Academic Course Description

BHARATH UNIVERSITY
Faculty of Engineering and Technology
Department of Electrical and Electronics Engineering
BSS601 Value Education and Professional Ethics
Six Semester (Even Semester)

Course (catalog) description

- To teach the philosophy of Life, personal value, social value, mind cultural value and personal health
- To teach professional ethical values, codes of ethics, responsibilities, safety, rights and related global issues.

Credit hours & contact hours : 3 & 45 hours

Course Coordinator : Dr. S.Prakash

Instructors : Dr. S.Prakash

Name of the instructor	Class handling	Office location	Office phone	Email (domain:@ bharathuniv.ac.in	Consultation
Dr. S.Prakash	Third year EEE	KS 302	04422290125	Hod.eee@bharathuniv.ac.in	12.30-1.30 PM

Relationship to other courses:

Pre –requisites **:** Professional Courses

Assumed knowledge : The student will be ethically a good person both personally and professionally.

Syllabus Contents

UNIT I PHILOSOPHY OF LIFE AND INDIVIDUAL QUALITIES 9

Human Life on Earth - Purpose of Life, Meaning and Philosophy of Life. The Law of Nature – Protecting Nature /Universe. Basic Culture - Thought Analysis - Regulating desire - Guarding against anger - To get rid of Anxiety – The Rewards of Blessing - Benevolence of Friendship - Love and Charity - Self – tranquility/Peace

UNIT II SOCIAL VALUES (INDIVIDUAL AND SOCIAL WELFARE) 9

Family - Peace in Family, Society, The Law of Life Brotherhood - The Pride of Womanhood – Five responsibilities/duties of Man : - a) to himself, b) to his family, c) to his environment, d) to his society, e) to the Universe in his lives, Thriftness (Thrift)/Economics. Health - Education - Governance - People's Responsibility / duties of the community, World peace.

UNIT III MIND CULTURE & TENDING PERSONAL HEALTH 9

Mind Culture - Life and Mind - Bio - magnetism, Universal Magnetism (God –Realization and Self Realization) - Genetic Centre – Thought Action – Short term Memory – Expansiveness – Thought – Waves, Channelising the Mind, Stages - Meditation, Spiritual Value. Structure of the body - the three forces of the body- life body relation, natural causes and unnatural causes for diseases, Methods in Curing diseases

UNIT IV ENGINEERING AS SOCIAL EXPERIMENTATION AND ENGINEERS'S RESPONSIBILITIES FOR SAFETY 9

Engineering as Experimentation – Engineer as Responsible Experimenters – Codes of Ethics – The Chalenger, case study. Assessment of Safety and Risk – Risk Benefit Analysis and Reducing Risk – The Three Mile Island and Chernobyl case studies.

UNIT V ENGINEERS'S RESPONSIBILITIES FOR RIGHTSAND GLOBAL ISSUES 9

Collegiality and Loyalty – Respect for Authority – Collective Bargaining – Confidentiality – Conflicts of Interest – Occupational Crime – Whistle Blowing – Professional Rights – Employee Rights – Intellectual Property Rights (IPR) – Discrimination. Multinational Corporations – Environmental Ethics – Computer Ethics – Weapons Development –Engineers as Managers – Consulting Engineers – Engineers as Expert Eye Witnesses and Advisors – Moral Leadership

Text book(s) and/or required material

1. Value Education for Health, Happiness and Harmony, The World Community Service, Centre Vethathiri Publications.
2. Mike W Martin and Roland Schinzinger, Ethics In Engineering, Tata McGraw Hill, Newyork 2005

Reference Books:

1. Philosophy of Universal Magnetism (Bio - magnetism, Universal Magnetism) The WorldCommunity Service Centre Vethathiri Publications
2. Thirukkural with English Translation of Rev. Dr. G.U. Pope, Uma Publication, 156, SerfojiNagar, Medical College Road,Thanjavur 613 004
3. R S Nagaarazan, Textbook On Professional Ethics And Human Values, New Age International Publishers, 2006
4. Charles D Fledderman, Engineering Ethics,Prentice Hall,New Mexico,2004

Computer usage: NIL

Professional component

General	-	100%
Basic Sciences	-	0%
Engineering sciences & Technical arts	-	0%
Professional subject	-	0%

Test Schedule

S. No.	Test	Tentative Date	Portions	Duration
1	Cycle Test-1	February 2nd week	Session 1 to 18	2 Periods
2	Cycle Test-2	March 2nd week	Session 19to 36	2 Periods
3	Model Test	April 3rd week	Session 1 to 45	3 Hrs
4	University Examination	TBA	All sessions / Units	3 Hrs.

Mapping of Instructional Objectives with Program Outcome

To teach the philosophy of Life, personal value, social value, mind cultural value and personal health and also to professional ethical values, codes of ethics, responsibilities, safety, rights and related global issues.	Correlates to program outcome		
	H	**M**	**L**
1. To learn about philosophy of Life and Individual qualities.	e,h	c,g,i,l	j,k
2. To learn and practice social values and responsibilities.	e,h	c,g,i,l	j,k
3. To learn and practice mind culture, forces acting on the body and causes of diseases and their Curing	e,h	c,g,i,l	j,k
4. To learn more of Engineer as Responsible Experimenter.	c, e,h	g,i,l	j,k
5. To learn more of Risk and Safety assessment with case studies.	c, e,h	g,i,l	j,k
6. To learn more of Responsibilities and Rights as Professional and facing Global Challenges	c, e,h	g,i,l	j,k

H: high correlation, M: medium correlation, L: low correlation

Draft Lecture Schedule

S.NO	Topics	Problem solving (Yes/No)	Text / Chapter
UNIT I	**PHILOSOPHY OF LIFE AND INDIVIDUAL QUALITIE**		
1.	Human Life on Earth - Purpose of Life	No	[T_1] [R_1]
2.	Meaning and Philosophy of Life	No	
3.	The Law of Nature	No	
4.	Protecting Nature /Universe. Basic Culture	No	
5.	Thought Analysis - Regulating desire	No	
6.	Guarding against anger	No	
7.	To get rid of Anxiety The Rewards of Blessing	No	
8.	Benevolence of Friendship	No	
9.	Love and Charity - Self – tranquility/Peace	No	
UNIT II	**SOCIAL VALUES (INDIVIDUAL AND SOCIAL WELFARE)**		
10.	Family - Peace in Family, Society, The Law of Life Brotherhood	No	[T_1] [R_2]
11.	The Pride of Womanhood	No	
12.	Five responsibilities/duties of Man : - a) to himself, b) to his family,	No	
13.	c) to his environment, d) to his society, e) to	No	

	the Universe in his lives,		
14.	Thriftness (Thrift)/Economics.	No	
15.	Health, Education	No	
16.	Governance	No	
17.	People's Responsibility	No	
18.	duties of the community, World peace.	No	
UNIT III	**MIND CULTURE & TENDING PERSONAL HEALTH**		
19.	Mind Culture - Life and Mind	No	
20.	Bio - magnetism, Universal Magnetism (God –Realization and Self Realization) Genetic Centre	No	
21.	Thought Action – Short term Memory	No	
22.	Expansiveness – Thought – Waves,	No	
23.	Channelising the Mind, Stages	No	$[T_1]$/ $[R_1]$
24.	Meditation, Spiritual Value. Structure of the body	No	
25.	the three forces of the body	No	
26.	life body relation, natural causes	No	
27.	unnatural causes for diseases, Methods in Curing diseases	No	
UNIT IV ENGINEERING AS SOCIAL EXPERIMENTATION AND ENGINEERS'S RESPONSIBILITIES FOR SAFETY			
28.	Engineering as Experimentation	No	
29.	Engineer as Responsible Experimenters	No	
30.	Codes of Ethics	No	
31.	The Chalenger, case study. Assessment of Safety and Risk	No	
32.	The Chalenger, case study. Assessment of Safety and Risk	No	$[T_2]$ $[R_3]$
33.	Risk Benefit Analysis and Reducing Risk	No	
34.	Risk Benefit Analysis and Reducing Risk	No	
35.	The Three Mile Island and Chernobyl case studies.	No	
36.	The Three Mile Island and Chernobyl case studies.	No	
UNIT V	**ENGINEERS'S RESPONSIBILITIES FOR RIGHTSAND GLOBAL ISSUES**		
37.	Collegiality and Loyalty, Respect for Authority, Collective Bargaining, Confidentiality	No	
38.	Conflicts of Interest – Occupational Crime	No	
39.	Whistle Blowing – Professional Rights	No	
40.	Employee Rights Intellectual Property Rights (IPR) – Discrimination.	No	
41.	Multinational Corporations – Environmental Ethics	No	$[T_2]$
42.	Computer Ethics – Weapons Development	No	
43.	Engineers as Managers – Consulting Engineers	No	
44.	Engineers as Expert Eye Witnesses and Advisors	No	
45.	Moral Leadership	No	

Teaching Strategies

The teaching in this course aims at establishing a good fundamental understanding of the areas covered using:

- Formal face-to-face lectures
- Tutorials, which allow for exercises in problem solving and allow time for students to resolve problems in understanding of lecture material.
- Laboratory sessions, which support the formal lecture material and also provide the student with practical construction, measurement and debugging skills.
- Small periodic quizzes, to enable you to assess your understanding of the concepts.

Evaluation Strategies

Cycle Test – I	-	05%
Cycle Test – II	-	05%
Model Test	-	10%
Attendance	-	05%
SEMINAR&ASSIGNMENT	-	05%
Final exam	-	70%

Prepared by: Dr. S.Prakash **Dated :**

Addendum

ABET Outcomes expected of graduates of B.Tech / EEE / program by the time that they graduate:

a) An ability to apply knowledge of mathematics, science, and engineering fundamentals.

b) An ability to identify, formulate, and solve engineering problems.

c) An ability to design a system, component, or process to meet the desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.

d) An ability to design and conduct experiments, as well as to analyze and interpret data.

e) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

f) An ability to apply reasoning informed by the knowledge of contemporary issues.

g) An ability to broaden the education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.

h) An ability to understand professional and ethical responsibility and apply them in engineering practices.

i) An ability to function on multidisciplinary teams.

j) An ability to communicate effectively with the engineering community and with society at large.

k) An ability in understanding of the engineering and management principles and apply them in project and finance management as a leader and a member in a team.

l) An ability to recognize the need for,and an ability to engage in life-long learning.

Program Educational Objectives

PEO1: PREPARATION
Electrical Engineering Graduates are in position with the knowledge of Basic Sciences in general and Electrical Engineering in particular so as to impart the necessary skill to analyze and synthesize electrical circuits, algorithms and complex apparatus.

PEO2: CORE COMPETENCE
Electrical Engineering Graduates have competence to provide technical knowledge, skill and also to identify, comprehend and solve problems in industry, research and academics related to power, information and electronics hardware.

PEO3: PROFESSIONALISM
Electrical Engineering Graduates are successfully work in various Industrial and Government organizations, both at the National and International level, with professional competence and ethical administrative acumen so as to be able to handle critical situations and meet deadlines.

PEO4: SKILL
Electrical Engineering Graduates have better opportunity to become a future researchers/ scientists with good communication skills so that they may be both good team-members and leaders with innovative ideas for a sustainable development.

PEO5: ETHICS

Electrical Engineering Graduates are framed to improve their technical and intellectual capabilities through life-long learning process with ethical feeling so as to become good teachers, either in a class or to juniors in industry.

Course Teacher	Signature
Dr. S.Prakash	

Course Coordinator **HOD/EEE**

(Dr. S.Prakash) ( )