Academic Course Description

BHARATH UNIVERSITY
Faculty of Engineering and Technology
Department of civil Engineering

BSS601 - VALUE EDUCATION AND PROFESSIONAL ETHICS

Sixth Semester, 2016-17 (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.

Compulsory/Elective course : Compulsory for CE students

Credit/Contact hours : 3 credits / 45 Hours

Course Coordinator : Mrs K.Kiruthiga

Instructors :

Name of the instructor	Class handling	Office location	Office phone	Email (domain:@ bharathuniv.ac.in	Consultation
Mrs.K.Kiruthiga	Third year CE				9.00 - 9.50 AM
Mr .S.Rajesh	Third year CE				12.45 - 1.15 PM

Relationship to other courses:

Pre –requisites **:** Professional Courses

Assumed knowledge : Basic knowledge in philosophy of Life and Individual qualities

Following courses :

Syllabus Contents

UNIT I PHILOSOPHY OF LIFE AND INDIVIDUAL QUALITIES 9hrs

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) 9hrs

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 9hrs

Mind Culture - Life and Mind - Bio - magnetism, Universal Magnetism (God –Realization and Self Realization) - Genetic Centre – Thought Action – Short term Memory – Expansiveness – Thought – Waves, Channelizing 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 9hrs

Engineering as Experimentation – Engineer as Responsible Experimenters – Codes of Ethics – The Challenger, 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 RIGHTS AND GLOBAL ISSUES 9 hrs

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.

Total 45 hours

TEXTBOOKS:

1. Value Education for Health, Happiness and Harmony, The World Community Service, Centre Vethathiri Publications (Unit 1 – III).
2. Mike W Martin and Roland Schinzinger, Ethics In Engineering, Tata McGraw Hill, Newyork 2005 (Units IV & V)

REFERENCE:

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

Computer usage:

Professional component

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

Broad area : learn and practice mind culture, forces acting on the body

Test Schedule

S. No.	Test	Tentative Date	Portions	Duration
1	Cycle Test-1	February 1st week	Session 1 to 14	2 Periods
2	Cycle Test-2	March 2nd week	Session 15 to 28	2 Periods
3	Model Test	April 2nd 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 • To teach 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	c,g	J,k
2. To learn and practice social values and responsibilities	e	C,g	J,k
3. To learn and practice mind culture, forces acting on the body and causes of diseases and their curing	e	C,g	J,k
4. To learn more of Engineer as Responsible Experimenter.	C,e	a, g,k	j
5. To learn more of Risk and Safety assessment with case studies .	C,e, k	a, g	j
6. To learn more of Responsibilities and Rights as Professional and facing Global	C,e	g	j

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

Draft Lecture Schedule

S.NO	Topics	Problem solving (Yes/No)	Text / Chapter
UNIT	**PHILOSOPHY OF LIFE AND INDIVIDUAL QUALITIES**		
1.	Human Life on Earth	No	[T1] [R2]
2.	Purpose of Life, Meaning and Philosophy of Life	No	
3.	The Law of Nature	No	
4.	Protecting Nature /Universe	No	
5.	Basic Culture - Thought Analysis - Regulating desire	No	
6.	Guarding against anger - To get rid of Anxiety	No	
7.	The Rewards of Blessing	No	
8.	Benevolence of Friendship - Love and Charity	No	
9.	Self – tranquility/Peace	No	
UNIT II	SOCIAL VALUES (INDIVIDUAL AND SOCIAL WELFARE)		
10.	Family - Peace in Family, Society,	No	[T1] [R2]
11.	The Law of Life Brotherhood	No	
12.	The Pride of Womanhood	No	
13.	Five responsibilities/duties of Man	No	
14.	a) to himself, b) to his family, c) to his environment,	No	
15.	d) to his society, e) to the Universe in his lives,	No	
16.	Thriftness (Thrift)/Economics. Health - Education	No	
17.	Governance - 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 - Bio - magnetism,	No	[T1] [R1,R2]
20.	Universal Magnetism (God –Realization and Self Realization)	No	
21.	Genetic Centre – Thought Action	No	
22.	Short term Memory – Expansiveness – Thought – Waves,	No	
23.	Channelizing the Mind, Stages	No	
24.	Meditation, Spiritual Value.	No	
25.	Structure of the body - the three forces of the body	No	
26.	life body relation, natural causes and unnatural causes for diseases	No	
27.	Methods in Curing diseases	No	
UNIT IV	ENGINEERING AS SOCIAL EXPERIMENTATION AND ENGINEERS'S RESPONSIBILITIES FOR SAFETY		
28.	Engineering as Experimentation	No	[T1] [R3,R4]
29.	Engineer as Responsible Experimenters	No	
30.	Codes of Ethics	No	
31.	The Challenger,	No	
32.	case study	No	
33.	Assessment of Safety and Risk	No	
34.	Risk Benefit Analysis	No	

35.	Reducing Risk	No	
36.	The Three Mile Island and Chernobyl case studies.	No	
UNIT V	ENGINEERS'S RESPONSIBILITIES FOR RIGHTS AND GLOBAL ISSUES		
37.	Collegiality and Loyalty	No	[T2] [R3,R4]
38.	Respect for Authority	No	
39.	Collective Bargaining	No	
40.	Confidentiality – Conflicts of Interest – Occupational Crime	No	
41.	Whistle Blowing – Professional Rights – Employee Rights	No	
42.	Intellectual Property Rights (IPR) – Discrimination	No	
43.	Multinational Corporations – Environmental Ethics		
44.	Computer Ethics – Weapons Development –Engineers as Managers –		
45.	Consulting Engineers – Engineers as Expert Eye Witnesses and Advisors – 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	-	5%
Cycle Test – II	-	5%
Model Test	-	5%
Assignment	-	5%
Attendance	-	10%
Final exam	-	70%

Prepared by: Mr S.Rajesh Asst Prof , Department of CE **Dated :**

Addendum

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

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

b) The ability to identify, formulate, and solve engineering problems

c) The 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) The ability to design and conduct experiments, as well as to analyze and interpret data

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

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

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

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

i) The ability to function on multidisciplinary teams

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

k) The 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.

Program Educational Objectives

PEO1: PREPARATION:
To provide strong foundation in mathematical, scientific and engineering fundamentals necessary to analyze, formulate and solve engineering problems in the chosen field of Engineering and Technology.

PEO2: CORE COMPETENCE:
To enhance the skills and experience in defining problems in the appropriate field of Engineering and Technology, designing, implementing, analyzing the experimental evaluations, and finally making appropriate decisions.

PEO3: PROFESSIONALISM:
To enhance their skills and embrace new thrust areas through self-directed professional development and post-graduate training or education.

PEO4: SKILL:
To provide Industry based training for developing professional skills and soft skills such as proficiency in languages, technical communication, verbal, logical, analytical, comprehension, team building, inter personal relationship, group discussion and leadership skill to become a better professional.

PEO5: ETHICS:
Apply the ethical and social aspects of modern Engineering and Technology innovations to the design, development, and usage of new products, machines, gadgets, devices, etc.

Course Teacher	Signature
Mrs K.Kiruthiga	
Mr S.Rajesh	

Course Coordinator **HOD/Civil**