

**King Saud University**                   **Mathematics Department**  
**MATH-254 (NUMERICAL METHODS)** Summer Semester (1437-38 H)  
**TEXTBOOK:** Introduction to Numerical Analysis using MATLAB  
**AUTHOR:** Rizwan Butt

---

**Note:** The Contents of the course will be covered by the following sections:  
**CHAPTER 1:** 1.2,1.3.

**CHAPTER 2:** 2.1,2.2,2.3,2.4,2.5,2.6,2.7,2.8.

**CHAPTER 3:** 3.1,3.2,3.3,3.4,3.5,3.6,3.7.

**CHAPTER 4:** 4.1,4.2,4.3.

**CHAPTER 5:** 5.1,5.2,5.3,5.5,5.6.

**CHAPTER 6:** 6.1,6.2,6.3,6.4.

Theorems and Lemmas without Proofs:

Theorems 2.1,2.2,3.1,3.2,3.7,3.8,3.14,3.18,3.20,3.21,3.22,4.1,4.2,4.3,4.4,5.1,5.2,5.3,5.4,5.5,6.1.

Lemmas 2.1,2.2,2.3,2.4.

**Note:** About the 10 Marks we do as follows:

**Two Quizzes (4+4) + Class Attendance (2).**

**Note:** Quizzes and Class Attendance should be taken in the tutorial classes.

#### **NAMES OF CHAPTERS OF THE COURSE**

- Chapter 1:** Introduction to Numerical Methods.
- Chapter 2:** Solution of Nonlinear Equations.
- Chapter 3:** Systems of Linear Algebraic Equations.
- Chapter 4:** Polynomial Interpolation and Approximation.
- Chapter 5:** Numerical Differentiation and Numerical Integration.
- Chapter 6:** Numerical Solution of Ordinary Differential Equations.

Dates of Midterm and Final Examinations will be take place as follows:

**First Mterm: (25 Marks) Wednesday : 03-11-1438(26-07-17) Time:7:0-8:30 PM.**

**Second Mterm: (25 Marks) Wednesday : 24-11-1438(16-08-17) Time:7:0-8:30 PM.**

ପ୍ରକାଶନ କମିଶନ

四

**يعتمد وكيل الكلية للشؤون الأكademية**

د. طلال بن غزوي (المربي)