



Suez University  
Faculty of Petroleum and Mining Engineering  
BSE225, Spring Term 16-17



# Course Presentation

Lecture 0 – Monday February 13, 2017

# Outline

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# Course Description

IEEE Computer Society defined Computer Engineering as “a discipline that integrates several fields of electrical engineering and computer science required to develop computer systems”.

BSE225 Computer Engineering course conveys a simplified picture of the different fundamental concepts in computer engineering

# Course Topics

- Hardware and software basics of modern computers
- Internal and external data representation
- Number systems and conversion
- Binary arithmetic fundamentals
- Binary Arithmetic
- Logic gates, Boolean algebra and combinatorial logic
- Problem solving and algorithms
- Algorithm description and implementation
- Data Visualization
- Descriptive Analytics
- Data Regression, Numerical Analysis and Optimization

# Course Outline

1. Course Presentation
2. Introduction to Computer Engineering
3. Data Representation & Number Systems
4. Binary Arithmetic
5. Binary Logic
6. Problem Solving and Algorithms
7. MATLAB Review
8. Data Visualization
9. Descriptive Analytics
10. Data Regression
11. Numerical Analysis
12. Optimization

# Course Policy

<b>Evaluation Method</b>	<b>Weight</b>
Assignments	10%
Mid-term	30%
Final Exam	60%
<b>Total</b>	<b>100%</b>

# Course Resources

- **Course Website**

<http://www.alaakhamis.org/teaching/BSE225/index.html>

- **Textbook**

- G. Beekman and M. Quinn. *Computer Confluence: Tomorrow's Technology and You*. 7th Ed. ISBN: 013152531X , Prentice Hall, 2005.

- J. G. Brookshear. *Computer Science: An Overview*. 7th Ed. Pearson Education, Inc. 2003

# Course Resources

- **Course Instructor**

Dr. Alaa Khamis

Email: alaakhamis[at]gmail[dot]com

Office: Engineering Science Dept. Chair Office, Faculty of Petroleum, 3rd Floor

Office hours: Monday, 3<sup>rd</sup> Slot

- **Course TA**

Eng. Mohamed Salah and Eng. Ahmed Abdelhamid



***Questions?***