CS 101-008: Computer Programming & Problem Solving

Wallace Rutkowski

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CS 101
Introduction to Programming for Engineers

Instructor: Wallace Rutkowski
email: wallace.rutkowski@njit.edu
office: GITC 4413
phone: 973-596-5483

Textbook: MATLAB Programming for Engineers
Author: Stephen J. Chapman
Publisher: Thomson
ISBN-10: 0-495-24449-X

Grading: There will be a midterm and a final examination. There will be numerous programming projects and some online quizzes posted on canvas. Due to the coronavirus crisis, the grading scheme will be modified as follows.

Final grade will be computed as:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs</td>
<td>50%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>20%</td>
</tr>
<tr>
<td>Final (on-line)</td>
<td>30%</td>
</tr>
</tbody>
</table>

Topics:
Part of the course will introduce students to the application of computing in engineering. The majority of the course will teach the basic concepts of imperative programming using the MATLAB programming language. The main topics will be:
1. Input/output
2. Translating equations into MATLAB
   arithmetic operators
   calling functions
   plotting
3. Sequence of control flow
4. Selection statements
   relational operators
   logical operators
5. Iteration statements
6. Writing functions
   parameter passing
   local variables
7. Introduction to Python