NEW YORK CITY COLLEGE OF TECHNOLOGY
The City University of New York

DEPARTMENT: Mathematics
COURSE: MAT 1315/ MA 315
TITLE: Technical Mathematics with Applications II
DESCRIPTION: The second of a two-semester sequence of intermediate algebra and trigonometry with applications. Topics include law of sines, law of cosines, logarithmic and exponential equations, absolute values and inequalities, advanced trigonometric graphs, exponents and radicals, introduction to statistics and graphical analysis. This course is open to students in the Verizon program only.


CREDITS: 4
PREREQUISITES: MAT 1215 or MA 215

Prepared by: Prof. A. Kramer

A. Testing Guidelines:
There will be two class tests, a computer project and a final examination.

B. Computer Project (counts as one test): A computer project done by teams of two or three students) using some of the mathematics in the course, and, EXCEL and POWERPOINT, or similar software. All reports should contain an introduction with an overview and a discussion of the concepts with examples and diagrams or pictures. Categories are:
1. A Statistics study from work or experience (See Exercises p613/31, 32; marked W in the text)
2. Further study in one of the following areas: Statistics (Process Control oraphs, AC circuits, Exponential and Logarithmic Functions, Linear Regression, Linear...
Programming. Include an explanation of the concepts and five or more worked out examples.
3. A historical study of a major contributor or contribution to Telecommunications, e.g. Life of Alexander Graham Bell, Guglielmo Marconi etc, History of Fiber Optics, Wireless Communications etc.
4. An application that uses the mathematics in the course, e.g. a topic in sics, astronomy, finance etc.

Learning Outcomes
for
MAT 1315/ MA 315

1.

2.

3.

4.
Mathematics Department Policy on Lateness/Absence

A student may be absent during the semester without penalty for 10% of the class instructional sessions. Therefore,

If the class meets: The allowable absence is:

1 time per week 2 absences per semester
2 times per week 3 absences per semester

Students who have been excessively absent and failed the course at the end of the semester will receive either

- the WU grade if they have attended the course at least once. This includes students who stop attending without officially withdrawing from the course.
- the WN grade if they have never attended the course.

In credit bearing courses, the WU and WN grades count as an F in the computation of the GPA. While WU and WN grades in non-credit developmental courses do not count in the GPA, the WU grade does count toward the limit of 2 attempts for a developmental course.

The official Mathematics Department policy is that two latenesses (this includes arriving late or leaving early) is equivalent to one absence.

Every withdrawal (official or unofficial) can affect a student’s financial aid status, because withdrawal from a course will change the number of credits or equated credits that are counted toward financial aid.

New York City College of Technology Policy on Academic Integrity

Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the College recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and at New York City College of Technology and is punishable by penalties, including failing grades, suspension, and expulsion. The complete text of the College policy on Academic Integrity may be found in the catalog.
### Homework *(All problems are odd unless indicated)*

Any starred problems can be submitted for extra test points: 
* = 1 pt, ** = 2 pts.
Other ways to earn test points are shown at the bottom.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Wash</th>
<th>Kramer Hand Out</th>
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<tbody>
<tr>
<td><strong>Statistics and Linear Regression:</strong></td>
<td>p612/(Do histograms on EXCEL)1-3all, 7-9all, 13, 14, 27, 29, 28*, 30*; p616/1-15, 17-19all, 28-32all, 35, 36, (41-44all)<em>; p621/9-12all, 13, 15, 19, 16</em>, 18*, 20*; p626/5, 6,7, 8*, 13-16all, 17-19all, 20*; p636/1-11, 2*, 4*, 6*.</td>
<td>N/A</td>
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<tr>
<td><strong>Inequalities and Linear Programming:</strong></td>
<td>p467/5-15, 16*, 29-33, 39, 41, 40*; p480/Graph on Calculator: 3-8all, 19, 20, 43-47, (44-48 even)<strong>; p484/1-9, 4</strong>, 6**, 15-19, (16-20all)**</td>
<td>N/A</td>
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**Extra Test Points:**
- 1-2 pts for each starred problem handed in correctly
- 1-2 pts for each problem explained on the board
- 1 pt for each mistake found in the book or on the board
- 2-10 pts for correcting mistakes on a test: F (10), D (8), C (6), B (4), A (2)