

234901 Workshop in Competitive Programming, Spring 2019

Information Sheet

This workshop is aimed to improve programming skills, and is a great opportunity to experience solving problems and applying the theoretical computer science knowledge you gained in a fun and challenging manner in teams.

During the meetings, students will gain experience aimed at improving their capability to perform in settings similar to the ACM International Collegiate Programming Contest ([ICPC](#)). It is the oldest, largest, and most prestigious programming contest in the world. The contest pits teams of three university students against eight or more problems, with a five-hour deadline. Huddled around a single computer, teammates collaborate to rank the difficulty of the problems, come up with efficient algorithms for solving them, and program their solutions. The students are given a problem statement, and an example of test data, but they do not have access to the judges' test data and acceptance criteria. Judging is strict. Solutions submitted are either accepted or rejected, and each incorrect solution submitted is assessed a time penalty. The team that solves the most problems in the fewest attempts in the least cumulative time is declared the winner. The workshop will be followed by a competition determining a team that will represent the Technion in ICPC.



Course Staff

- Prof. Gill Barequet (Lecturer in charge) – barequet@cs.technion.ac.il
- Nofar Carmeli (TA in charge) – snofca@cs.technion.ac.il
- Gil Ben-Shachar (TA) – gilbe@cs.technion.ac.il

Teams

In the beginning of the semester we will work in singles, and after a few lessons we will start working in teams of 3. You do not need to have a team when registering to the course. Note that usually, you will work with the same team throughout the semester and in the final competition.

Grade

The final grade will be determined by four components:

- Class Performance (40%)
- Class Attendance (penalty for missing classes)
- Homework (30%)
- Final Competition (30%)

Class Performance

The lessons will mostly involve solving problems from previous ICPC competitions. Students will be graded according to the number of problems they (or their team) solved. Electronic submission will only be possible until the end of the lesson.

Late submission

If you are eager to keep working on your unsolved problems after class, you can do that and get a small bonus to your grade.

Late submission of a problem presented in a certain meeting will be possible in singles until the beginning of the next lesson. The bonus is worth a quarter of a problem solved in class.

Class Attendance

Attendance is mandatory and will be checked every meeting.

In cases where missing lessons is unavoidable, please inform the TA in charge in advance by mail.

- Missing one meeting during the semester will be excused.
- In case of Miluim,
 - a. Please let us know in advance.
 - b. Please send Ishur Miluim to the TA in charge by email.
 - c. You will be given a chance to compensate for missed class performance only until the late submission deadline for that lesson.

- Every additional absence will result in a 5-point penalty to the final grade.
- If you missed class, you are encouraged to solve class problems at home, and submit them through late submission.

Homework

There will be 3 HW assignments this semester:

- HW0 - in singles (10%)
- HW1 - in singles (50%)
- HW2 - in teams (40%)

Submission instructions will be published along with the assignments.

Late submission

Late submission is possible up to a maximum of 5 days. Assignments overdue by more than 5 days will not be accepted.

- A 5 point penalty will be deducted for each day of delay.
 - Friday and Saturday will each be considered as 0.5 day, and the total number of overdue days will be rounded up.
- In case of reserve duty ("Miluim") or an exam during the time after the assignment is published and before the due date, one day of postponement will be allowed for each day of reserve duty/exam of each of the team members without penalty.
 - Please inform the leading TA before the due date.
 - Please send an official certificate document by mail to the leading TA. The first page of your exam scan can act as an official certificate for exams and midterms.

Final Competition

The final competition will be held after the semester ends and before the exams begin: either on Friday 28/06/19 or on Sunday 30/06/19. We will update the final date here before the semester starts. The competition will last 5 hours in settings similar to ICPC competitions. Participation is Mandatory and required to pass the workshop.

- The winning eligible team will be invited to represent the Technion in the SWERC ICPC contest in europe.