



Cryptography and Network Security



CES 603



Benha University

Computer Systems Engineering
Electrical Engineering Department

Faculty of Engineering
(at Shoubra)

- Course Title:** Cryptography and Network Security
- Course Code:** CES 603
- Course Page:** <http://bu.edu.eg/staff/islam.elshaarawy-courses>
- Instructor:** Dr. Islam ElShaarawy (<http://www.bu.edu.eg/staff/islam.elshaarawy>)
- Main Textbook:** William Stallings. *Cryptography and Network Security: Principles and Practice*. 6th Edition, Pearson Education, Inc., 2013, ISBN 978-0133354690.
- Other Reference(s)** Christof Paar and Jan Pelzl. *Understanding Cryptography*. 1st Edition, Springer-Verlag Berlin Heidelberg, 2010, ISBN 978-3642041006.
- Online Resources:**  <http://williamstallings.com/Cryptography/Crypto6e-Student/>
 <http://www.crypto-textbook.com/>

Course Contents:

1. Overview
2. Classical Encryption Techniques
3. Block Ciphers and the Data Encryption Standard
4. Pseudorandom Number Generation and Stream Ciphers
5. Public-Key Cryptography and RSA
6. Other Public-Key Cryptosystems
7. Digital Signatures
8. Key Management and Distribution
9. User Authentication
10. Network Access Control and Cloud Security
11. Electronic Mail Security

Course 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. Side talking, cellphones, laptops, food/drinks, and walking¹ are not allowed.



5. **Leaked solution manual as well as any other resources (unless otherwise specified) should never be used for solving the assignments.**

Grading System:

Attendance²:	000
Assignments:	010
Quizzes:	010
Midterm Exam:	010
Project:	010
Final Exam:	060
Total	100

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

² Attendance will be taken anyway.