SYLLABUS
Old Dominion University • College of Sciences • Department of Computer Science
CS 600 • Algorithms and Data Structures • Spring 2020

Instructor
Dr. Andrey Chernikov
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Office hours: MW 2:00pm to 3:00pm and 4:30pm to 5:30pm, and by appointment

Course Information

Meeting location & hours  ECS 2120, MW 3:00pm to 4:15pm

Catalog description  This course covers the following topics: (i) Basic introduction to algorithms, their design and analysis (ii) Asymptotic notation (iii) Recurrence Relations and their solutions (iv) Sorting and Order Statistics: various algorithms for sorting and their analysis, lower bounds for sorting, computing medians, modes and various order statistics (v) Paradigms for algorithm design and analysis: Dynamic Programming, Greedy Method, Amortized Analysis, and (vi) Graphs and Elementary Graph Algorithms: Breadth-first and Depth-first Search, Topological Sort, Minimum Spanning Trees and Shortest Paths Algorithms.

Prerequisites  CS 361 or equivalent and CS 381 or equivalent

Current course information and assignments  https://www.blackboard.odu.edu (check frequently)

Textbook  Introduction to Algorithms (3rd edition) by Cormen et al., MIT Press, 2009

Assignments

• 80% all weekly homeworks
• 20% final take-home exam

The final percentage score will be computed as follows:

$$\text{final score} = \frac{\text{individual total weekly test score} - x}{\text{maximum total weekly test score} - y} \times 80 + \frac{\text{your final exam score}}{\text{maximum final exam score}} \times 20,$$

where $x$ is student’s lowest weekly test score, and $y$ is the number of points allocated for this test. The letter grade will be looked up from the following table.

<table>
<thead>
<tr>
<th>final score:</th>
<th>0</th>
<th>60</th>
<th>65</th>
<th>70</th>
<th>75</th>
<th>80</th>
<th>85</th>
<th>90</th>
<th>95</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>letter grade:</td>
<td>F</td>
<td>C-</td>
<td>C</td>
<td>C+</td>
<td>B-</td>
<td>B</td>
<td>B+</td>
<td>A-</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>
Policies

• All assignments will be published and submitted through the Blackboard system. No other medium will be accepted without prior instructor’s permission.

• Late assignments will not be accepted, unless accompanied by a documented evidence (e.g., doctor’s note) of student’s inability to complete them. An interruption in the internet connection will not be recognized as a reason to retake the test, unless accompanied by a note from the university IT department. Therefore, it is strongly advised to complete the assignments before the deadline.

• Weekly homeworks will have a week-long interval of submission. Once the interval expires, the test will close automatically. The correct answers will be revealed after the test closes.

• For open-ended questions either typed or handwritten (and then scanned) answers can be uploaded. However, appeals of low grades based on misread handwriting will not be accepted. The portable document format (pdf) is preferred as formulas and charts sometimes do not render correctly across platforms when native formats are used.

• The writing must be clear and concise. Points will be taken off for unnecessarily wordy or incomprehensible solutions.

• All assignments must be completed individually. No person, except the instructor or the teaching assistant, can be asked for help with solving the assignments.

• The internet and any printed materials can be consulted as needed. However, all sources used in the graded work must be cited.

• If a cited source has to be quoted verbatim, quotation marks and indentation must be used.

• Problem solutions found on the internet are sometimes incorrect and often poorly written. The goal of the class is developing individual proficiency in the material. The instructor may question the student to determine if submitted work corresponds to student’s proficiency and assign the grade accordingly.

• Class attendance is not factored into the grade. However, class meetings are important as they provide a helpful environment to stay focused and to ask questions.

• Students must be familiar with and abide by the University Honor Code: https://www.odu.edu/about/monarchcitizenship/student-conduct/code.

Disability: Students are encouraged to self-disclose disabilities that have been verified by the Office of Educational Accessibility by providing Accommodation Letters to their instructors early in the semester in order to start receiving accommodations. Accommodations will not be made until the Accommodation Letters are provided to instructors each semester.