# Theory - 01 Credit Course Indian Constitution

Course Ti	tle:	Indian Constitution				
Course Co	ode:	†	CIE Marks	50		
		BIGOK107-207	SEE Marks	50		
Course Ty	ype (Theory/Practical /Integrated)		Total Marks	100		
Teaching	Hours/Week (L:T:P: S)	1:0:0:0	Exam Hours	01 Theory		
Total Hou	irs of Pedagogy	15 hours	Credits	01		
Course	objectives :					
The cours	e INDIAN CONSTITUTION (22)	ICO17 / 27) will enable the	e students.			
1. 1	To know about the basic structure of	f Indian Constitution.	,			
2. 7	To know the Fundamental Rights (F	'R's). DPSP's and Fundam	ental Duties (FD's) of	our constitution.		
3 7	To know about our Union Governme	ent_political structure & co	odes procedures			
4 T	To know the State Executive & Ele	ctions system of India	aes, proceaures.			
5 7	To learn the Amendments and Emer	concy Provisions other im	nortant provisions giv	en by the constitution		
J. I	- Learning Presses	gency i tovisions, other ini	portant provisions giv	en by the constitution.		
These are	g-Learning Process	u anu una ta anglaunta th	attainment of the sur			
melse are	sample strategies, which teached	Foodbard of accelerate the	e attainment of the Va	in rous course outcomes and		
паке геа	ichnig – Learning more effective:	i eachers shall adopt suitab	e pedagogy for effect	ive leacning - learning		
process. T	ne pedagogy shall involve the com	bination of different metho	aologies which suit m	odern technological tools.		
(1) L	Direct instructional method (Low/O	Id Technology), (11) Flippe	d classrooms (High/ad	ivanced Technological tools),		
(1	III) Blended learning (Combination	of both), (iv) Enquiry and	evaluation based learn	ning, (v) Personalized		
le	earning, (vi) Problems based learnin	ig through discussion.				
(ii) A	part from conventional lecture met	hods, various types of inno	vative teaching techni	iques through videos,		
a	nimation films may be adapted so the	hat the delivered lesson car	n progress the students	s In theoretical applied and		
p	ractical skills.					
	Module-1	(03 hou	irs of pedagogy)			
Indian Co Indian cor	onstitution: Necessity of the Const nstitution, Making of the Constitution	itution, Societies before an on, Role of the Constituent	d after the Constitutio Assembly.	n adoption. Introduction to the		
	Module-2	(03 hou	urs of pedagogy)			
Salient fea	atures of India Constitution. Pream	nble of Indian Constitutio	n & Key concepts of	f the Preamble. Fundamental		
Rights (F	R's) and its Restriction and limit	ations in different Complex	x Situations. building	<u>.</u>		
	Module-3	(03 hou	irs of pedagogy)			
Directive and its S Minister,	e Principles of State Policy (DPS cope and significance in Nation, U Union Cabinet.	SP's) and its present rel inion Executive : Parliame	evance in Indian ntary System, Union	society. Fundamental Duties Executive – President, Prime		
	Module-4	(03 ho	urs of pedagogy)			
Parliamen Supreme (	t - LS and RS, Parliamentary Co Court of India and other Courts, Juc	mmittees, Important Parli licial Reviews and Judicial	amentary Terminolog Activism.	ies. Judicial System of India,		
	Module-5	(03 ho	urs of pedagogy)			
State Exe	cutive and Governer, CM, State C	abinet, Legislature - VS &	& VP, Election Comm	nission, Elections & Electoral		
Process. Amendment to Constitution, and Important Constitutional Amendments till today. Emergency Provisions.						
<b>Course outcome (Course Skill Set)</b> At the end of the course 22IC017/27 the student will be able to:						
CO1 Analyse the basic structure of Indian Constitution.						
CO2 Remember their Fundamental Rights, DPSP's and Fundamental Duties (FD's) of our constitution.						
CO3 know about our Union Government, political structure & codes, procedures.						
C04	Understand our State Executive &	Elections system of India	- l.			
C05	Remember the Amendments and	Emergency Provisions oth	er important provision	as given by the constitution		
000	temember die Amerikaniens und Emergeney Provisions, odier important provisions given by the constitution.					

#### Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50). The minimum passing mark for the SEE is 35% of the maximum marks (18 marks out of 50). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 35% (18 Marks out of 50) in the semester-end examination(SEE), and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

#### Continuous Internal Evaluation(CIE):

Two Unit Tests each of 30 Marks (duration 01 hour)

- First test after the completion of 30-40 % of the syllabus
- Second test after completion of 80-90% of the syllabus

One Improvement test before the closing of the academic term may be conducted if necessary. However best two tests out of three shall be taken into consideration

#### Two assignments each of 20 Marks

The teacher has to plan the assignments and get them completed by the students well before the closing of the term so that marks entry in the examination portal shall be done in time. Formative (Successive) Assessments include Assignments/Quizzes/Seminars/ Course projects/Field surveys/ Case studies/ Hands-on practice (experiments)/Group Discussions/ others.. The Teachers shall choose the types of assignments depending on the requirement of the course and plan to attain the Cos and POs. (to have a less stressed CIE, the portion of the syllabus should not be common /repeated for any of the methods of the CIE. Each method of CIE should have a different syllabus portion of the course). CIE methods /test question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

The sum of two tests, two assignments, will be out of 100 marks and will be scaled down to 50 marks

#### Semester End Examinations (SEE)

SEE paper shall be set for **50 questions, each of the 01 mark**. The pattern of the **question paper is MCQ** (multiple choice questions). The time allotted for SEE is **01 hour**. The student must secure a minimum of 35% of the maximum marks for SEE.

#### **Suggested Learning Resources:**

#### **Textbook:**

- 1. "Constitution of India" (for Competitive Exams) Published by Naidhruva Edutech Learning Solutions, Bengaluru. 2022.
- 2. "Introduction to the Constitution of India", (Students Edition.) by Durga Das Basu (DD Basu): Prentice –Hall, 2008.

#### **Reference Books:**

- 1. "Constitution of India, Professional Ethics and Human Rights" by Shubham Singles, Charles E. Haries, and et al: published by Cengage Learning India, Latest Edition 2019.
- 2. **"The Constitution of India"** by Merunandan K B: published by Merugu Publication, Second Edition, Bengaluru.
- 3. "Samvidhana Odu" for Students & Youths by Justice HN Nagamohan Dhas, Sahayana, kerekon.
- 4. M.Govindarajan, S.Natarajan, V.S.Senthilkumar, "Engineering Ethics", Prentice Hall, 2004.

#### Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- ✓ Contents related activities (Activity-based discussions)
- ✓ For active participation of students instruct the students to prepare Flowcharts and Handouts
- ✓ Organising Group wise discussions Connecting to placement activities
- ✓ Quizzes and Discussions
- ✓ Seminars and assignments

#### I Semester

Learning

INNOVATION and DESIGN THINKING					
Course Code	<b>BIDTK158/258</b>	CIE Marks	50		
Teaching Hours/Week (L: T:P: S)	1:0:0	SEE Marks	50		
Total Hours of Pedagogy	15	Total Marks	100		
Credits	01	Exam Hours	01		

#### Course Category: Foundation

**Preamble:** This course provides an introduction to the basic concepts and techniques of engineering and reverses engineering, the process of design, analytical thinking and ideas, basics and development of engineering drawing, application of engineering drawing with computer aide. **Course objectives:** 

- To explain the concept of design thinking for product and service development
- To explain the fundamental concept of innovation and design thinking
- To discuss the methods of implementing design thinking in the real world.

#### **Teaching-Learning Process (General Instructions)**

These are sample Strategies; which teachers can use to accelerate the attainment of the various course outcomes.

- **1.** Lecturer method (L) does not mean only the traditional lecture method, but a different type of teaching method may be adopted to develop the outcomes.
- **2.** Show Video/animation films to explain concepts
- 3. Encourage collaborative (Group Learning) Learning in the class
- **4.** Ask at least three HOTS (Higher-order Thinking) questions in the class, which promotes critical thinking
- **5.** Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develops thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- **6.** Topics will be introduced in multiple representations.
- **7.** Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- **8.** Discuss how every concept can be applied to the real world and when that's possible, it helps improve the students' understanding.

	Module-1				
PROCESS OF	DESIGN				
Understandi	ng Design thinking				
Shared mode	l in team-based design – Theory and practice in Design thinking – Explore presentation				
signers acros	s globe – MVP or Prototyping				
Teaching-	Introduction about the design thinking: Chalk and Talk method				
Learning	Theory and practice through presentation				
Process	MVP and Prototyping through live examples and videos				
Module-2					
Tools for De	sign Thinking				
Real-Time design interaction capture and analysis – Enabling efficient collaboration in digital space					
– Empathy for design – Collaboration in distributed Design					
Teaching-	Case studies on design thinking for real-time interaction and analysis				

Process	Process Simulation exercises for collaborated enabled design thinking					
Live examples on the success of collaborated design thinking						
	Module-3					
Design 7	Thinking in IT					
Design T	hinking to Business Process modelling – Agile in Virtual collabora	tion environment – Scenario				
based Pr	ototyping					
Teaching	- Case studies on design thinking and business acceptance of the	ie design				
Learning	Simulation on the role of virtual eco-system for collaborated	prototyping				
Process						
	Module-4					
DT For st	rategic innovations					
Growth -	Story telling representation - Strategic Foresight - Change -	Sense Making - Maintenance				
Relevance	e – Value redefinition - Extreme Competition – experience	design - Standardization -				
Humaniza	ation - Creative Culture – Rapid prototyping, Strategy and Org	ganization – Business Model				
design.						
Teaching	Teaching-Business model examples of successful designs					
<b>Learning</b> Presentation by the students on the success of design						
Process	Live project on design thinking in a group of 4 students					
Design th	inking workshop					
Design Th	ninking Work shop Empathize, Design, Ideate, Prototype and Test					
Teaching	- 8 hours design thinking workshop from the expect and then p	resentation by the students				
Learning	on the learning from the workshop					
Process						
Course O	utcomes:					
Upon the	successful completion of the course, students will be able to:					
СО	Course Outsomes	Knowledge Level				
Nos.	course outcomes	(Based on revised				
Bloom's Taxonom						
C01	CO1Appreciate various design process procedureK2					
CO2	Generate and develop design ideas through different K2					
	technique					
CO3	Identify the significance of reverse Engineering toUnderstand K2					
	products					
CO4	Draw technical drawing for design ideas K3					

#### Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50). The minimum passing mark for the SEE is 35% of the maximum marks (18 marks out of 50). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 35% (18 Marks out of 50) in the semester-end examination(SEE), and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. **Continuous Internal Evaluation (CIE)**:

- Two Tests (preferably in MCQ pattern ) each of **30 Marks**; The first test after the completion of the 40 -50% syllabus of the course. A second test after the completion of 90-100% of the syllabus of the course.
- Two Assignments/two quizzes/two seminars/one field survey and report

presentation/one-course project totaling **40 marks** 

Total Marks scored (test + assignments) out of 100 shall be scaled down to **50 marks** 

At the beginning of the semester, the instructor/faculty teaching the course has to announce the methods of CIE for the course.

The Teachers shall choose the types of assignments depending on the requirement of the course and plan to attain the Cos and POs. (to have a less stressed CIE, the portion of the syllabus should not be common /repeated for any of the methods of the CIE. Each method of CIE should have a different syllabus portion of the course). CIE methods /test question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

#### Semester-End Examination:

Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for subject

SEE paper will be set for 50 questions of each of 01 marks. The pattern of the question paper is MCQ. The time allotted for SEE is **01 hour** 

#### Suggested Learning Resources:

#### **Text Books :**

- 1. John.R.Karsnitz, Stephen O'Brien and John P. Hutchinson, "Engineering Design", Cengage learning (International edition) Second Edition, 2013.
- 2. Roger Martin, "The Design of Business: Why Design Thinking is the Next Competitive Advantage", Harvard Business Press, 2009.
- 3. Hasso Plattner, Christoph Meinel and Larry Leifer (eds), "Design Thinking: Understand Improve Apply", Springer, 2011
- 4. Idris Mootee, "Design Thinking for Strategic Innovation: What They Can't Teach You at Business or Design School", John Wiley & Sons 2013.

**References**:

5.	Yousef Haik and Tamer M.Shahin, "Engineering Design Process", CengageLearning, Second				
	Edition, 2011.				
6.	Book - Solving Problems with Design Thinking - Ten Stories of What Works (Columbia Business				
	School Publishing) Hardcover – 20 Sep 2013 by Jeanne Liedtka (Author), Andrew King (Author),				
	Kevin Bennett (Author).				
Web li	Web links and Video Lectures (e-Resources):				
1.	www.tutor2u.net/business/presentations/. / <b>productlifecycle</b> /default.html				
2.	https://docs.oracle.com/cd/E11108_02/otn/pdf/. /E11087_01.pdf				
3.	www.bizfilings.com > Home > Marketing > Product Developmen				
4.	https://www.mindtools.com/brainstm.html				
5.	https://www.quicksprout.com/. /how-to- <b>reverse-engineer</b> -your-competit				
6.	www.vertabelo.com/blog/documentation/reverse-engineering				
	https://support.microsoft.com/en-us/kb/273814				
7.	https://support.google.com/docs/answer/179740?hl=en				
8.	https://www.youtube.com/watch?v=2mjSDIBaUlM				
	thevirtualinstructor.com/foreshortening.html				
	https://dschool.stanford.edu//designresources//ModeGuideBOOTCAMP2010L.pdf				
	https://dschool.stanford.edu/use-our-methods/ 6. https://www.interaction-				
	design.org/literature/article/5-stages-in-the-design-thinking-process 7.				
	http://www.creativityatwork.com/design-thinking-strategy-for-innovation/ 49 8.				
	https://www.nngroup.com/articles/design-thinking/ 9.				
	https://designthinkingforeducators.com/design-thinking/ 10.				
	www.designthinkingformobility.org/wp-content//10/NapkinPitch_Worksheet.pdf				
Activit	ty Based Learning (Suggested Activities in Class)/ Practical Based learning				
•	http://dschool.stanford.edu/dgift/				

https://onlinecourses.nptel.ac.in/noc19\_mg60/preview

#### Theory - 01 Credit Course Scientific Foundations of Health

Scientific Foundations of	Health					
Course Title:	Scientific Foundations o	f Health				
Course Code:BSFHK158/258CIE Marks50						
Course Type (Theory/Practical /Integrated)	Theory	SEE Marks	50			
	4.0.0.0	Total Marks	100			
Teaching Hours/Week (L:T:P: S)	1:0:0:0	Exam Hours	01 Theory			
Total Hours of Pedagogy	15 nours	Creats	01			
<ul> <li>Course objectives</li> <li>The course Scientific Foundations of Health (22SFH18/28) will enable the students,</li> <li>1. To know about Health and wellness (and its Beliefs) &amp; It's balance for positive mindset.</li> <li>2. To Build the healthy lifestyles for good health for their better future.</li> <li>3. To Create a Healthy and caring relationships to meet the requirements of good/social/positive life.</li> <li>4. To learn about Avoiding risks and harmful habits in their campus and outside the campus for their bright future</li> <li>5. To Prevent and fight against harmful diseases for good health through positive mindset</li> </ul> Teaching-Learning Process These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes and make Teaching –Learning more effective: Teachers shall adopt suitable pedagogy for effective teaching - learning process. The pedagogy shall involve the combination of different methodologies which suit modern technological tools. <ul> <li>(i) Direct instructional method (Low/Old Technology), (ii) Flipped classrooms (High/advanced Technological tools), (iii) Blended learning, (vi) Problems based learning through discussion, (vii) Following the method of expeditionary learning Tools and techniques, (viii) Use of audio visual methods. Apart from conventional lecture methods, various types of innovative teaching techniques through videos, animation films</li></ul>						
Mo	odule-1	(03	hours of pedagogy)			
Good Health & It's balance for posit	ive mindset: Health -Impor	tance of Health,	Influencing factors of Health,			
Health beliefs, Advantages of good health, H	Health & Behavior, Health & S	Society, Health &	family, Health & Personality,			
Psychological disorders-Methods to improve	good psychological health, Ch	anging health hab	its for good health.			
Мо	dule-2	(03	hours of pedagogy)			
Building of healthy lifestyles for better	• future: Developing healthy	diet for good heal	th, Food & health, Nutritional			
guidelines for good health, Obesity & overw	eight disorders and its manage	ement, Eating disc	orders, Fitness components for			
health Wellness and physical function How	to avoid exercise iniuries	(02)				
M00	lule-3	(03 r	lours of pedagogy)			
Creation of Healthy and caring relation	onships : Building communic	ation skills, Frien	ds and friendship - Education,			
the value of relationship and communication	n skills, Relationships for Bett	er or worsening of	of life, understanding of basic			
instincts of life (more than a biology), Changing health behaviours through social engineering.						
Module-4(03 hours of pedagogy)						
Avoiding risks and harmful habits : C	haracteristics of health compre	omising behaviors	s, Recognizing and avoiding of			

addictions, How addiction develops, Types of addictions, influencing factors of addictions, Differences between addictive people and non addictive people & their behaviors. Effects of addictions Such as..., how to recovery from addictions.

# Module-5(03 hours of pedagogy)Preventing & fighting against diseases for good health: How to protect from different types of infections, How to<br/>reduce risks for good health, Reducing risks & coping with chronic conditions, Management of chronic illness for Quality<br/>of life, Health & Wellness of youth :a challenge for upcoming future, Measuring of health & wealth status.

#### Course outcome (Course Skill Set) :

At the en	At the end of the course Scientific Foundations of Health (22SFH18/28) the student will be able to:				
C01	To understand and analyse about Health and wellness (and its Beliefs) & It's balance for positive mindset.				
C02	Develop the healthy lifestyles for good health for their better future.				
CO3	Build a Healthy and caring relationships to meet the requirements of good/social/positive life.				
C04	To learn about Avoiding risks and harmful habits in their campus and outside the campus for their bright future.				
C05	Prevent and fight against harmful diseases for good health through positive mindset.				

#### Assessment Details (both CIE and SEE) :

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50). The minimum passing mark for the SEE is 35% of the maximum marks (18 marks out of 50). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 35% (18 Marks out of 50) in the semester-end examination(SEE), and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

#### **Continuous Internal Evaluation(CIE) :**

#### Two Unit Tests each of 30 Marks (duration 01 hour)

- First test after the completion of 30-40 % of the syllabus
- Second test after completion of 80-90% of the syllabus

One Improvement test before the closing of the academic term may be conducted if necessary. However best two tests out of three shall be taken into consideration.

#### Two assignments each of 20 Marks

The teacher has to plan the assignments and get them completed by the students well before the closing of the term so that marks entry in the examination portal shall be done in time. Formative (Successive) Assessments include Assignments/Quizzes/Seminars/ Course projects/Field surveys/ Case studies/ Hands-on practice (experiments)/Group Discussions/ others.. The Teachers shall choose the types of assignments depending on the requirement of the course and plan to attain the Cos and POs. (to have a less stressed CIE, the portion of the syllabus should not be common /repeated for any of the methods of the CIE. Each method of CIE should have a different syllabus portion of the course). CIE methods /test question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

#### The sum of two tests, two assignments, will be out of 100 marks and will be scaled down to 50 marks

#### **Semester End Examinations (SEE)**

SEE paper shall be set for **50 questions, each of the 01 mark**. The pattern of the **question paper is MCQ** (multiple choice questions). The time allotted for SEE is **01 hour**. The student must secure a minimum of 35% of the maximum marks for SEE.

#### Suggested Learning Resources:

#### **Textbook:**

- 1. "Scientific Foundations of Health" Study Material Prepared by Dr. L Thimmesha, Published in VTU University Website.
- 2. "Scientific Foundations of Health", (ISBN-978-81-955465-6-5) published by Infinite Learning Solutions, Bangalore 2022.
- 3. **Health Psychology A Textbook,** FOURTH EDITION by Jane Ogden McGraw Hill Education (India) Private Limited Open University Press.

#### **Reference Books:**

- 1. Health Psychology (Second edition) by Charles Abraham, Mark Conner, Fiona Jones and Daryl O'Connor Published by Routledge 711 Third Avenue, New York, NY 10017.
- 2. **HEALTH PSYCHOLOGY (Ninth Edition)** by SHELLEY E. TAYLOR University of California, Los Angeles, McGraw Hill Education (India) Private Limited Open University Press.
- 3. SWAYAM / NPTL/ MOOCS/ We blinks/ Internet sources/ YouTube videos and other materials / notes.
- **4. Scientific Foundations of Health (Health & Welness) General Books** published for university and colleges references by popular authors and published by the reputed publisher.

#### Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- ✓ Contents related activities (Activity-based discussions)
- ✓ For active participation of students instruct the students to prepare Flowcharts and Handouts
- ✓ Organising Group wise discussions Connecting to placement activities
- ✓ Quizzes and Discussions, Seminars and assignments

BSCK307 – Soci 2022 Schem	al Connect & Responsibility ne & syllabus for 3 <sup>rd</sup> sem	Semester	3 <sup>rd</sup>				
Course Code	BSCK307	CIE Marks	100				
Teaching Hours/Week (L:T:P: S)	0:0:3:1	SEE Marks					
Total Hours of Pedagogy	40 hour Practical Session +15 hour Planning	Total Marks	100				
Examination nature	Examination nature For CIE Assessment - Activities Report Evaluation by College NSS						
(No SEE – Only CIE)	Officer / HOD / Sports Dept	t / Any Dept.					
Credits	01 - Credit						
Course objectives: The cours	e will enable the students to:						
<ol> <li>Provide a formal platform for</li> <li>create a responsible connection</li> <li>Understand the community in</li> <li>Identify the needs and problet</li> <li>Develop among themselves and in finding practical solutions</li> <li>Develop competence require in mobilizing community particular solution</li> </ol>	r students to communicate and connect to the surround on with the society. n general in which they work. ems of the community and involve them in problem –so a sense of social & civic responsibility & utilize their k to individual and community problems. d for group-living and sharing of responsibilities & gai ticipation to acquire leadership qualities and democrati	ing. Diving. nowledge n skills to attitudes.					
<ol> <li>These are sample Strategies, which te</li> <li>In addition to the traditiona that the activities will deve</li> <li>State the need for activities</li> <li>Support and guide the stude</li> <li>You will also be responsible students' progress in real action</li> <li>Encourage the students for</li> </ol>	achers can use to accelerate the attainment of the various l lecture method, different types of innovative teaching lop students' theoretical and applied social and cultural s and its present relevance in the society and Provide re- ents for self-planned activities. e for assigning homework, grading assignments and qui- ctivities in the field. group work to improve their creative and analytical ski	us course outcomes. methods may be add skills. al-life examples. izzes, and document lls.	opted so ing				
Contents :							
The course is mainly activity-based human beings, nature, society, and t	that will offer a set of activities for the student that enable world at large.	bles them to connect	with fellow				
The course will engage students for activities conducted by faculty ment	interactive sessions, open mic, reading group, storytelli ors.	ing sessions, and sem	nester-long				
In the following a set of activities pl	anned for the course have been listed:						
Social	<b>Connect &amp; Responsibility - Conte</b>	ents					
Part I:							
<b>Plantation and adoption of a</b> Plantation of a tree that will be adopted	<b>tree:</b> ed for four years by a group of BE / B.Tech students. (	ONE STUDENT O	NE TREE)				
They will also make an excerpt either as a documentary or a photo blog describing the plant's origin, its usage in daily life.							
its appearance in folklore and literature - Objectives, Visit, case study, report, outcomes.							
Part II :							
Heritage walk and crafts corr	ner:						
Heritage tour, knowing the history a	nd culture of the city, connecting to people around thr	ough their history. k	nowing the				
city and its craftsman photo blog an	d documentary on evolution and practice of various of	raft forms $-$ Object	ctives Visit				
end and its cratisman, photo blog an	a accumentary on evolution and practice of various e						
case study, report, outcomes.							

# Part III :

#### **Organic farming and waste management:**

Usefulness of organic farming, wet waste management in neighboring villages, and implementation in the campus -

Objectives, Visit, case study, report, outcomes.

#### Part IV:

#### Water conservation:

Knowing the present practices in the surrounding villages and implementation in the campus, documentary or photoblog presenting the current practices – Objectives, Visit, case study, report, outcomes.

#### Part V :

#### Food walk:

City's culinary practices, food lore, and indigenous materials of the region used in cooking – Objectives, Visit, case study, report, outcomes.

#### **Course outcomes (Course Skill Set):**

At the end of the course, the student will be able to:

- CO1: Communicate and connect to the surrounding.
- CO2: Create a responsible connection with the society.
- CO3: Involve in the community in general in which they work.
- CO4: Notice the needs and problems of the community and involve them in problem -solving.
- CO5: Develop among themselves a sense of social & civic responsibility & utilize their knowledge in finding practical solutions to individual and community problems.
- CO6: Develop competence required for group-living and sharing of responsibilities & gain skills in mobilizing community participation to acquire leadership qualities and democratic attitudes.

# **Activities:**

Jamming session, open mic, and poetry: Platform to connect to others. Share the stories with others. Share the experience of Social Connect. Exhibit the talent like playing instruments, singing, one-act play, art-painting, and fine art.

#### **PEDAGOGY:**

The pedagogy will include interactive lectures, inspiring guest talks, field visits, social immersion, and a course project. Applying and synthesizing information from these sources to define the social problem to address and take up the solution as the course project, with your group. Social immersionwith NGOs/social sections will be a key part of the course. Will all lead to the course project that will address the needs of the social sector?

#### **COURSE TOPICS:**

The course will introduce social context and various players in the social space, and present approaches to discovering and understanding social needs. Social immersion and inspiring conversional will culminate in developing an actual, idea for problem-based intervention, based on an in-depth understanding of a key social problem.

#### **Duration :**

A total of 40 - 50 hrs engagement per semester is required for the 3rd semester of the B.E. /B.Tech. program. The students will be divided into groups. Each group will be handled by faculty mentor. Faculty mentor will design the activities (particularly Jamming sessions open mic ,and poetry) Faculty mentors has to design the evaluation system as per VTU guidelines of scheme & syllabus.

# **Guideline for Assessment Process: Continuous Internal Evaluation (CIE):**

After completion of the course, the student shall prepare, with daily diary as reference, a comprehensive report in consultation with the mentor/s to indicate what he has observed and learned in the social connect period. The report should be signed by the mentor. The report shall

be evaluated on the basis of the following criteria and/or other relevant criteria pertaining to the activity completed. Marks allotted for the diary are out of 50. Planning and scheduling the social connect Information/Data collected during the social connect Analysis of the information/data and report writing Considering all above points allotting the marks as mentioned below

Excellent	: 80 to 100
Good	: 60 to 79
Satisfactory	: 40 to 59
Unsatisfactory an	d fail : <39

**Special Note :** 

NO SEE – Semester End Exam – Completely Practical and activities based evaluation

# **Pedagogy – Guidelines :**

It may differ depending on local resources available for the study as well as environment and climatic differences, location and time of execution.

SI No	Торіс	Group size	Location	Activity execution	Reporting	Evaluation Of the Topic
1.	Plantation and adoption of a tree:	May be individual or team	Farmers land/ parks / Villages / roadside/ community area / College campus etc	Site selection /proper consultation/Contin uous monitoring/ Information board	Report should be submitted by individual to the concerned evaluation authority	Evaluation as per the rubrics Of scheme and syllabus by Faculty
2.	Heritage walk and crafts corner:	May be individual or team	Temples / monumental places / Villages/ City Areas / Grama panchayat/ public associations/Governme nt Schemes officers/ campus etc	Site selection /proper consultation/Contin uous monitoring/ Information board	Report should be submitted by individual to the concerned evaluation authority	Evaluation as per the rubrics Of scheme and syllabus by Faculty
3.	Organic farming and waste management:	May be individual or team	Farmers land / parks / Villages visits / roadside/ community area / College campus etc	Group selection / proper consultation / Continuous monitoring / Information board	Report should be submitted by individual to the concerned evaluation authority	Evaluation as per the rubrics Of scheme and syllabus by Faculty
4.	Water conservation: & conservation techniques	May be individual or team	Villages/ City Areas / Grama panchayat/ public associations/Governme nt Schemes officers / campus etc	site selection / proper consultation/Contin uous monitoring/ Information board	Report should be submitted by individual to the concerned evaluation authority	Evaluation as per the rubrics Of scheme and syllabus by Faculty
5.	Food walk: Practices in society	May be individual or team	Villages/ City Areas / Grama panchayat/ public associations/Governme nt Schemes officers/ campus etc	Group selection / proper consultation / Continuous monitoring / Information board	Report should be submitted by individual to the concerned evaluation authority	Evaluation as per the rubrics Of scheme and syllabus by Faculty

# Plan of Action (Execution of Activities )

Sl.NO	Practice Session Description						
1	Lecture session in field to start activities						
2	Students Presentation on Ideas						
3	Commencement of activity and its p	rogress					
4	Execution of Activity						
5	Execution of Activity						
6	Execution of Activity						
7	Execution of Activity						
8	Case study based Assessment, Individ	lual performan	ce				
9	Sector/ Team wise study and its conse	olidation					
10	Video based seminar for 10 minutes l	oy each student	At the end of semester with Report.				
• Assessn	<ul> <li>At last consolidated report of all activities from 1<sup>st</sup> to 5<sup>th</sup>, compiled report should be submitted as per the instructions and scheme.</li> </ul>						
W	eightage	CIE – 100%	• Implementation strategies of the project (				
Fie Co Ca Inc See Via stu Ac To see	Field Visit, Plan, Discussion10 MarksNSS work).Commencement of activities and its progress20 MarksThe last report should be signed by NSS Officer, the HOD and principal.Case study based Assessment20 Marks* At last report should be evaluated by the NSS officer of the institute.Sector wise study & its consolidation 5*5 = 2525 Marks* At last report should be evaluated by the NSS officer of the institute.Video based seminar for 10 minutes by each student At the end of semester with Report. Activities 1 to 5, 5*5 = 2525 Marks* Finally the consolidated marks sheet should be sent to the university and also to be made available at LIC visit.Total marks for the course in each semester100 Marks100 Marks						
Fo as	r each activity, 20 marks CIE will be even sessment copy should be made available	aluated for IA r in the departm	narks at the end of semester, Report and ent.				

Students should present the progress of the activities as per the schedule in the prescribed practical session in the field. There should be positive progress in the vertical order for the benefit of society in general through activities.

#### BUHK408 – UHV for 2022 Scheme

Universal Hun	Semester	3 <sup>rd</sup>	
Course Code	BUHK408	CIE Marks	50
Teaching Hours/Week (L: T:P: S)	1:0:0:1	SEE Marks	50
Total Hours of Pedagogy	15 hour Theory Session +15 hour Self study	Total Marks	100
Credits	01	Exam Hours	01 Hour
Examination type (SEE)	SEE paper shall be set for 50 questions, each of the 01 mark. The pattern of the question paper is <b>MCO</b> (multiple choice questions).		

# **Course objectives:**

This course is intended to:

- To help the students appreciate the essential complementarity between 'VALUES' and 'SKILLS' to ensure sustained happiness and prosperity which are the core aspirations of all human beings.
- To facilitate the development of a Holistic perspective among students towards life and profession as well as towards happiness and prosperity based on a correct understanding of the Human reality and the rest of existence. Such a holistic perspective forms the basis of Universal Human Values and movement towards value-based living in a natural way.
- To highlight plausible implications of such a Holistic understanding in terms of ethical human conduct, trustful and mutually fulfilling human behaviour and mutually enriching interaction with Nature.
- This course is intended to provide a much-needed orientation input in value education to the young enquiring minds.

#### **Teaching-Learning Process (General Instructions)**

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- **1.** The methodology of this course is explorational and thus universally adaptable. It involves a systematic and rational study of the human being vis-à-vis the rest of existence.
- 2. In addition to the traditional lecture method, different types of innovative teaching methods may be adopted so that the activities will develop students' theoretical and applied skills.
- 3. State the need for UHV activities and its present relevance in the society and Provide real-life examples.
- 4. Support and guide the students for self-study activities.
- 5. You will also be responsible for assigning homework, grading assignments and quizzes, and documenting students' progress in real activities in the field.
- 6. This process of self-exploration takes the form of a dialogue between the teacher and the students to begin with, and then to continue within the student in every activity, leading to continuous selfevolution.
- 7. Encourage the students for group work to improve their creative and analytical skills.

Module-1		
Introduction to Value Education	(3 hours)	
Right Understanding, Relationship and Physical Facility (Holistic Development and	the Role of	
Education) Understanding Value Education, Self-exploration as the Process	for Value	
Education, Continuous Happiness and Prosperity - the Basic Human Aspirations, Happiness		
and Prosperity – Current Scenario, Method to Fulfil the Basic Human Aspirations		
Module-2		

Harmony in the Human Being :

Understanding Human being as the Co-existence of the Self and the Body, Distinguishing between the Needs of the Self and the Body, The Body as an Instrument of the Self, Understanding Harmony in the Self, Harmony of the Self with the Body, Programme to ensure self-regulation and Health

Module-3

# Harmony in the Family and Society :

# (3 hours)

(3 hours)

(3 hours)

Harmony in the Family – the Basic Unit of Human Interaction, 'Trust' – the Foundational Value in Relationship, 'Respect' – as the Right Evaluation, Other Feelings, Justice in Human-to-Human Relationship, Understanding Harmony in the Society, Vision for the Universal Human Order

#### Module-4

# Harmony in the Nature/Existence :

Understanding Harmony in the Nature, Interconnectedness, self-regulation and Mutual Fulfilment among the Four Orders of Nature, Realizing Existence as Co-existence at All Levels, The Holistic Perception of Harmony in Existence

Module-5

Implications of the Holistic Understanding – a Look at Professional Ethics :(3 hours)Natural Acceptance of Human Values, Definitiveness of (Ethical) Human Conduct, A Basis forHumanistic Education, Humanistic Constitution and Universal Human Order, Competence inProfessional Ethics Holistic Technologies, Production Systems and Management Models-TypicalCase Studies, Strategies for Transition towards Value-based Life and Profession

# Course outcome (Course Skill Set)

At the end of the course, students are expected to become more aware of themselves, and their surroundings (family, society, nature);

- They would become more responsible in life, and in handling problems with sustainable solutions, while keeping human relationships and human nature in mind.
- They would have better critical ability.
- They would also become sensitive to their commitment towards what they have understood (human values, human relationship and human society).
- It is hoped that they would be able to apply what they have learnt to their own self in different day-to-day settings in real life, at least a beginning would be made in this direction.

Expected to positively impact common graduate attributes like:

- 1. Ethical human conduct
- 2. Socially responsible behaviour
- 3. Holistic vision of life
- 4. Environmentally responsible work
- 5. Having Competence and Capabilities for Maintaining Health and Hygiene
- 6. Appreciation and aspiration for excellence (merit) and gratitude for all

#### BUHK408 – UHV for 2022 Scheme

#### Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together

#### **Continuous internal Examination (CIE)**

- For the Assignment component of the CIE, there are 25 marks and for the Internal Assessment Test component, there are 25 marks.
- The first test will be administered after 40-50% of the syllabus has been covered, and the second test will be administered after 85-90% of the syllabus has been covered
- Any two assignment methods mentioned in the 220B2.4, if an assignment is project-based then only one assignment for the course shall be planned. The teacher should not conduct two assignments at the end of the semester if two assignments are planned.
- For the course, CIE marks will be based on a scaled-down sum of two tests and other methods of assessment.

# The sum of two tests, two assignments, will be out of 100 marks and will be scaled down to 50 marks

Internal Assessment Test question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

Semester End Examinations (SEE)

SEE paper shall be set for **50 questions**, each of the 01 marks. **The pattern of the question paper is MCQ** (multiple choice questions). The time allotted for SEE is **01 hour**. The student has to secure a minimum of 35% of the maximum marks meant for SEE.

# Suggested Learning Resources:

#### Books for READING:

Text Book and Teachers Manual

- a. The Textbook A Foundation Course in Human Values and Professional Ethics, R R Gaur, R Asthana, G P Bagaria, 2nd Revised Edition, Excel Books, New Delhi, 2019. ISBN 978-93-87034-47-1
- b. The Teacher"s Manual for A Foundation Course in Human Values and Professional Ethics, R R Gaur, R Asthana, G

# Reference Books

- 1. Jeevan Vidya: Ek Parichaya, A Nagaraj, Jeevan Vidya Prakashan, Amar kantak, 1999.
- 2. Human Values, A.N. Tripathi, New Age Intl. Publishers, New Delhi, 2004.
- 3. The Story of Stuff (Book).
- 4. The Story of My Experiments with Truth by Mohandas Karamchand Gandhi
- 5. Small is Beautiful E. F Schumacher.
- 6. Slow is Beautiful Cecile Andrews

7. Economy of Permanence - J C Kumarappa

8. Bharat Mein Angreji Raj – Pandit Sunderlal

9. Rediscovering India - by Dharampal

10. Hind Swaraj or Indian Home Rule - by Mohandas K. Gandhi

11. India Wins Freedom - Maulana Abdul Kalam Azad

12. Vivekananda - Romain Rolland (English)

13. Gandhi - Romain Rolland (English)

14. Sussan George, 1976, How the Other Half Dies, Penguin Press. Reprinted 1986, 1991

15. Donella H. Meadows, Dennis L. Meadows, Jorgen Randers, William W. Behrens III, 1972, Limits to Growth – Club of Rome's report, Universe Books.

16. A Nagraj, 1998, Jeevan Vidya Ek Parichay, Divya Path Sansthan, Amarkantak.

17. P L Dhar, RR Gaur, 1990, Science and Humanism, Commonwealth Publishers.

18. A N Tripathy, 2003, Human Values, New Age International Publishers.

19. SubhasPalekar, 2000, How to practice Natural Farming, Pracheen (Vaidik) KrishiTantraShodh, Amravati.

20. E G Seebauer & Robert L. Berry, 2000, Fundamentals of Ethics for Scientists & Engineers , Oxford University Press

21. M Govindrajran, S Natrajan & V.S. Senthil Kumar, Engineering Ethics (including Human Values), Eastern Economy Edition, Prentice Hall of India Ltd.

22. B P Banerjee, 2005, Foundations of Ethics and Management, Excel Books.

23. B L Bajpai, 2004, Indian Ethos and Modern Management, New Royal Book Co., Lucknow. Reprinted 2008.

# Web links and Video Lectures (e-Resources):

- Value Education websites,
- <u>https://www.uhv.org.in/uhv-ii</u>,
- <u>http://uhv.ac.in</u>,
- <u>http://www.uptu.ac.in</u>
- Story of Stuff,
- <u>http://www.storyofstuff.com</u>
- Al Gore, An Inconvenient Truth, Paramount Classics, USA
- Charlie Chaplin, Modern Times, United Artists, USA
- IIT Delhi, Modern Technology the Untold Story
- Gandhi A., Right Here Right Now, Cyclewala Productions
- <u>https://www.youtube.com/channel/UCQxWr5QB\_eZUnwxSwxXEkQw</u>
- <u>https://fdp-si.aicte-india.org/8dayUHV\_download.php</u>
- <u>https://www.youtube.com/watch?v=8ovkLRYXIjE</u>
- <u>https://www.youtube.com/watch?v=OgdNx0X9231</u>
- <u>https://www.youtube.com/watch?v=nGRcbRpvGoU</u>
- https://www.youtube.com/watch?v=sDxGXOgYEKM

V Semester

#### **Environmental Studies**

Course Code:	BESK508	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	2+0+0+0	SEE Marks	50
Total Hours of Pedagogy	30	Total Marks	100
Credits	02	Exam Hours	01

#### **Course objectives:**

- To create environmental and sustainbility awareness among the students.
- To gain knowledge on different types of pollution in the environment, waste management and Environmental legislation.

#### Teaching-Learning Process (General Instructions)

These are sample Strategies; which teacher can use to accelerate the attainment of the various course outcomes.

- 1. Apart from conventional lecture methods various types of innovative teaching techniques through videos, and animation films may be adopted so that the delivered lesson can progress the students in theoretical, applied and practical skills.
- 2. Environmental awareness program for the in house campus
- 3. Encourage collaborative (Group Learning) Learning in the class.
- 4. Seminars, surprise tests and Quizzes may be arranged for students in respective subjects to develop skills.

#### Module-1

#### Module-1: ECOSYSTEM AND SUSTAINABILITY

Ecosystems (Structure and Function): Forest, Desert, Wetlands, River, Oceanic and Lake. Sustainability: 17 SDGs- History, targets, implementation, Capacity Development

Teaching-Learning	Chalk and talk, PowerPoint presentation and animation tools	
Process	, 1	
Module-2		
Module 2: NATURAL RESOURCE MANAGEMENT		

Advances in Energy Systems (Merits, Demerits, Global Status and Applications): Hydrogen, Solar, OTEC, Tidal and Wind.

Natural Resource Management (Concept and case-studies): Disaster Management, Sustainable Mining - case studies and Carbon Trading.

Teaching-Learning Process	Chalk and talk, powerpoint presentation and animation tools	
Module-3		
Module 3: ENVIRONMENTAL POLLUTION & WASTE MANAGEMENT		
Environmental Pollution (Sources, Impacts, Corrective and Preventive measures, Relevant		

Environmental Acts, Case-studies): Surface and Ground Water Pollution; Noise pollution; Soil Pollution and Air Pollution.

**Waste Management:** Bio-medical Wastes; Solid waste; Hazardous wastes; E-wastes; Industrial and Municipal Sludge.

Teaching-Learning Process	Chalk and talk, powerpoint presentation and animation tools	
Module-4		

# Module 4: GLOBAL ENVIRONMENTAL ISSUES

**Global Environmental Concerns** (Concept, policies and case-studies): Ground water depletion/recharging, Climate Change; Acid Rain; Ozone Depletion; Radon and Fluoride problem in drinking water; Resettlement and rehabilitation of people, Environmental Toxicology.

 Teaching-Learning
 Chalk and talk, powerpoint presentation and animation tools

 Process
 Module-5

# **Module 5: ENVIRONMENTAL LEGISLATION**

**Environmental Legislation :** Water Act 1974, Air Act 1981, Environmental Protection Act 1984, Solid Waste Management Rules-2016, E- Waste management Rule - 2022, Biomedical Waste management- 2016.

Teaching-Learning Process	Chalk and talk, power point presentation and animation tools
Course outgome (Course Skill Set)	

#### Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- CO1: Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale,
- CO2: Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment as legislation.
- CO3: Apply their ecological knowledge to illustrate and grasp the problem and describe the realities that managers face when dealing with complex issues.

# Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 35% (18 Marks out of 50) in the semester-end examination(SEE), and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together

#### **Continuous Internal Evaluation:**

#### Three Unit Tests each of 20 Marks (duration 01 hour)

- 1. First test at the end of 5<sup>th</sup> week of the semester
- 2. Second test at the end of the  $10^{th}$  week of the semester
- 3. Third test at the end of the  $15^{th}$  week of the semester

#### Two assignments each of 10 Marks

- 4. First assignment at the end of 4<sup>th</sup> week of the semester
- 5. Second assignment at the end of 9<sup>th</sup> week of the semester

Group discussion/Seminar/quiz any one of three suitably planned to attain the COs and POs for **20 Marks** (duration 01 hours)

6. At the end of the  $13^{th}$  week of the semester

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be scaled down to 50 marks

(to have less stressed CIE, the portion of the syllabus should not be common /repeated for any of the methods of the CIE. Each method of CIE should have a different syllabus portion of the course).

CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

#### Semester End Examination:

Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for the subject (**duration 01 hours**)

Question paper pattern:

1. The Question paper will have 50 objective questions.

- 2. Each question will be for 01 marks
- 3. Students will have to answer all the questions on an OMR Sheet.
- 4. The Duration of the Exam will be 01 hour

# Suggested Learning Resources:

# Books

- Environmental studies, Benny Joseph, Tata Mcgraw-Hill 2<sup>nd</sup> edition 2012
- Environmental studies, S M Prakash, pristine publishing house, Mangalore 3<sup>rd</sup> edition-2018

# **Reference Books: -**

- Benny Joseph, Environmental studies, Tata Mcgraw-Hill 2<sup>nd</sup> edition 2009
- M.Ayi Reddy Textbook of environmental science and Technology, BS publications 2007
- Dr. B.S Chauhan, Environmental studies, university of science press 1<sup>st</sup> edition

Web links and Video Lectures (e-Resources):

Weblink:

<u>https://sdgs.un.org/goals</u>

Video Lectures

• <u>https://archive.nptel.ac.in/courses/109/105/109105190/</u>.

Activity-Based Learning (Suggested Activities in Class)/ Practical Based learning

• Field work: Visit to Zero Waste Management Plant / Solid waste management plant.

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#### V Semester

	<b>Environmental Studies</b>		
Course Code	21CIV57	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	1+2+0+0	SEE Marks	50
Total Hours of Pedagogy	15	Total Marks	100
Credits	01	Exam Hours	01

#### **Course objectives:**

- To create environmental awareness among the students.
- To gain knowledge on different types of pollution in the environment.

#### **Teaching-Learning Process (General Instructions)**

These are sample Strategies; which teacher can use to accelerate the attainment of the various course outcomes.

- 1. Apart from conventional lecture methods various types of innovative teaching techniques through videos, and animation films may be adopted so that the delivered lesson can progress the students in theoretical, applied and practical skills.
- 2. Environmental awareness program for the in house campus
- 3. Encourage collaborative (Group Learning) Learning in the class.
- **4**. Seminars, surprise tests and Quizzes may be arranged for students in respective subjects to develop skills.

	Module-1	
Ecosystems (Structure and Function): Forest, Desert, Wetlands, River, Oceanic and Lake.		
Biodiversity: Types, Value; Hot-spots; Threats and Conservation of biodiversity, Forest Wealth,		
and Deforestation.		
Teaching-Learning Process	Chalk and talk, PowerPoint presentation and animation tools	
	Module-2	
Advances in Energy Systems (Merits, Demerits, Global Status and Applications): Hydrogen,		
Solar, OTEC, Tidal and	Wind.	
Natural Resource Management (Concept and case-studies): Disaster Management, Sustainable		
Mining,case studiesng, and Carbon Trading.		
Teaching-Learning Process	Chalk and talk, powerpoint presentation and animation tools	
	Module-3	
Environmental Pollution (Sources, Impacts, Corrective and Preventive measures, Relevant		
Environmental Acts, Case-studies): Surface and Ground Water Pollution; Noise pollution; Soil		
Pollution and Air Pollution.		
Waste Management & Public Health Aspects: Bio-medical Wastes; Solid waste; Hazardous		
wastes; E-wastes; Industrial and Municipal Sludge.		
Tooshing Looming		

Teaching-Learning	Chalk and talk, powerpoint presentation and animation tools	
Process		
Module-4		
Global Environmental Concerns (Concept, policies and case-studies): Ground water		
depletion/recharging, Climate Change; Acid Rain; Ozone Depletion; Radon and Fluoride problem		
in drinking water; Resettlement and rehabilitation of people, Environmental Toxicology.		
Teaching-Learning	Chalk and talk, powerpoint presentation and animation tools	
Process		

**Module-5** 

Latest Developments in Environmental Pollution Mitigation Tools (Concept and Applications): G.I.S. & Remote Sensing, Environment Impact Assessment, Environmental Management Systems, ISO14001; Environmental Stewardship- NGOs. Field work: Visit to an Environmental Engineering Laboratory or Green Building or Water Treatment Plant or Waste water treatment Plant; ought to be Followed by understanding of process and its brief documentation.

Teaching-Learning	Chalk and talk, power point presentation and animation tools
Process	

#### Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- CO1: Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale,
- CO2: Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.
- CO3: Demonstrate ecology knowledge of a complex relationship between biotic and a biotic components.
- • CO4: Apply their ecological knowledge to illustrate and graph a problem and describe the realities that managers face when dealing with complex issues.

# Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 35% (18 Marks out of 50)in the semester-end examination(SEE), and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together

#### **Continuous Internal Evaluation:**

#### Three Unit Tests each of 20 Marks (duration 01 hour)

- 1. First test at the end of  $5^{th}$  week of the semester
- 2. Second test at the end of the  $10^{th}$  week of the semester
- 3. Third test at the end of the  $15^{th}$  week of the semester

#### Two assignments each of 10 Marks

- 4. First assignment at the end of 4<sup>th</sup> week of the semester
- 5. Second assignment at the end of 9<sup>th</sup> week of the semester

Group discussion/Seminar/quiz any one of three suitably planned to attain the COs and POs for **20 Marks** (duration **01 hours**)

6. At the end of the  $13^{th}$  week of the semester

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be scaled down to 50 marks

(to have less stressed CIE, the portion of the syllabus should not be common /repeated for any of the methods of the CIE. Each method of CIE should have a different syllabus portion of the course).

CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

# Semester End Examination:

Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for the subject (**duration 01 hours**)

Question paper pattern:

1. The Question paper will have 50 objective questions.

- 2. Each question will be for 01 marks
- 3. Students will have to answer all the questions on an OMR Sheet.
- **4**. The Duration of the Exam will be 01 hour

# Suggested Learning Resources:

# Books

• .

- Environmental studies, Benny Joseph, Tata Mcgraw-Hill 2<sup>nd</sup> edition 2012
- Environmental studies, S M Prakash, pristine publishing house, Mangalore 3<sup>rd</sup> edition-2018

# **Reference Books: -**

- Benny Joseph, Environmental studies, Tata Mcgraw-Hill 2<sup>nd</sup> edition 2009
- M.Ayi Reddy Textbook of environmental science and Technology, BS publications 2007
- Dr. B.S Chauhan, Environmental studies, university of science press 1<sup>st</sup> edition

Web links and Video Lectures (e-Resources):

Activity-Based Learning (Suggested Activities in Class)/ Practical Based learning