Algorithms 1 (234247)  
Spring 2018 Syllabus

1 Staff

Lecturers

- Prof. Roy Schwartz (Lecturer in Charge)
- Yohay Kaplan
- Gilad Kutiel

Teaching Assistants

- Yaron Fairstein (TA in Charge)
- Ran Yeheskel
- Shafik Nassar
- Ayelet Kravi
- Rana Shahut
- Michal Friedman
- Zuphit Fidelman

2 Course Material

<table>
<thead>
<tr>
<th>Topic</th>
<th>Approx. Time</th>
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<tbody>
<tr>
<td>Breadth First Search (BFS)</td>
<td>2 hours</td>
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<tr>
<td>Depth First Search (DFS)</td>
<td>2 hours</td>
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<tr>
<td>Strongly Connected Components</td>
<td>2 hours</td>
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<tr>
<td>Minimum Spanning Trees (MST)</td>
<td>3 hours</td>
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<tr>
<td>Shortest Path Problem</td>
<td>3 hours</td>
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<tr>
<td>Greedy Algorithms</td>
<td>3 hours</td>
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<tr>
<td>Dynamic Programming</td>
<td>5 hours</td>
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</tbody>
</table>

- Including All-Pairs Shortest Path (APSP) Problem.

Maximum Flow Problem                                    6 hours

3 Grading

There will be two "magen" tests, each consisting of 10%, and a final exam worth 80%.
4 Magen Tests Dates

• Test 1 will take place on Tuesday, May 8th, 2018.
• Test 2 will take place on Tuesday, June 5th, 2018.

5 Exam Dates

• Moed A will take place on Tuesday, July 24th, 2018.
• Moed B will take place on Wednesday, October 3rd, 2018.

6 Workshops

Each week a collection of question will be published. The question would be solved in workshops held at the following week. We highly recommend solving these questions and participating to make the most out of the course! In addition, the magen test will contain mostly question from these collections.

7 Course Website

The course has an online website at [http://webcourse.cs.technion.ac.il/234247](http://webcourse.cs.technion.ac.il/234247). You are expected to visit the website and update frequently. The course also has a mailing list; make sure you are registered for receiving updates (Auto Update on the GR website).

8 Literature

The course textbooks are:

• **Lectures booklet**, written by Prof. Shlomo Moran in 2015

Notes regarding the books:

1. There is a third edition of the Introduction to Algorithms book. The course follows the second edition.
2. There is a Hebrew translation of Chapters 1-7 of the Algorithm Design book.