Introduction

Computational Methods Lab ME15L1

Department of Mechanical Engineering
College of Engineering Thalassery

July 5, 2016

Outline

Prerequisites

Sufficient recall of

- Basic mathematics - Algebra, Calculus, Linear Algebra, Ordinary Differential Equations
- Basic programming in C -Basic program design, implementation and testing, data types, arrays, loops, conditionals, functions

Course Outcomes

By the end of this course, students will be able to,

- Understand the practical aspects of the use of numerical methods in modern Scientific computing.
- develop computer programmes for solving **algebraic or transcendental equations** using an appropriate numerical method.
- develop computer programmes for solving **linear system of equations** using an appropriate numerical method.
- develop computer programmes for solving **ordinary differential equations** using an appropriate numerical method.
- develop computer programmes for calculating a **definite integral** using an appropriate numerical method.

Course Evaluation

- 50 Marks for Internal Evaluation, which includes
  - 30 Marks : Continuous evaluation
  - 20 Marks : Internal Examinations / Assignments
- 50 Marks for End Semester Examination

General Instructions

- Before coming to the lab,a copy of the code of the previous week should be send to cmlabcoet@gmail.com for evaluation.
- Each week, before coming to the lab, rough record of the previous week exercise should be completed in all respects.
- Rough record should contain, solution algorithm, computer code[1],results and inferences.
- Continuous evaluation marks will be based on Programme, Rough record and Regularity in lab hours.
- This presentation as well as a support document[2]for this course can be found at
  https://github.com/arunshal/ME15L1CMlab
  1 2

[1] In order to avoid errors, its advisable to attach a print of the code rather than writing it.

[2] It's incomplete and is being updated.

Thank You

Thank You for listening.
Queries???