



TURKISH REPUBLIC
FIRAT UNIVERSITY
COLLEGE OF TECHNOLOGY
DEPARTMENT OF SOFTWARE ENGINEERING

COURSE SYLLABUS
SENG 545 Evolutionary Computation

Location: Software Engineering Building

Class meeting times:	Lab meeting time:	Instructor:	Teaching Assistant
TBA	TBA	Assoc. Prof. Dr. Lütfü Şağbanşua	

Office hours: Please see the notice board outside each faculty member's office.

Course description: The purpose of this course is to introduce history of evolutionary computation, concepts of genetic algorithms, evolution strategies, evolution programming, genetic programming, classifier systems, constraint handling, multi-objective cases, dynamic environments, parallel implementations, co-evolutionary systems, parameter control, hybrid approaches, and commercial applications.

Course objectives:

- To develop knowledge of evolutionary computation techniques and methodologies set in the context of modern heuristic methods.
- To gain experience in matching various evolutionary computation methods and algorithms for particular classes of problems.
- To gain experience in applying various evolutionary computation methods and algorithms as a part of software development.
- To develop knowledge and experience in developing evolutionary algorithms for real-world applications and to be able to read and understand scientific research papers as well as presenting them in seminar talks and conferences.

Prerequisite:

Textbook: Lecture notes and research papers to be announced on the course website.

Course requirements:



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Assignments: Students will be required to complete different types of homework to be assigned.

Exams: There will be one midterm exam and a final exam. Students will be given at least one week's notice of the exam dates. All examinations are written examinations. If a student has an excused absence exam, the University Regulation will be applied.

Grading plan: Mid-term exam	40%
Final exam	60%

≥ 90	\Rightarrow	A
≥ 80 but < 90	\Rightarrow	B
≥ 70 but < 80	\Rightarrow	C
≥ 60 but < 70	\Rightarrow	D
< 60	\Rightarrow	F

Class participation

In accordance with the university policy, regular attendance is required; however, no points will be awarded or subtracted based on your attendance. You are responsible for all material covered in every class, regardless of whether you attended or not. It is your responsibility to obtain notes, assignments, etc., from fellow class members if you miss the class.

Academic dishonesty

All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The university and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource



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materials. No cheating on an examination or assignments is allowed; a score of zero will be given to the student if such a case occurred.

Rules of conduct

Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Please turn off or mute your cellular phone and/or pager before class begins. Students are prohibited from eating in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking among each other at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a, minimally, a directive to leave class or being reported to the Dean of Students for disciplinary action in accordance with university policy.

Visitors in the classroom

Occasion visiting of classes by responsible individuals is allowed with prior arrangement with the instructor, as long as it does not interfere with the registered members of the class or the educational process.

Disabilities

According to University policy requests for accommodations must be initiated by the student. A student seeking accommodations should go to the Deans of Students for instructions.

Religious Holidays

An institution of higher education shall excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.