



THE FEDERAL UNIVERSITY OF TECHNOLOGY, AKURE

Department of Computer Science

CSC201 – Introduction to Fortran Programming

COURSE PARTICULARS

Course Code: CSC 201

Course Title: – Introduction to Fortran Programming

No. of Units: 3

Course Duration: Two hours of theory and two hours of Practical per week for 14 weeks.

Status: Compulsory

Course Email Address: csc201@futa.edu.ng

Course Webpage:

Prerequisite: CSC101, CSC102

COURSE INSTRUCTORS

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COURSE DESCRIPTION

This course is designed for a semester in Fortran Programming language for undergraduate Computer Science, Mathematical Science and Engineering students. The course covers general concepts and introduction to Fortran Programming with Fortran 03 (or Fortran 2003). Fortran 03

contains all of the features of the later version Fortran 77/95 needed to write complete and workable Fortran programs. Even though the course may not, in to full details, give everything the students need, it covers the basic features needed to be a good Fortran programmer and an introduction to the important new features of Fortran 03. This course has found profound and significant applications in Engineering, Mathematics, Computer Science, and other related fields.

COURSE OBJECTIVES

The objectives of this course are to:

- introduces the students to the general concepts of programming language in general and Fortran 2003 programming language in particular,
- introduces the students to various features of Fortran 2003 - syntax, semantics and structures;
- furnishes the students with the opportunities of coding and/or developing customised and workable programs for science, engineering, business and personal needs.

COURSE LEARNING OUTCOMES / COMPETENCIES

Upon successful completion of this course, the student will be able to:

- understand, in its entirety, the concepts of programming with Fortran; and
- write good and error-free codes using Fortran 2003 programming language

GRADING SYSTEM FOR THE COURSE

This course will be graded as follows:

Practical	20%
Test/Assignment	20%
<u>Final Examination</u>	<u>60%</u>
<u>TOTAL</u>	<u>100%</u>

GENERAL INSTRUCTIONS

Attendance: It is expected that every student will be in class for lectures and also participate in all practical exercises. Attendance records will be kept and used to determine each person's qualification to sit for the final examination. In case of illness or other unavoidable cause of absence, the student must communicate as soon as possible with any of the instructors, indicating the reason for the absence.

Academic Integrity: Violations of academic integrity, including dishonesty in assignments, examinations, or other academic performances are prohibited. You are not allowed to make copies of another person's work and submit it as your own; that is plagiarism. All cases of academic dishonesty will be reported to the University Management for appropriate sanctions in

accordance with the guidelines for handling students' misconduct as spelt out in the Students' Handbook.

Assignments and Group Work: Students are expected to submit assignments as scheduled. Failure to submit an assignment as at when due will earn you zero for that assignment. Only under extenuating circumstances, for which a student has notified any of the instructors in advance, will late submission of assignments be permitted.

Code of Conduct in Lecture Rooms and Laboratories: Students should turn off their cell phones during lectures. Students are prohibited from engaging in other activities (such as texting, watching videos, etc.) during lectures. Food and drinks are not permitted in the laboratories.

READING LIST

Walter S. Brainerd 2009. **Guide to Fortran 2003 Programming**. Published by Springer-Verlag London Ltd.

Legend

- 1- Available in the University Library
- 2- Available in Departmental/School Libraries
- 3- Available on the Internet.
- 4- Available as Personal Collection
- 5- Available in local bookshops.

COURSE OUTLINE

Week	Course Title
1	Introduction to course and distribution of outline
2	Basic concept of Programming
3	Program structure and layout
4	Constant, variables and array arithmetic
5	Character handling and logic
6	Control structures
7	Mid semester break
8	Functions and procedures
9	Input/output facilities and programming usage

10	Data statement and common blocks
11	Test
12	Intrinsic and extrinsic functions
13	Revision
14	Lecture free