ENG EK 125 Introduction to Programming for Engineers Spring 2019

SYLLABUS

(Classes and discussions listed; labs always follow classes)

Date	Topics

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Week # 1

1/23   Class 1: Introduction to EK 125; Introduction to MATLAB, Characters, Relational expressions (M Chapter 1)

1/25   Discussion 1: Problem solving techniques; Mock quiz

Week # 2

1/28   Class 2: Vectors, Matrices (M Chapter 2)

1/30   Class 3: Intro to Programming, Scripts, I/O, Plots (M 3A: Sec 3.1-3.6)

2/1   Discussion 2: Quiz 1

Week # 3

2/4   Class 4: Functions, Programs, Commands (M 3B: Sec 3.7-3.9)

2/4   *Last day to add a course*

2/6   Class 5: If statements, Relational expressions; switch statements; "is" functions (M Chap 4)

2/8   Discussion 3: Quiz 2

Week # 4

2/11   Class 6: Loops: for, nested (M5A: Sec 5.1-5.2)

2/13   Class 7: Exam Review

2/15   Discussion 4: Exam Review

2/15   *   EXAM # 1   4:40 – 6:20 pm   Rooms: TBA**

Week # 5

2/18	*Holiday; No Classes*
2/19	*Monday Schedule at BU;* Class 8: Loops: while, error-checking; Vectorizing, Timing Code (M 5B: Sec 5.3 - 5.5)
2/20	Class 9: User-defined functions, MATLAB program organization (M 6A: Sec 6.1-6.3)
2/22	Discussion 5: Quiz 3

Week # 6

2/25	Class 10: Scope, persistent variables, Debugging, Live scripts (M 6B: Sec 6.4-6.6)
2/26	*Last day to drop a course (without a "W")*
2/27	Class 11: Text Manipulation (M Chapter 7)
3/1	Discussion 6: Quiz 4

Week # 7

3/4	Class 12: Cell arrays, Intro to Structs (M 8A: Sec 8.1-8.2.3)
3/6	Class 13: Advanced data structures (M 8B: Sec 8.2.4-8.3)
3/8	Discussion 7

3/9-3/17   Spring Break; No classes

Week # 8

3/18	Class 14: Data Transfer (M Chap 9)
3/20	Class 15: Advanced functions: variable # of arguments, nested functions (M Sec 10.1-10.2)
3/22	Discussion 8: Quiz 5

Week # 9

3/25	Class 16: Intro to OOP: Graphics Objects, App Designer (M 11A: Sec 11.1-11.2, 12B: 12.3, 13C: Sec. 13.2-13.3)
3/27	Class 17: Exam Review
3/29	Discussion 9: Exam Review

3/29   *   EXAM # 2   4:35 – 6:20 pm   Room: TBA**

Week # 10

4/1   Class 18: Command Line Interfaces; Intro to C (C Chapter 1)

4/3   Class 19: Selection Statements and Loops (C Chapter 2)

4/5   *Last day to drop a course (with a "W")*

4/5   Discussion 10: Quiz 6

Week # 11

4/8   Class 20: Data Structures: Arrays, Strings, and Structures (C Chapter 3)

4/10   Class 21: Introduction to Functions and Program Organization in C;
            Pointers, Call-by-reference (C 4A and 4B: Sec 4.1-4.7)

4/12   Discussion 11: Quiz 7

Week # 12

4/15   *Holiday; No classes*

4/17   *Monday Schedule at BU*; Class 22: Dynamic Memory Allocation;
            Introduction to Linked Lists (C 5A and 5B: Sec 5.1-5.2.3)

4/19   Discussion 12

Week # 13

4/22   Class 23: Common Operations on Linked Lists (C 5C: Sec 5.2.4 – 5.2.5)

4/24   Class 24: Exam Review

4/26   Discussion 13: Exam Review

4/26   *****   EXAM # 3   4:35 – 6:20pm   Rooms: TBA**

Week # 14

4/29   Class 25: What's Next; Course Evaluations; Project Presentations

5/1   Class 26: Final Project Due

5/2   *Last Day of Classes*