



# Computer Applications II SUR 315



Benha University

Surveying Engineering Department

Faculty of Engineering  
(at Shoubra)

- Course Title:** Computer Applications II
- Course Code:** SUR 315
- Course Page:** <http://www.bu.edu.eg/staff/islam.elshaarawy-courses>
- Instructor:** Dr. Islam ElShaarawy (<http://www.bu.edu.eg/staff/islam.elshaarawy>)
- Main Textbook:** Steven Chapra. *Applied Numerical Methods with MATLAB for Engineers and Scientists*. 3<sup>rd</sup> Edition, McGraw-Hill Education, 2011, ISBN 978-0073401102. <http://highered.mheducation.com/sites/0073401102/index.html> 
- Other References:** <http://www.mathworks.com/help/matlab/>  MathWorks
- Online Resources:**
- <http://www.gnu.org/software/octave/> 
- <http://octave-online.net/> 
- [http://www.tutorialspoint.com/execute\\_matlab\\_online.php](http://www.tutorialspoint.com/execute_matlab_online.php) 

## Course Contents:

1. Introduction
2. MATLAB Fundamentals
3. Matrices and Arrays
4. Linear Algebra
5. Iterative Methods
6. Linear Regression
7. Nonlinear Regression
8. Numerical Integration
9. Numerical Differentiation
10. Applications In Surveying Engineering

## Attendance Policy:

1. Attendance is compulsory.
2. **Reading the relevant chapter(s) ahead of lectures is essential.**
3. Keeping track of whatever happens during the lectures is the student responsibility regardless of attendance.
4. **Leaked solution manual as well as any other resources (unless otherwise specified) should never be used for solving the assignments.**
5. Side talking, cellphones, laptops, food/drinks, and walking<sup>1</sup> are not allowed.



## Grading System:

<b>Attendance<sup>2</sup>:</b>	00%
<b>Assignments:</b>	05%
<b>Quizzes:</b>	05%
<b>Midterm Exam:</b>	10%
<b>Oral/Practical/Project:</b>	00%
<b>Final Exam:</b>	80%

<sup>1</sup> If you are late for the lecture, then you are allowed to walk into the lecture hall but quietly.

<sup>2</sup> Attendance will be taken anyway.