

**BIJU PATNAIK UNIVERSITY OF TECHNOLOGY,  
ODISHA  
ROURKELA**



**Curriculum and Syllabus**

**B. Tech (Computer Science & Engineering) for the  
Batch**

**2018-19**

**Semester (5<sup>th</sup>)**

**Principal  
Radhakrishna Institute of Technology  
and Engineering, Bhubaneswar**

B. Tech in Computer Science & Engineering (Admission Batch: 2018-2019)

**5<sup>th</sup> Semester**

Fifth Semester					
Theory					
Sl. No.	Category	Course Code	Course Title	L-T-P	Credit
1	PC 11		Formal Languages and Automata Theory	3-0-0	3
2	PC 12		Database Management Systems	3-0-0	3
3	PC 13		Operating Systems	3-0-0	3
4	PE2 (Any One)		Advanced Computer Architecture	3-0-0	
			Artificial Intelligence & Machine Learning	3-0-0	
			Mobile Computing	3-0-0	
5	PE 3 (Any One)		Parallel & Distributed Systems	3-0-0	3
			Object-Oriented Analysis & Design	3-0-0	
			Computer Graphics	3-0-0	
6	MC 5		Universal Human Values		0
Total Credit (Theory)					15
Practical					
1	PC 14		Formal Languages and Automata Theory Lab	0-0-3	2
2	PC 15		Database Management Systems Lab	0-0-3	2
3	PC 16		Operating Systems Lab	0-0-3	2
4	PSI 2		Evaluation of Summer Internship	0-0-3	1
Total Credit (Practical)					7
Total Semester Credit					22



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## 5<sup>th</sup> Semester

### Universal Human Values (Self, Society and Nature)

**Pre-requisites:** Universal Human Values: Self & Family (desirable); 4-day Harmony-2 Workshop (co-requisite). Please refer to AICTE Model Curriculum-Vol-II.

#### 1. Objective:

The objective of the course is four-fold:

- A. Sensitization of student towards issues in society and nature.
- B. Understanding (or developing clarity) of nature, society and larger systems, on the basis of human relationships and resolved individuals.
- C. Strengthening of self-reflection.
- D. Development of commitment and courage to act.

(For elaboration on some of the above, consult course description for Universal Human Values 1: Self and Family, AICTE Model Curriculum-VOL-II).

#### 2. Course Topics:

In this Universal Human Values course, the focus is more on understanding society and nature on the basis of self and human relationships.

- i) Purpose and motivation for the course.
- ii) Recapitulation (from the previous course) on ideas of self, pre-conditioning, and natural acceptance.
- iii) Harmony in the self. Understanding human being as co-existence of self and body. Identifying needs and satisfying needs of self and body. Self-observations. Handling peer pressure.
- iv) Recapitulation on relationships. Nine universal values in relationships. Reflecting on relationships in family. Hostel and institute as extended family. Real life examples.
- v) Teacher-student relationship. Shraddha. Guidance. Goal of education.
- vi) Harmony in nature. Four orders of nature – material order, plant order, animal order and human order. Salient features of each. Human being as cause of imbalance in nature. (Film “Home” can be used.)
- vii) Human being as cause of imbalance in nature. Depletion of resources – water, food, mineral resources. Pollution. Role of technology. Mutual enrichment not just recycling.



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- viii) Prosperity arising out of material goods and understanding of self. Separation of needs of the self and needs of the body. Right utilization of resources. Understanding the purpose they try to fulfil.
- ix) Recapitulation on society. Five major dimensions of human society. Fulfilment of the individual as major goal. Justice in society. Equality in human relationships as naturally acceptable. Establishment of society with abhaya (absence of fear).
- x) Ethical human conduct. Values, character and netikataa.
- xi) Professional ethics. Conduct as an engineer or scientist.

**Digital Learning Resources:**

Course Name: Universal Human Values

CourseLink: <https://nptel.ac.in/courses/109/104/109104068/>

Course Instructor: Prof. A.K. Sharma, IIT, Kanpur



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