# BAS104 / BAS204: ENVIRONMENT AND ECOLOGY

# **Course Objectives:**

- Aims and objectives of environmental education emphasize the relationship between man and the environment and educate young people about the importance of nature and the environment.
- 2. Environmental education aims to impart ecological knowledge and promote environmentally conscious behavior towards nature.
- 3. It encourages young minds to take **responsibility for protecting** the natural environment protection through information and knowledge and to develop environmental awareness.
- 4. Incidentally, promoting awareness and a sense of respect for nature leads to a comprehensive understanding of the environment and a reasonable attitude towards protecting it.
- 5. The focus of environmental education is Awareness, Knowledge, Attitude, Skills, Capacity Building and Participation.

Environment: Definition, Types of Environment, Components of environment, Segments of environment, Scope and importance, Need for Public Awareness.  Ecosystem: Definition, Types of ecosystem, Structure of ecosystem, Food Chain, Food Web, Ecological pyramid. Balance Ecosystem.  Effects of Human Activities such as Food, Shelter, Housing, Agriculture, Industry, Mining, Transportation, Economic and Social security on Environment, Environmental Impact Assessment, Sustainable Development.  Unit-2  Natural Resources: Introduction, Classification.	
Ecosystem: Definition, Types of ecosystem, Structure of ecosystem, Food Chain, Food Web, Ecological pyramid. Balance Ecosystem.  Effects of Human Activities such as Food, Shelter, Housing, Agriculture, Industry, Mining, Transportation, Economic and Social security on Environment, Environmental Impact Assessment, Sustainable Development.  Unit-2	
Ecosystem: Definition, Types of ecosystem, Structure of ecosystem, Food Chain, Food Web, Ecological pyramid. Balance Ecosystem.  Effects of Human Activities such as Food, Shelter, Housing, Agriculture, Industry, Mining, Transportation, Economic and Social security on Environment, Environmental Impact Assessment, Sustainable Development.  Unit-2	
Environment, Environmental Impact Assessment, Sustainable Development.  Unit-2	
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Natural Resources: Introduction, Classification	
orabbilication.	
Water Resources; Availability, sources and Quality Aspects, Water Borne and Water Induced Diseases, Fluoride and Arsenic Problems in Drinking Water.	
Mineral Resources; Material Cycles; Carbon, Nitrogen and Sulfur cycles.	
Energy Resources; Conventional and Non conventional Sources of Energy.	
Forest Resources; Availability, Depletion of Forests, Environment impact of forest depletion on society.	
Unit-3	8
Pollution and their Effects; Public Health Aspects of Environmental;	
Water Pollution, Air Pollution, Soil Pollution, Noise Pollution, Solid waste management.	
Unit-4	8
Current Environmental Issues of Importance; Global Warming, Green House Effects, Climate Change, Acid Rain, Ozone Layer Formation and Depletion, Population Growth and Automobile pollution, Burning of paddy straw.	

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Unit-5	8
Environmental Protection; Environmental Protection Act 1986, Initiatives by Non Governmental Organizations (NGO's), Human Population and the Environment: Population growth, Environmental Education, Women Education.	

# **Course Outcomes:**

Upon completion of the course, the student will be able to:

	Course Outcomes	Bloom's Level
CO-1	Gain in-depth knowledge on natural processes that sustain life, and govern economy.	К2
CO-2	Estimate and Predict the consequences of human actions on the web of life, global economy and quality of human life.	КЗ
CO-3	Develop critical thinking for shaping strategies (scientific, social, economic and legal) for environmental protection and conservation of biodiversity, social equity and sustainable development.	
CO-4	Acquire values and attitudes towards understanding complex environmental- economic social challenges, and participate actively in solving current environmental problems and preventing the future ones.	К3
CO-5	Adopt sustainability as a practice in life, society and industry.	К3

### Reference Books:

- 1. Textbook of Environment and Ecology by Dave, Katewa & Singh, 2<sup>nd</sup> Edition, Cengage Learning India Pvt Ltd Delhi.
- 2. Environmental Studies by S Deswal, Dhanpat Rai & Co.
- 3. Environmental Studies by VK Ahluwalia, 2nd Edition, TERI Press, New Delhi.
- 4. Environmental Studies by R Rajgopalan, Oxford University Press.
- 5. Environment & Ecology by Singh & Malviya, Acme Learning

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# AICTE's New Student Induction Program v2.1

### Introduction

In its 49th meeting, held on 14th March 2017, AICTE approved a package of measures for further improving the quality of technical education in the country. This 3-week mandatory Student Induction Program (SIP) based on Universal Human Values (UHV) is one of these key measures.

The SIP is intended to prepare newly admitted undergraduate students for the new stage in their life by facilitating a smooth transition from their home and school environment into the college and university environment.

The present form of the Student Induction Program (SIP) has taken inspiration from and gratefully acknowledges the many efforts in this direction. In particular the Foundation Program at IIT Gandhinagar¹ (July 2011) and the course in Universal Human Values and Professional Ethics² (IIIT Hyderabad, 2005; AKTU Lucknow, 2009 and PTU Jalandhar, 2011; overall about 35 universities); and also, the mentorship, internship and apprenticeship programs³ of several institutions. The SIP amalgamates all the three into an integrated whole, which leads to its high effectiveness in terms of building a healthy lifestyle, creativity, bonding and character. It develops sensitivity towards self and one's relationships, builds awareness about others and society beyond the individual, and also in bonding with their own batch-mates and senior students as well as faculty members.

The purpose of this document along with accompanying details are to help institutions / colleges in understanding the spirit of the Induction Program and implementing it.

It is in line with the thoughts expressed in the NEP 2020:

"Education is fundamental for achieving full human potential, developing an equitable and just society, and promoting National development".

"The purpose of the education system is to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical moorings and values".

"It aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution".

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<sup>&</sup>lt;sup>1</sup> IIT Gandhinagar places great emphasis on not only educating successful engineers of the future, but also creating well-rounded personalities, who contribute to society, are respectful of and can adapt to their surroundings, and prove themselves to be great thinkers and problem solvers in all avenues of life. In 2011, in line with this vision, It took the bold step to introduce a five week Foundation Program for incoming 1st year UG students. It involved activities such as games, art, etc.; also science and other creative workshops as well as lectures by eminent resource persons. To enable undivided attention on this, normal classes were scheduled only after this program was over.

<sup>&</sup>lt;sup>2</sup> The foundation course was started in 2005 at IIIT Hyderabad. In 2009, UP Technical University (now AKTU) introduced it in all academic programs across their 550 colleges. From there on, it has been included in the curriculum of many universities, particularly in technical universities, in quite a natural manner, filling a long-felt need. After AKTU, it was IKG-Punjab Technical University in 2011, then Royal University of Bhutan in 2012 and so on. By 2020, more than 40 universities in India and both universities of Bhutan have been offering this foundation course. Since 2017, it has been a compulsory credit course in AICTE's model curriculum for all UG courses. Faculty from all departments are involved in conducting the course. The content is universal, rational, verifiable and leading to harmony. The mode is a self-exploration (and not sermonising or lecturing). Faculty are to be prepared beforehand. The results have been quite encouraging.

<sup>&</sup>lt;sup>3</sup> Many institutes setup mentor-mentee network under which 1<sup>st</sup> year students are divided into small groups, each assigned to a senior student as a Student Buddy, and to a faculty member as a Faculty Mentor. Thus, a new student has their guidance through regular interactions. They can discuss their aims and aspirations as well as concerns whether social, psychological, financial, academic, or otherwise.

"Education must build character, enable learners to be ethical, rational, compassionate, and caring, while at the same time prepare them for gainful, fulfilling employment".

"The curriculum must include basic arts, crafts, humanities, games, sports and fitness, languages, literature, culture, and values, in addition to science and mathematics, to develop all aspects and capabilities of learners; and make education more well-rounded, useful, and fulfilling to the learner".

So, when new students join an institution, they are to be welcomed and oriented to the institute, its vision, people, purpose, culture and values, policies, programs, rules and regulations etc. through a well-planned 3-week interaction before regular classes start.

Education aims at developing the students to their full potential, so that they are able to participate meaningfully not only in their profession, but also in their family, society and their natural environment. That requires the development of their values as well as skills.

Engineering colleges were established to train graduates in their respective branch/ department of study, be ready for the job market, but also have a holistic outlook towards life and have a desire and competence to work for national needs and beyond. The graduating student must have the knowledge and skills in the area of his study. However, s(he) must also have a broad understanding of society and relationships. Besides the above, several meta-skills and underlying values are needed. Character needs to be nurtured as an essential quality by which s(he) would understand and fulfil his/her responsibility as an engineer, a family member, a citizen etc.

The same applies to all other branches of study – be it professional, vocational or any other area of academic. The graduating student must be a good human being and have the skills in their area of study.

Each family, institution, region, community etc. have evolved their way of life, their cultures over a period of time. The new students are going from one culture to another. Today, a major issue is that one culture tends to be opposed to other cultures. This is because their basic assumptions, and therefore thoughts, are different. Even though there are commonalities at the core value level, the conflict is at the level of expression and details.

With this situation, it is imperative to

- Articulate the essence or core aspects of human culture and civilization, i.e. understand universal human values like trust and respect, love and compassion
- Appreciate the various expressions, different approaches taken in different regions

Our effort is in the context of the whole humanity. However, when it comes to exemplifying these essential concepts, we will have to take to local or national expressions.

In SIP, we want to provide an exposure to essence in the context of the whole humanity first. Then we can take a representative cross-section of all cultures as expressions of this essence. A yardstick to evaluate these various options is provided to guide the student towards a humanistic culture founded on the truth and universal human values like love and compassion.

For example: We want to live with fulfilment as a society. This part is common, universal. To exemplify this, we may expose students to traditional Indian culture and philosophy as well as contemporary western culture and thought.

#### The intent is:

Connecting the basic principles through specific examples

 To see and appreciate various cultures, to see the commonality amongst them, in the light of clarity about human culture and civilisation.

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To evaluate any specific example, system or culture, with a view to fill the gaps, rather than to criticise or reject it. Further, we can also be mutually enriching for other cultures.

# Student Induction Program (SIP)

With this background, the SIP has been formulated with specific goals to help students to:

- Become familiar with the ethos and culture of the institution (based on institutional culture and practices)
- Set a healthy daily routine, create bonding in batch as well as between faculty members and students
- Get an exposure to a holistic vision of life, develop awareness, sensitivity and understanding

Self---family---Society---Nation---International---Entire Nature

- Facilitate them in creating new bonds with peers and seniors who accompany them through their college life and beyond
- Overcome weaknesses in some essential professional skills only for those who need it (e.g. Mathematics, Language proficiency modules)

The SIP consists of different activities which includes meeting new students, socializing with teachers and other people in the university. Secondly associating with the Local area or city, knowing different departments, associating with the department heads, local stores and necessary shops for the survival at new place. Basically, getting information about the rules and regulations of the university which includes do's and don'ts. Other activities which may involve students in several creative, cultural and co- curricular activities through which they can explore themselves and get idea about their intrinsic desires and interests which may help them in the long run. In order to make it worth, at the initial level of joining of student various seminars, lectures by eminent personalities, sessions by the appointed mentor for the student is being done to make them more familiar with the university environment. It has been seen that student after schooling when moves towards further studies for either under graduation or post-graduation has got so many confusions and false knowledge about the college and the curriculum. They should know the basic idea about the fruits and prospects of the particular course and the university or institute in which they are entering. To have faith about their choices and to know that after completion, they will be well equipped with the values and skills which may aid to their future goals and let them work for their personal motives, society and the Nation's development.

The various modules or core areas recommended for the 3-week SIP are:

SIP Module 1: Universal Human Values I (UHV I)

22 hours

The purpose is to help develop a holistic perspective about life. A self-reflective methodology of teaching is adopted. It opens the space for the student to explore his/her role (value) in all aspects of living - as an individual, as a member of a family, as a part of the society and as an unit in nature. Through this process of self-exploration, students are able to discover the values intrinsic in them. The session-wise topics are given below:

Ses No.	sion	Topic Title	Aspirations and Issues	Basic Realities (underlying harmony)
1		come and ductions	Getting to know each other	Self-exploration
2 Aspirations and Concerns 3			Individual academic, career Expectations of family, peers, society, nation Fixing one's goals	Basic human aspirations Need for a holistic perspective Role of UHV

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4 and 5	Self-Management	Self-confidence, peer pressure, time management, anger, stress Personality development, self-improvement	Harmony in the human being
6 and 7	Health	Health issues, healthy diet, healthy lifestyle Hostel life	Harmony of the Self and Body Mental and physical health
8, 9, 10 and 11	Relationships	Home sickness, gratitude towards parents, teachers and others Ragging and interaction Competition and cooperation Peer pressure	Harmony in relationship Feelings of trust, respect gratitude, glory, love
12	Society	Participation in society	Harmony in the society
13	Natural Environment	Participation in nature	Harmony in nature/existence
14	Sum Up	Review role of education Need for a holistic perspective	Information about UHV-II course, mentor and buddy
15	Self-evaluation and Closure	Sharing and feedback	

### SIP Module 2: Physical Health and Related Activities

51 hours

This module is intended to help understand the basic principles to remain healthy and fit and practice them through a healthy routine which includes exercise, games etc.

## SIP Module 3: Familiarization of Department/ Branch and Innovation 06 hours

This module is for introducing and relating the student to the institution/department/branch; how it plays a role in the development of the society, the state, region, nation and the world at large and how students can participate in it.

#### SIP Module 4: Visit to a Local Area

10 hours

To relate to the social environment of the educational institution as well as the area in which it is situated through interaction with the people, place, history, politics...

#### SIP Module 5: Lectures by Eminent People

06 hours

Listening to the life and times of eminent people from various fields like academics, industry etc. about careers, art, self-management and so on enriches the student's perspective and provides a holistic learning experience.

#### SIP Module 6: Proficiency Modules

06 hours

This module is to help fill the gaps in basic competency required for further inputs to be absorbed. It includes effort to make student proficient in interpersonal communication and expression as well as awareness about linguistic and thereafter NLP.

#### SIP Module 7: Literature / Literary Activities

30 hours

Through the exposure of local, national and international literature, this module is aimed at helping the student learn about traditional as well as contemporary values and thought.

#### SIP Module 8: Creative Practices

49 hours

This module is to help develop the clarity of humanistic culture and its creative, joyful expression through practice of art forms like dance, drama, music, painting, pottery, sculpture etc.

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#### SIP Module 9: Extra Curricular Activities

06 hours

This is a category under which things that are not placed in any of the above may be placed. Some clubs and hobby group may be made for each of the above categories, so that students may pursue them even after SIP.

The recommended hours to be allocated are given above. Depending on the available faculty, staff, infrastructure, playgrounds, class timings, hostellers and day scholars etc., the timetable for these activities may be drawn up. Of course, colleges may conduct an inaugural function at the beginning of the SIP; and they may also conduct a celebratory closing ceremony at the end of the SIP.

In particular during the lockdown phase, appropriate care may be taken and some or all activities may be planned in distance-learning or on-line mode.

#### Sample 3-week Activity List

Week 1	Inaugural Function	
	Regular SIP Activities (See Hours Plan)	
Week 2	Regular SIP Activities (See Hours Plan)	
Week 3	Regular SIP Activities (See Hours Plan)	
	Valedictory and Closing Ceremony (Celebration)	

#### Implementation

Every institution/college is expected to conduct the 3-week SIP under the guidance of the Director/Principal or Dean Students or a senior faculty member. For this, the institution is expected to make an SIP Cell. The SIP Cell will be responsible for planning, and then implementation of the SIP.

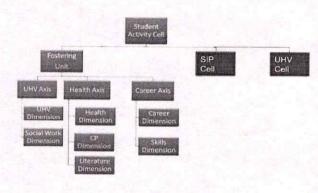
#### Follow up

The SIP is only the beginning of the interaction with newly joined students.

An important part of the SIP is to associate one faculty mentor to every small groups of about 20 students; and also associate one senior student buddy to an even smaller groups of about 5 students for the guidance required for holistic development of the newly joined student throughout his/her time in the institution/college.

These activities are to be continued in the ongoing academic program along with other cultural activities through the Student Activity Cell (SAC).

#### Student Activity Cell (SAC) - SIP Cell, UHV Cell and Fostering Unit



- Student Activity Cell will be a five-tier structure in terms of cell, units, axis, dimensions & Clubs as shown in the figure till dimensions. Details of the clubs will be based on local conditions.
- Director or Principal or Dean of Student affairs will be the Chairman of Student Activity Cell
- •SIP Cell (or Induction Unit) will be managed by faculty members with the help of student volunteers. 5 to 7 faculty members will be the members. The SIP Cell will be responsible for

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- planning, organization, coordination and reporting of the annual Student Induction Program with the help of other faculty members and student volunteers
- UHV Cell will be managed by the UHV Convener / Coordinator under the chairpersonship of the director/principal. Faculty members and some students will be the members. They will coordinate the UHV activities like UHV-I during SIP, UHV-II 3rd/4th semester, faculty mentoring program and student buddy program throughout the student's association with the institute/college. UHV Cell will work to incorporate human values in every aspect of education at the institute/college. Preparing UHV Faculty (Mentors) is one of its activities
- Fostering unit will largely be managed by students with the help of one fostering unit faculty mentor. Student will be coordinators for axis, dimensions and clubs. Fostering unit will take support from induction unit as and when required. It will be responsible for coordinating various student clubs and activities in alignment with human values

#### Assessing the Implementation and Impact

The institution / college is expected to take feedback and prepare appropriate reports for assessing the impact and for further improvement of SIP. The basic feedback forms are included with the SIP Teaching Materials.

AICTE will also conduct periodic assessment to ascertain the implementation efforts and impact of the SIP and related activities.

#### **Faculty Development**

To ensure the implementation of SIP, and in particular to prepare the faculty, the National Coordination Committee for Student Induction (NCC-IP) has been formed. It offers various faculty development programs (FDPs) with the support from AICTE HQ and Regional Offices.

UHV Faculty (Mentors): Every institution is expected to prepare UHV Faculty in the ratio of 1:20 (1 faculty per 20 newly admitted students). Faculty from every teaching department are to be prepared. The basic preparation is participation in an 8-day FDP-SI (UHV).

Faculty for other Modules: Institutions/colleges generally have faculty, coaches, student clubs, alumni for these areas. FDP and comprehensive material will also be made available.

#### SIP Teaching Material and More Details

The SIP Handbook as well as detailed guides and material for each of the modules is available on the AICTE website (http://www.fdp-si.aicte-india.org/download.php).

#### **Details and Reference Documents:**

- 1. G012 SIP Handbook v2
- 2. Teaching Material for UHV-I v2.1
- 3. Teaching Material for SIP modules 2 to 9 v1
- 4. G008 Facilitator (Mentor) Manual Version 2.1
- 5. G911 UHV Cell, Nodal and Resource Centres
- 6. G009 RP Development Process v2

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KVE301/ KVE 401/ KVE 301H/ KVE 401 H

### Universal Human Values and Professional Ethics

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### Objectives:

- To help students distinguish between values and skills, and understand the need, basic guidelines, content and process of value education.
- 2. To help students initiate a process of dialog within themselves to know what they 'really want to be' in their life and profession
- 3. To help students understand the meaning of happiness and prosperity for a human being.
- 4. To facilitate the students to understand harmony at all the levels of human living, and live accordingly.
- 5. To facilitate the students in applying the understanding of harmony in existence in their profession and lead an ethical life

#### Course Outcome:

On completion of this course, the students will be able to

- Understand the significance of value inputs in a classroom, distinguish between values and skills, understand the need, basic guidelines, content and process of value education, explore the meaning of happiness and prosperity and do a correct appraisal of the current scenario in the society
- Distinguish between the Self and the Body, understand the meaning of Harmony in the Self the Co-existence of Self and Body.
- Understand the value of harmonious relationship based on trust, respect and other naturally acceptable feelings in human-human relationships and explore their role in ensuring a harmonious society
- 4. Understand the harmony in nature and existence, and work out their mutually fulfilling participation in the nature.
- 5. Distinguish between ethical and unethical practices, and start working out the strategy to actualize a harmonious environment wherever they work.

#### Catalogue Description

Every human being has two sets of questions to answer for his life: a) what to do? and, b) how to do?. The first set pertains to the value domain, and the other to the skill domain. Both are complimentary, but value domain has a higher priority. Today, education has become more and more skill biased, and hence, the basic aspiration of a human being, that is to live with happiness and prosperity, gets defeated, in spite of abundant technological progress. This course is aimed at giving inputs that will help to ensure the right understanding and right feelings in the students in their life and profession, enabling them to lead an ethical life. In this course, the students learn the process of self-exploration, the difference between the Self and the Body, the naturally acceptable feelings in relationships in a family, the comprehensive human goal in the society, the mutual fulfillment in the nature and the co-existence in existence. As a natural outcome of such inputs, they are able to evaluate an ethical life and profession ahead.

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# UNIT-1 Course Introduction - Need, Basic Guidelines, Content and Process for Value Education

Understanding the need, basic guidelines, content and process for Value Education, Self-Exploration—what is it? - its content and process; 'Natural Acceptance' and Experiential Validation—as the mechanism for self exploration, Continuous Happiness and Prosperity—A look at basic Human Aspirations, Right understanding, Relationship and Physical Facilities—the basic requirements for fulfillment of aspirations of every human being with their correct priority, Understanding Happiness and Prosperity correctly—A critical appraisal of the current scenario, Method to fulfill the above human aspirations: understanding and living in harmony at various levels.

# UNIT-2 Understanding Harmony in the Human Being - Harmony in Myself

Understanding human being as a co-existence of the sentient 'I' and the material 'Body', Understanding the needs of Self ('I') and 'Body' - Sukh and Suvidha, Understanding the Body as an instrument of 'I' (I being the doer, seer and enjoyer), Understanding the characteristics and activities of 'I' and harmony in 'I', Understanding the harmony of I with the Body: Sanyam and Swasthya; correct appraisal of Physical needs, meaning of Prosperity in detail, Programs to ensure Sanyam and Swasthya.

# UNIT-3 Understanding Harmony in the Family and Society- Harmony in Human-Human Relationship

Understanding harmony in the Family- the basic unit of human interaction, Understanding values in human-human relationship; meaning of *Nyaya* and program for its fulfillment to ensure *Ubhay-tripti*; Trust (*Vishwas*) and Respect (*Samman*) as the foundational values of relationship, Understanding the meaning of *Vishwas*; Difference between intention and competence, Understanding the meaning of *Samman*, Difference between respect and differentiation; the other salient values in relationship, Understanding the harmony in the society (society being an extension of family): *Samadhan*, *Samridhi*, *Abhay*, *Sah-astitva* as comprehensive Human Goals, Visualizing a universal harmonious order in society-Undivided Society (*AkhandSamaj*), Universal Order (*SarvabhaumVyawastha*)-from family to world family!.

# UNIT-4 Understanding Harmony in the Nature and Existence - Whole existence as Co-existence

Understanding the harmony in the Nature, Interconnectedness and mutual fulfillment among the four orders of nature- recyclability and self-regulation in nature, Understanding Existence as Co-existence (Sah-astitva) of mutually interacting units in all-pervasive space, Holistic perception of harmony at all levels of existence.

# UNIT-5 Implications of the above Holistic Understanding of Harmony on Professional Ethics

Natural acceptance of human values, Definitiveness of Ethical Human Conduct, Basis for Humanistic Education, Humanistic Constitution and Humanistic Universal Order, Competence in Professional Ethics: a) Ability to utilize the professional competence for augmenting universal human order, b) Ability to identify the scope and characteristics of people-friendly and eco-friendly

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production systems, technologies and management models, Case studies of typical holistic technologies, management models and production systems, Strategy for transition from the present state to Universal Human Order: a) At the level of individual: as socially and ecologically responsible engineers, technologists and managers, b) At the level of society: as mutually enriching institutions and organizations.

#### **Text Books:**

 R R Gaur, R Sangal, G P Bagaria, 2009, A Foundation Course in Human Values and Professional Ethics.

#### References:

- Ivan Illich, 1974, Energy & Equity, The Trinity Press, Worcester, and Harper Collins, USA
- 2. E.F. Schumacher, 1973, Small is Beautiful: a study of economics as if people mattered, Blond & Briggs, Britain.
- 3. Sussan George, 1976, How the Other Half Dies, Penguin Press. Reprinted 1986, 1991
- Donella H. Meadows, Dennis L. Meadows, Jorgen Randers, William W. Behrens III, 1972, Limits to Growth – Club of Rome's report, Universe Books.
- A Nagraj, 1998, Jeevan Vidya Ek Parichay, Divya Path Sansthan, Amarkantak.
- 6. P L Dhar, RR Gaur, 1990, Science and Humanism, Commonwealth Publishers.
- 7. A N Tripathy, 2003, Human Values, New Age International Publishers.
- 8. SubhasPalekar, 2000, How to practice Natural Farming, Pracheen (Vaidik) KrishiTantraShodh, Amravati.
- E G Seebauer & Robert L. Berry, 2000, Fundamentals of Ethics for Scientists & Engineers, Oxford University Press
- M Govindrajran, S Natrajan & V.S. Senthil Kumar, Engineering Ethics (including Human Values), Eastern Economy Edition, Prentice Hall of India Ltd.
- 11. B P Banerjee, 2005, Foundations of Ethics and Management, Excel Books.
- B L Bajpai, 2004, Indian Ethos and Modern Management, New Royal Book Co., Lucknow. Reprinted 2008.

#### Mode of Evaluation:

Assignment/ Seminar/Continuous Assessment Test/Semester End Exam

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## KOE-069 UNDERSTANDING THE HUMAN BEING COMPREHENSIVELY – HUMAN ASPIRATIONS AND ITS FULFILLMENT

## **Course Objectives:**

- 1. To help the students having the clarity about human aspirations, goal, activities and purpose of life.
- 2. To facilitate the competence to understand the harmony in nature/existence and participation of human being in the nature/existence.
- To help the students to develop the understanding of human tradition and its various components.

#### Course Methodology:

- 1. The methodology of this course is exploration and thus universally adaptable. It involves a systematic and rational study of the human being vis-à-vis the rest of existence.
- 2. It is free from any dogma or set of do's and don'ts related to values.
- 3. It is a process of self-investigation and self-exploration, and not of giving sermons. Whatever is found as truth or reality is stated as a proposal and the students are facilitated and encouraged to verify it in their own right, based on their Natural Acceptance and subsequent Experiential Validation.
- 4. 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 leading to continuous self-evolution.
- 5. This self-exploration also enables them to critically evaluate their preconditioning and present beliefs.

Unit	Topic	Lectures
1	Introduction:  The basic human aspirations and their fulfillment through Right understanding and Resolution; All-encompassing Resolution for a Human Being, its details and solution of problems in the light of Resolution.	
2	Understanding Human being and its expansion: The domain of right understanding starts from understanding the human being (the knower, the experience and the doer); and extends up to understanding nature/existence – its interconnectedness and co-existence; and finally understanding the role of human being in existence (human conduct).	8
3	Activities of the Self: Understanding the human being comprehensively is the first step and the core theme of this course; human being as co-existence of the self and the body; the activities and potentialities of the self; Reasons for harmony/contradiction in the self.	8
4	Understanding Co-existence with other orders:  The need and the process of inner evolution (through self-exploration, selfawareness and self-evaluation)- particularly awakening to activities of the Self: Realization, Understanding and Contemplation in the Self (Realization of Co-Existence, Understanding of Harmony in Nature and Contemplation of Participation of Human in this harmony/ order leading to comprehensive knowledge about the existence).	8
5	Expansion of harmony from self to entire existence:  Understanding different aspects of All-encompassing Resolution (understanding, wisdom, science etc.), Holistic way of living for Human Being with All-encompassing Resolution covering all four dimensions of human endeavour viz., realization, thought, behavior and work (participation in the larger order) leading to harmony at all levels from self to Nature and entire Existence.	8

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#### Reference Books:

- A Foundation Course in Human Values and Profession Ethics (Text Book and Teachers' Manual), R. R. Gaur, R. Sangal, G. P. Bagaria (2010), Excel Books, New Delhi [ISBN 978-8-174-46781-2]
- 2. Avartansheel Arthshastra, A. Nagraj, Divya Path Sansthan, Amarkantak, India
- 3. Economy of Permanence (a quest for social order based on non-violence), J. C. Kumarappa (2010), Sarva-Seva-Sangh-Prakashan, Varansi, India
- 4. Energy and Equity, Ivan Illich (1974), The Trinity Press, Worcester & Harper Collins, USA
- 5. Ishandi Nau Upnishad, Shankaracharya, Geeta press, Gorakhpur,
- 6. Manav Vyavahar Darshan, A. Nagraj, Divya Path Sansthan, Amarkantak, India
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	KOE089: HUMAN VALUES IN MADHYASTH DARSHA DETAILED SYLLABUS	3-1-0
Unit	Topic	Proposed Lecture
	Catalogue Description: Madhyasth Darshan is a new emerging philosophy that describes the existential realities along with its implication in behaviour and work at the level of individual as well as society. This philosophy has been propounded by Shri A. Nagraj in seventies.	08
	It is to be kept in mind that Darshan means realisation which calls for developing the capacity to see the reality in oneself directly. So, any study of Darshan shall help develop this capacity in the students through proper steps of practices and shall not just provide the information.	
1	Module I: Introduction to Madhyasth Darshan and its Basics Need to study Madhyasth Darshan; introduction, basic formulations of the darshan; the complete expanse of study and the natural outcome of living according to the darshan.	08
П	Module II: Submergence of Nature in Space The ever-present existence in the form of nature submerged in space; nature classified into two categories – material and consciousness, and four orders; the form, property, natural characteristic and self- organization of the four orders, General direction and process of evolution in the nature/ existence.	08
Ш	Module III: Human Being as an indivisible part of Nature Human being as an indivisible part of nature; various types (five classes) of human beings; human being in the combination of self and body; purpose of self as realization, prosperity for the body; need of behavior and work for attaining the goals of realization and prosperity	08
IV	Module IV: Fulfillment of human goal of realization and prosperity Following natural, social and psychological principles for actualizing the human goal; form of conducive society and order for such practices, study process- achieving realization through self-study and practice while living in such a society (social order).	08
V	Module V: Human Conduct based on Madhyasth Darshan  Description of such a realized self, continuity of happiness, peace, satisfaction and bliss through realization, conduct of a realized human being.  Possibility of finding solutions to present day problems (such as inequality of rich and poor, man and woman etc.) in the light of it.	

## Text Books:

1. Nagraj, A., "Manav Vyavahar Darshan", Jeevan Vidya Prakashan, 3rd edition, 2003

#### References

- 1. Nagraj, A., "Vyavaharvadi Samajshastra", Jeevan Vidya Prakashan, 2nd edition, 2009.
- 2. Nagraj, A., "Avartanasheel Arthashastra", Jeevan Vidya Prakashan, 1st edition, 1998.
- 3. Class notes on "Human Values in Madhyasth Darshan" available on www.uhv.org.in
- 4. PPTs for "Human Values in Madhyasth Darshan" available on www.uhv.org.in
- 5. Video lectures on "Human Values in Madhyasth Darshan" on AKTU Digital Education (https://www.youtube.com/watch?v=l4x26FPFJYs&t=1558s)

Open Elective List (VIII Semester) 2021-22

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#### KOE098 HUMAN VALUES IN BAUDDHA AND JAIN DARSHAN

Catalogue Description: Bauddha and Jain Darshan form a part of the philosophy of Indian tradition. This course outlines the basic concepts and principles of these two philosophies and provides scope for further reading of the philosophies, so as to gain clarity about the human being, the existence and human participation i.e. human values expressing itself in human conduct.

It is to be kept in mind that Darshan means realization which calls for developing the capacity to see the reality in oneself directly. So, any study of Darshan shall help develop this capacity in the students through proper steps of practices and shall not just provide the information.

of i	DETAILED SYLLABUS		
Unit	Topic	Proposed Lecture	
I	Introduction to Bauddha and Jain Darshan and their Basics Need to study Bauddha and Jain Darshan; the origin of the these philosophies, their basic principles and scope for further reading.		
п	Basic Principles of Bauddha Darshan law of impermanence (changability); four noble truths; eightfold path; law of cause- action (pratitya-samutpaad) Definition of some salient words of Buddha Darshan – nirvana, dhamma, tri- ratna(Buddha, Dharma and Sangh), pragya, karma, parmi, ashta-kalap, trishna, shad-ayatan, samvedana, vipassana, anitya, maitri, brham-vihaar, tathagata, arahant.	08	
m	Purpose and Program for a Human Being based on Bauddha Darshan The purpose and program of a human being living on the basis of it, clarity and practice of human values and human conduct, the natural outcome of such a program on society, nature and tradition. Purpose-freedom from suffering, nirvana; root of suffering- vikaar – raga, dvesha and moha, Progam – various steps of meditation for attaining knowledge; shamath and vipassana; sheel- samadhi-pragya; practice of equanimity (samatva), eightfold path(Ashtang Marg); combination of understanding and practice	08	
IV	Basic Principles of Jain Darshan  Basic realities – description of nine elements in existence (jeev, ajeev, bandh, punya, paap, aashrav, samvar, nirjara, moksha), 6 dravya of lok – dharma, adhrma, akash, kaal, pudgal, jeev; tri-lakshan, various types of pragya, various stages of realisation; samyak-gyan, samyak- darshan, samyak-charitra, syadvaad, anekantavaad, naya- nishchaya and vyavahar, karma- phal siddhanta  Definition of some salient words of Jain Darshan –arhant, jin, tirthankara, panch- parameshthi, atma, pramaan, kaal, pudgal, paramanu, kashay, leshya	08	
V	Purpose and Program for a Human Being based on Jain Darshan The purpose and program of a human being living on the basis of it, clarity and practice of human values and human conduct, the natural outcome of such a program on society, nature and tradition, possibility of finding solutions to present day problems in the light of it. Purpose (goal) - moksha, Program- following mahavrat, anuvrat, 10 lakshan dharma; samyak darshan-gyan-charitra. Commonality with Bauddha Darshan	08	

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