



केरल केन्द्रीय विश्वविद्यालय CENTRAL UNIVERSITY OF KERALA

(संसद के अधिनियम, वर्ष 2009 द्वारा स्थापित / Established under the Act of Parliament in 2009)

Minutes of BOS in Computer Science Held on 05/01/2019 at 11 AM


- Agenda:**
- To discuss about the Syllabus
 - To discuss about the feedback of students
 - To start Centre for Computational Intelligence
 - To decide about the eligibility criteria for M.Sc. Computer Science
 - To discuss about the panel of examiners and question paper setting

The following members were present during the meeting.

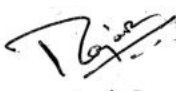
- Dr. Arunkumar Thangavelu, Professor, Dept. of Computer Science and Engineering, VIT
- Dr. K.A. Germina, Associate Professor, Department of Mathematics
- Dr. Rajesh R, Head, Department of Computer Science
- Mr. Kumar V.

- The BOS members have gone through the previous syllabus and current syllabus proposed by FC based on brainstorming workshop on curriculum development held on 04/01/2019. The BOS observes the improvement in the new curriculum/syllabus and approves the same.
- The BOS has gone through the feedback of the students of 2016-18 batch and considered the suggestions. Two exemplary students cleared the NET exam and two students got placed in TCS.
- The BOS recommends for starting of a Centre for Computational Intelligence based on the recommendations from the FC. Initially, Dr. Rajesh R. will serve as the Director for the centre.
- Based on the recommendation of FC, the BOS recommends to amend the eligibility conditions for M.Sc. Computer Science admission as
BCA or B.Sc (Computer Science/electronics/communications/IT/Bioinformatics) or B.Tech/BE (Computer Science/electronics/communications/IT/electrical/ECE) or B.Sc. in Physics/Mathematics/Statistics (with computer science as a subject or having a certificate/diploma in computer related areas) or B.Voc (computer science/IT/electronics/electrical/ECE)
- The BOS recommends the panel of examiners/question paper setters suggested by the FC.

The meeting ended with vote of thanks.


Dr. Arunkumar Thangavelu
5th Jan 2019


Dr. K.A. Germina
5/1/2019


Dr. Rajesh R.


Mr. Kumar V.

**CENTRAL UNIVERSITY OF KERALA
DEPARTMENT OF COMPUTER SCIENCE
M.Sc. COMPUTER SCIENCE – PROGRAMME STRUCTURE**

AUDITED/VALUE ADDED COURSES*					
COURSE CODE	COURSE TITLE	CONTACT HRS/WEEK			CREDITS
		LEC	LAB	TUT	
CSC5056	Operations Research	2	1	1	Nil

This is an audited/value added **skill based course** and the credits will not be added to marklist.

Course Objective:

The main objective of this course is to impart knowledge on the basic principles of Operations Research.

By completing this course, students will obtain the following course/learning outcomes:

1. Knowledge gained:
 - (i) State of art methods in Operations Researchs
2. Skill gained:
 - (ii) Formulation of linear programming models.
3. Competency gained:
 - (iii) Solving real-life operations research problems.

Prerequisites: Nil

Grading:

Lab implementation	– 25%
Participatory based group Project	– 25%
Assignment/Quiz/presentation	– 25%
Individual project	- 25%

CSC5056 – OPERATIONS RESEARCH

Module 1

Basics of Operational Research: Origin & Development of Operational Research, Definition and Meaning of Operational Research, Different Phases of an Operational Research Study, Scope and Limitations of Operational Research, Mathematical Modeling of Real Life Problems.

Module 2

Linear Programming: Introduction to Linear algebra. Solution of a system of Linear Equations, Linear independence and dependence of vectors, Concept of Basis, Basic Feasible solution, Convex sets. Extreme points, Hyperplanes and Halfspaces, Convex cones, Polyhedral sets and cones.

Module 3

Linear Programming Problem Formulation, solution by Graphical Method, Theory of Simplex Method, Simplex Algorithm, Two phase Method, Charnes-M Method, Degeneracy, Theory of Duality, Dual-simplex method.

References /Suggested Readings:

1. G. Hadley: Linear Programming. Narosa, Reprint, 2002.
2. G. Hadley: Linear Algebra, Narosa, Reprint, 2002.
3. Hamdy A. Taha: Operations Research-An Introduction, Prentice Hall, 9th Edition, 2010.
4. A. Ravindran, D. T. Phillips and James J. Solberg: Operations Research- Principles and Practice, John Wiley & Sons, 2005.
5. F.S. Hillier. G.J. Lieberman: Introduction to Operations Research- Concepts and Cases, 9th Edition, Tata Mc-Graw Hill, 2010