Birla Institute of Technology & Science – Pilani, K.K.Birla – Goa campus,
Ist Sem 2018-19
Course Title :- INTRODUCTION TO ROBOTICS

INSTRUCTOR IN CHARGE: G. V. S. S. JAIDEEP RAM
INSTRUCTORS: DABHOLKAR AMOGH JAYANT,
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Tutorial Hrs: (will be added after obtaining semester timetable)

Course Description: As the name suggests this course is made with the intention of teaching all those who are enthusiastic in robotics the basics and recent approaches towards this field.

Tentative Schedule:

S.No.	Topics to be covered	No. of Lectures
1	Introduction to robotics	1
2	Basic terminology and Robotics Concepts	2
3	Microcontrollers: Arduino	3
4	Various mechanical linkage techniques	2
5	Gear systems and applications	2
6	Modeling simple systems using matlab and simulink	3
7	Arduino control using simulink	2
8	Introduction to ROS	2

9	Implementing Raspberry-Pi	2
10	Introduction to SLAM and control systems	1

Evaluation Criteria:

1) A task will be given to students after completing certain topics, which will be evaluated by the mentor allotted for that student.
2) A final project which should be submitted before one week of compre.

Component	Unit Weightage	Total Weightage
Tasks	12.5	75
Final project	25	25

Total: 100

Final Project:

Each student group needs to work individually in order to build a drive bot which, passes through the whole terrain and detects the obstacles. The demonstration of the robot must be ready by two weeks before compre. The process and detailed evaluation process will be told by the end of September.

Note: the final project topic may change but will be finalized by the second week of october.