate review document that discusses how each note was addressed. Please note that a draft does not mean the material is fixed, and more results/material can still be added.

- Presentation. We will end the semester with every project being presented by the contributors. Every contributor must be part of the presentation, and a contributor must have been part of the paper/discussion process in order to be part of a project (only doing the presentation does not count). Each group is given 10 minutes and an additional minute for each contributor beyond two.

Final Documents. The final documents that will be attached to the coauthor thread before it can be graded.

- Final paper pdf.
- Zip file of the paper source material from Overleaf.

- The two paper review rounds and the groups response file.
- The presentation pdf.
- The source file for the pdf.
- If there is a software component to the project, a zip of the current source with a github link to the project.
- The project evaluation from all contributors.

Each project will focus on a game or mechanic. You may request to create a new project if one does not exist on that topic.

Self-Evaluation/Project Contribution

For the final grade, there will be a place to report your contributions to different projects as well as the group work. Note that the project evaluation is separate from the self-evaluation, although it may be part of it.

The project evaluation must be filled out by each contributor. It is up to an individual to decide if they have contributed enough to a project to be included. Each individual on the project must submit, as part of the evaluation, what their contribution is.

In order to receive a passing grade, an individual must have enough contributions that constitute a significant addition to the project, or projects, they are involved in. This includes all aspects of the project (documentation, paper, presentation, software, etc).

Exercises / Labs

During class there will be several labs and exercises to help us explore games, ask good questions, and find answers. Students will work on them and post in the coathor thread of the game with the lab number title.

Many of these results will be useful, or at least a good starting point, for the final paper work.

UTRGV Course Policies

Attendance. Students are expected to attend all scheduled classes and may be dropped from the course for excessive absences. UTRGV s attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics; have been provided such an accommodation

by Student Accessibility Services (SAS); for observance of religious holy days; or for military service. Accommodations related to COVID-19 should also go through SAS. Students should contact the instructor in advance of the excused absence and arrange to make up missed work or examinations.

Recording. The use of classroom recordings is governed by the Federal Educational Rights and Privacy Act (FERPA), UTRGV s acceptable-use policy, and UTRGV HOP Policy STU 02-100 Student Conduct and Discipline. A recording of class sessions will be kept and stored by UTRGV, in accordance with FERPA and UTRGV policies. Your instructor will not share the recordings of your class activities outside of course participants, which include your fellow students, teaching assistants, or graduate assistants, and any guest faculty or community-based learning partners with whom we may engage during a class session. You may not share recordings outside of this course. Doing so may result in disciplinary action under UTRGV HOP Policy STU 02-100 Student Conduct and Discipline.

Class Drop Policy. 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. The census date is Sept. 11th, which is the last day to drop the class without it appearing on your transcript, and the last date to drop is Nov. 7th.

Scholastic Integrity Policy. Members of the UTRGV community uphold the Vaquero Honor Code s shared values of honesty, integrity and mutual respect in our interactions and relationships. In this regard, academic integrity is fundamental in our actions, as any act of dishonesty conflicts as much with academic achievement as with the values of honesty and integrity. Violations of academic integrity include, but are 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 (Board of Regents Rules and Regulations, STU 02-100, and UTRGV Academic

Integrity Guidelines). All violations of Academic Integrity will be reported to Student Rights and Responsibilities through Vaqueros Report It.

Course Evaluation. Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (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:
Fall Module 1 (7 Weeks) October 2 - 8, 2024
Fall Regular Term 2024 November 13 - December 4, 2024
Fall Module 2 (7 Weeks) November 27 - December 3, 2024

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 (OIED@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.

Students with Disabilities. Students with a documented disability (physical, psychological, learning, or other disability which affects academic performance) who would like to receive reasonable academic accommodations should contact Student Accessibility Services (SAS) for additional information. In order for accommodation requests to be considered for approval, the student must apply using the mySAS portal located at www.utrgv.edu/mySAS and is responsible for providing sufficient documentation of the disability to SAS. Students are required to participate in an interactive discussion, or an intake appointment, with SAS staff. Accommodations may be requested at any time but are not retroactive, meaning they are valid once approved by SAS. 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) should submit the request using the form found at https://www.utrgv.edu/pregnancyandparenting for review by Student Accessibility Services.

Student Accessibility Services.

> Brownsville Campus: Student Union (BSTUN) 1.20. Phone: (956) 882-7374. Email: ability@utrgv.edu.
>
> Edinburg Campus: University Center (EUCTR). Phone: (956) 665-7005. Email: ability@utrgv.edu.

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 Student 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	EITTB 1.000, (956) 665-7120
Career Center (CareerCenter@utrgv.edu)	BINAB 1.105, (956) 882-5627	ESTAC 2.101, (956) 665-2243
Counseling Center (Counseling@utrgv.edu)	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)	BLIBR 3.206, (956) 882-7065	ESTAC 3.119, (956) 665-2538

Dean of Students Resources. The Dean of Students office assists students when they experience a challenge with an administrative process, unexpected situation such as an illness, accident, or family situation, and aids in resolving complaints.

Additionally, the office facilitates student academic related requests for religious accommodations, support students formerly in foster care, helps to advocate on behalf of students and inform them about their rights and responsibilities, and serves as a resource and support for faculty and campus departments.

Vaqueros Report It allows students, staff, and faculty a way to report concern about the well-being of a student, seek assistance in resolving a complaint, or report allegations of behaviors contrary to community standards or campus policies. The Dean of Students can be reached by email (dos@utrgv.edu), phone (956-665-2260), (956-882-5141), or by visiting one of the following office locations: Student Union (BSTUN) 1.20 or University Center (EUCTR 323). Phone: 956-665-2260.