



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.

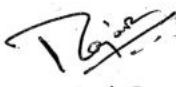
- Dr. Arunkumar Thangavelu, Professor, Dept. of Computer Science and Engineering, VIT
- Dr. K.A. Germina, Associate Professor, Department of Mathematics
- Dr. Rajesh R, Head, Department of Computer Science
- Mr. Kumar V.

- 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**

ELECTIVES					
COURSE CODE	COURSE TITLE	CONTACT HRS/WEEK			CREDITS
		LEC	LAB	TUT	
CSC5016	Internet of Things	2	2	1	4

Lec = Lecture, Tut = Tutorial, Lab = Practical

This is a participatory, experimental, flipped classroom, and **employability based skill development course**.

Course Objective:

The objective of the course is to provide practical aspects of learning and developing applications based on internet of things.

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

1. Knowledge gained:
 - (i) fundamental concepts of Internet of Things
2. Skill gained:
 - (ii) Skills in the development of embedded code
3. Competency gained:
 - (iii) Development of Internet of things applications for various real world applications.

Prerequisites: Basic knowledge of programming and electronic components.

Grading:

Lab implementation	– 20%
Participatory based group Project	– 10%
Assignment/Quiz/presentation	– 5%
Lab Test	– 5%
Final Exam	– 60%

CSC5016 – Internet of Things

Module 1

Introduction to IoT, History and evolution of IoT, societal benefits of IoT, Risks, Privacy and Security

Module 2

Understanding Arduino microcontroller, what can Arduino do?, setting up and testing Arduino, Understanding Arduino programming environment, programming with Arduino. Experiments with Arduino: Blinking an LED/ RGB LED, PWM pin for varying the brightness of an LED, usage of push button, potentiometer, Photoresistor, temperature sensor, buzzer, servo, motor and LCD screen,

Module 3

Understanding Raspberry pi, what can Raspberry pi do?, setting up Raspberry pi. Understanding Raspberry pi programming environment, programming with Raspberry pi. Experimenting with Raspberry Pi.

Module 4

Case study in any one of the following: Opensource IoT platform, Amazon IoT cloud, IR sensor, Gas sensor, fire sensor, GSM shield, Bluetooth shield, PIR sensor, line tracking robot, Tensorflow on raspberry Pi, Home automation

References:

1. University of Cambridge lab experiments. <https://www.cl.cam.ac.uk/projects/raspberrypi/>
2. <https://courses.ideate.cmu.edu/99-355/s2016a4/text/syllabus.html>
3. <https://courses.ideate.cmu.edu/99-355/s2017/text/syllabus.html>
4. https://www.tu-berlin.de/menue/summer_university/summer_university_term_2/arduino_for_interactive_design/