

ડો.દર્શના ભટ્ટ
એમેન્ડ એડહોક બોર્ડ,
ગુજરાત યુનિવર્સિટી,
અમદાવાદ.

તારીખ : ૨૧.૧૨.૨૦૨૩

પ્રતિ,
એકેડેમિક વિભાગ,
ગુજરાત યુનિવર્સિટી,
અમદાવાદ.

વિષય : IKS નો અભ્યાસક્રમ Website પર અપલોડ કરવા અંગે.
સંદર્ભ : ગુરુદત્ત જખી નો તારીખ.૨૧.૧૨.૨૦૨૩ નો ઈ મેલ

શ્રીમાન,

નમસ્કાર,

ઉપરોક્ત વિષય સંદર્ભે જણાવવાનું કે IKS નો અભ્યાસક્રમ તારીખ. ૨૧.૧૨.૨૦૨૩ ના રોજ ઈ-મેલ થી મોકલેલ છે. તે રોલવાલા કોમ્પ્યુટર સેન્ટર ને વેબસાઈટ પર અપલોડ કરવા સુચના આપવા વિનંતી.

આભાર સહ,

D.K. Bhatl
પ્રો. દર્શના ભટ્ટ

Dave
ડો. ભારતી દવે

Rajput
પ્રો. રાકેશ રાવલ

Rajput
ડો. કિરણસિંહ રાજપૂત

Rajput
ડો. ગુરુદત્તા જખી

V. A.
ડો. વિરાજ અમર

Semester- II

Course on Environmental Studies

Course Code: 127 - A

For all Undergraduate Programs

(Value Added Course)

A basic knowledge of environment is today considered useful for all people. It would motivate them to understand the critical environmental concerns as well as enable them to cope with related developmental needs. The course on Environmental Studies reinforces this basic education needs for integrating ecological values of development with curricular environmental education. The present course aims at fostering environmental awareness and concern among the people in general and a better understanding of how environmental issues may be approached for initiating correctives.

Course Outcome (CO)

Students will be able to:

- Demonstrate mastery of core ecological and physical science concepts and methods as they pertain to environmental problem-solving.
- Demonstrate mastery of core social science concepts and methods as they pertain to environmental problem-solving.
- Recognize and integrate the international, cross-cultural, and transdisciplinary nature of environmental problems in analyses and solutions.
- Produce a culminating/multi-scale piece of work demonstrating the ability to synthesize concepts and methods to make a contribution to environmental solutions.
- Apply proficiency in analytical methods, critical thinking, communication, and leadership skills sufficient to make a contribution in environmental and related fields.

D.K. Bhatia

W- A









- **Prerequisite: 12th Pass**

Corequisite: Learner can join different programs on the same topic on various online Portal recognized by the UGC.

Evaluation Pattern

	Total Marks
Internal	25
External	25

Semester: 2

Course Credit: 2

Course Duration: 40 Hrs.

Unit	Topic
1	<ul style="list-style-type: none"> • Environment – An Introduction, Our Environment, Linkages in Nature, Biomes of the Worlds, Communities in Nature • Environment and Conservation Ethics - Conservation through Ages, Environmental Parameters and Tourism, Indian Philosophy and Environment
2	<ul style="list-style-type: none"> • Environmental Issues and Tourism Development – Environment and Development, Concepts and Development, Responsible Tourism- Benefits • Environment, Community and Tourism- Access, Infrastructure and Land Use- Basic Issues, Community and Regional Assets, Multiplier Effect: Benefits and Consequences.

- | | |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <ul style="list-style-type: none">• Tourism as a Tool for Conservation- Practice and Potential, Site and Locational Planning , Regional Planning , Alternatives |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Reference Books

- Environmental Science: Toward A Sustainable Future by Dorothy F. Bourse and Richard T. Wright
- Social Learning in Environmental Management: Towards a Sustainable Future by Meg Keen, Valerie A. Brown, Rob Dyball
- Principles of Environmental Science by William P. Cunningham and Mary Ann Cunningham
- Visualizing Environmental Science by Linda R. Berg, Mary Catherine Hager and David M. Hassenzahl
- Environmental Studies From Crisis to Cure by R. Rajagopalan
- Environmental Science: Systems and Solutions by Michael L. McKinney, Robert M. Schoch, Logan Yonavjack and Grant A. Mincy
- Environmental Science: A Global Concern by William P. Cunningham and Mary Ann Cunningham
- Fundamental Concepts in Environmental Studies by Dr. D.D Mishra
- Chemistry of the Environment by Thomas Spiro, Kathleen Purvis-Roberts and William M. Stigliani
- Energy and Civilization: A History by Vaclav Smil

Semester- II

Basics of Ayurveda and Nutrition

Course Code: 127 - B

For all Undergraduate Programs

(Value Added Course)

The objective of this course is to recognize nutrition and health in adopting that right amount of nutrients to be provide^d in individual life, Ayurvedic Food and Nutrition is an emerging field of healthcare and Ayurveda industry. It is a whole new area that understands the need of good food habits and imparts guidance to develop a healthy world. On completion of this course, students will be able to understand how to improve nutrition and health status of a person, learning about the dietary guidelines, diet plans, its nutritive value and effects on the body, purely in Ayurvedic way.

Pre Requisite: 12th Standard Pass

Co Requisite:

Pursuing Graduation in any field especially / B.tech/ B.Sc. in Microbiology/ Life Sciences/ Botany/ Zoology/ Food Science/ Food Technology/ BE/ B.Pharma/ MBBS/ BDS/ BHMS/ BUMS/ BAMS or any other discipline. Diploma holders are eligible for our Executive Diploma Programmes.

Course Outcome (CO)

- Learn about the human body and its functioning.
- Be aware of the contribution of ayurveda and nutrition in health life.
- Link the natural and home-made spices with physical well-being.
- Understand and know harm of eating Junk.
- Develop a positive attitude towards good food.
- Increase subject- awareness

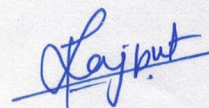
D.K. Bhatn

U - A









Evaluation Pattern

	Total Marks
Internal	25
External	25

Semester: 2

Course Credit: 2

Course Duration: 40 Hrs.

Unit	Topics
1	<ul style="list-style-type: none">• Introduction to Human Biology and Body Functions.• Nutrients (Role and Significance)• Understanding Nutrition• Managing Lifestyle Disorders Through Ahar• Concept of Immunity in Ayurveda and its Relation with Ahar
2	<ul style="list-style-type: none">• Management of Disease Through Ayurvedic Ahar• Samskars in Cooking & Utensils Used in Ayurvedic Cooking• Impact of Junk Food and its Healthy Alternatives in Ayurveda• Kitchen Spices and their Therapeutic Uses• Myths in Society and Facts in Ayurveda and Dietary Substances

Reference Books

- Frawley, David. Ayurvedic Healing. 2nd ed., Lotus Press: Twin Lakes, WI, 2000. Frawley,

- David, and Vasant Lad. The Yoga of Herbs. Lotus Press: Santa Fe, 1986.
- Lad, Vasant. Ayurveda: The Science of Self-Healing. Lotus Press: Santa Fe, 1984.
- Lad, Usha and Dr. Vasant. Ayurvedic Cooking for Self-Healing. 2nd ed. The Ayurvedic Press: Albuquerque, 1997.
- Lad, Vasant. Secrets of the Pulse. The Ayurvedic Press: Albuquerque, 1996.
- Lad, Vasant. The Textbook of Ayurveda, Volume One. The Ayurvedic Press: Albuquerque, 2002.
- Morningstar, Amadea, with Urmila Desai, The Ayurvedic Cookbook. Lotus Press: Santa Fe, 1990.
- Morrison, Judith H. The Book of Ayurveda: A Holistic Approach to Health and Longevity. New York: Simon & Schuster Inc., 1995,
- A Fireside Book. Svoboda, Robert E. Ayurveda: Life, Health and Longevity. The Ayurvedic Press: Albuquerque, 2004.
- Svoboda, Robert E. The Hidden Secret of Ayurveda. The Ayurvedic Press: Albuquerque, 1997.
- Svoboda, Robert E. Prakruti: Your Ayurvedic Constitution. Lotus Press: Twin Lakes, WI ,1998.

Semester- II

Introduction to Constitution of India

Course Code: 127-C.

For all Undergraduate Programs

(Value Added Course)

About the course


This course aims to introduce the constitutional law of India to students from all walks of life and help them understand the constitutional principles as applied and understood in everyday life. The pedagogy is precise and unique, as per week, the lessons shall be in the form of questions instead of being in pure theoretics. Accompanied with light reading and weekly exercises, the objective of making the Constitution of India, familiar to all students, and not only to law students, this course aims and objectifies legal understanding in the simplest of forms.

Learning outcomes

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

- Describe historical background of the constitution making and its importance for building a democratic India.
- Explain the functioning of three wings of the government i.e., executive, legislative and judiciary.
- Explain the value of the fundamental rights and duties for becoming good citizen of India.
- Analyse the decentralisation of power between central, state and local selfgovernment.
- Apply the knowledge in strengthening of the constitutional institutions like CAG, Election Commission and UPSC for sustaining democracy.

D.K. Bhatt
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- **Prerequisite: 12th Pass**
- **Corequisite:** Learner can join other online certificate and diploma courses for knowledge enhancement.
- **Evaluation Pattern**

	Total Marks
Internal	25
External	25

- **Semester: 2**
- Course Credit: 2
- Course Duration: 40 Hrs.

UNIT I	TOPICS
	<ul style="list-style-type: none"> • OVERVIEW AND CONTEXT • ARCHITECTURE OF THE CONSTITUTION • CENTRAL LEGISLATIVE BODY & PROCESS – THE PARLIAMENT • CENTRAL EXECUTIVE • SUPREME COURT • STATE LEGISLATURE • STATE EXECUTIVE • STATE JUDICIARY • UNION TERRITORIES AND SPECIAL PROVISIONS CONCERNING SOME STATES • LEGISLATIVE RELATIONS BETWEEN CENTER AND STATES

	<ul style="list-style-type: none"> • FINANCIAL RELATIONS BETWEEN CENTER AND STATES • ADMINISTRATIVE RELATIONS BETWEEN CENTER AND STATES
UNIT II	<ul style="list-style-type: none"> • EMERGENCY PROVISIONS • COOPERATIVE FEDERALISM • TRADE, COMMERCE AND INTERCOURSE • OFFICIAL LANGUAGES • FUNDAMENTAL RIGHTS – PART I • FUNDAMENTAL RIGHTS – PART II • FUNDAMENTAL RIGHTS – PART III • RIGHT TO CONSTITUTIONAL REMEDIES – ART. 32 • DIRECTIVE PRINCIPLES OF STATE POLICY • FUNDAMENTAL DUTIES • CONSTITUTIONAL AMENDMENTS

References:

1. Durga Das Basu, Introduction to the Constitution of India, Prentice – Hall of India Pvt.Ltd.. New Delhi
2. SubashKashyap, Indian Constitution, National Book Trust J.A. Siwach, Dynamics of Indian Government & Politics D.C. Gupta, Indian Government and Politics
3. H.M.Sreevai, Constitutional Law of India, 4th edition in 3 volumes (Universal Law Publication)

4. J.C. Johari, Indian Government and Politics Hans J. Raj Indian Government and Politics

5. M.V. Pylee, Indian Constitution Durga Das Basu, Human Rights in Constitutional Law, Prentice – Hall of India Pvt.Ltd.. New Delhi

6. Noorani, A.G., (South Asia Human Rights Documentation Centre), Challenges to Civil Right), Challenges to Civil Rights Guarantees in India, Oxford University Press 2012

Semester- II

Course on Yog Studies

Course Code: 127-D

For all Undergraduate Programs

(Value Added Course)

Objective Of the Course

Yog is a way of life that can be applied to one's own life irrespective of age, gender, occupation, society, circumstances, problems and sufferings. It can be part of any human effort-personal, educational, social, family and spiritual. Since it comes under both science and an art, there are theoretical and practical aspects of Yog which are taught in the course. The Course in Yog is built for beginners who wish to develop a career in Yog. Course has covered all pragmatic aspects of Yog.

Outcome of the Course (CO)

Learner will be able to....

- The emphasis in the course is on having the right perspective through the first-hand experience and learning the science and the practice of Yog.
- It helps the student to understand the types of Yog and imparts the practical knowledge of Yogasana, Kriyas, Bandhas, Mudras, Yogic Therapy and Pranayama.
- This course focuses on Sutra Yoga and the philosophy mentioned in those sutras. The role of Satvika Ahara is also based alongside Asanas.
- The end goal is the implementation of the philosophy of Yoga in everyday life.

Prerequisite: 12th Pass

Corequisite: Learner can join other online certificate and diploma courses for knowledge enhancement.

D.K. Bhatt

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Evaluation Pattern

Internal	Total Marks
	25
External	25

Semester: 2

Course Credit: 2

Course Duration: 40 Hrs.

Unit	Topic
1	Basic Introduction of Yog Studies Shuddhi Kriyas - Dhauti: Vaman Dhauti; Agnisaar, Neti: Jal Neti, Tratak, Kapalbhathi, Theoretical, knowledge as regards Basti & Nauli 6 Mudras, Chin / Jnana Mudra, Padma Mudra, Agochari Mudra (Nasikagra Drishthi), Shambhavi (Bruhmadhya Drishthi), Viparitarani, Mahamudra, Suryanamaskar (Traditional with 12 Poses) (Can be School- Specific) Pranayama, Sectional Breathing, Yogic Breathing, Nadishodhana, Kumbhakar without Bandhas, Suryabhedana, Ujjayi, Shitkari, Shitali, Bhramari.
2	Asanas- Three Meditative Asanas, Padmasana, Vajrasana, Svastikasana, Four Standing Asanas, Tadasana, Ekpadasana, Trikonasana, Padahastasana, Three Kneeling Asanas, Ushtrasana, Marjarasana, Shashankhasana, Six Sitting Asanas, Bhadrasana, Simhasana, Gaumukhasana, Vakrasana, Parvatasana, Paschimottanasana, Five Prone Asanas, Bhujangasana, Shalabhasana, Dhanurasana, Naukasana, Makarasana, Six Supine Asanas, Pavanmuktasana, Setubandhasana, Matsyasana, Uthitapadahastasana, Halasana, Shavasana, One Inverted Asanas, Sarvangasana, Suryanamaskar.

Reference Books

- The Yoga Sutra of Patanjali M.R.Yardi Bhandarkar Oriental Research Institute, Pune, 1979
- Outlines of Indian Philosophy Hiriyanna Motilal Banarsidass Publisher, 2014
- Indian Philosophy Dr S. Radhakrishnan Oxford University Press 1923
- Hatha Yoga Pradipika Yogi Swatmarama Yogavidya.com, 2002
- Yoga Sutras of Patanjali Sadhana Pada with Exposition of Vyasa Motilal Banarsidass, 2002
- Introduction to Indian Philosophy Dutta & Chatterji Rupa & Co, 2015
- Light of Yoga (on Yama – Niyama) B.K.S. Iyenger Thorsons, 2006
- The Yoga system of Patanjali James, Houghton, wood. Forgotten Books, 2018
- Science of Yoga I.K.Taimni Theosophical Publishing House, 2007

Semester- II

Course on Interpersonal Skills

Course Code: 127-E

For all Undergraduate Programs

(Value Added Course)

Objective of the Course

In order to have a successful professional life, you have to be able to communicate with the people you work with. You have to be able to communicate with co-workers in a way that establishes respect and influence.

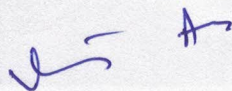
This course is designed to teach you how to communicate with the people you work with in ways that shows confidence and gives them a sense of trust. By taking this course you will learn how to assert your influence and how you can use these skills to do things like resolve issues between people at work. At every job, there is bound to be a conflict that will arise, and by taking this course you will gain the communication skills you need to resolve them. By learning the interpersonal skills that this course will equip you with, you will gain some foundational skills that will pave the way for your success. This course will provide you with the essential skills you need to be able to be able to successfully communicate and establish yourself with people in your professional life.

Outcome of the Course (CO)

Learner will be able to....

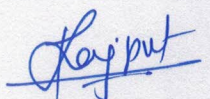
- Identify and analyze different communication styles and understand their strengths and weaknesses.
- Demonstrate active listening skills and questioning styles to explore issues and enhance understanding.
- Identify conflict response styles; approach and effectively mediate workplace conflicts.
- Determine ways to build and maintain trust and increase your influence and eminence in the workplace.

D.K. Blatter









Prerequisite: 12th Pass

Corequisite: Learner can join other online certificate and diploma courses for knowledge enhancement.

Evaluation Pattern

	Total Marks
Internal	25
External	25

Semester: 2

Course Credit: 2

Course Duration: 40 Hrs.

Unit	Topics
1	<p>➤ Effective Communication</p> <p>1. Art Of Listening</p> <ul style="list-style-type: none">• Introduction• What is listening?• Benefits of active listening• Factors that hamper listening• Common poor listening habits. <p>2. Art Of Speaking</p> <ul style="list-style-type: none">• Art of public speaking• Importance of public speaking• Public speaking tips• Over coming fear of public speaking <p>3. Art Of Writing E -mail</p> <ul style="list-style-type: none">• Introduction• The mail magic• Use appropriate salutations• Make the subject matter significant

	<ul style="list-style-type: none"> • Reread before pressing the “send” button – Be polite, and reciprocate good deeds
2	<p style="text-align: center;">c</p> <p>➤ Team building and Conflict Management</p> <ul style="list-style-type: none"> • Body Language • Body language in building interpersonal relations – Body language in building industrial relations • Interpreting body language Developing confidence with correct body language. • Skill needed for teamwork • A model of team building • Role of a team leader • Inter-group collaboration • Active listening • Problem-solving • Compromising • Avoiding

Reference

- SOFT SKILLS KNOW YOURSELF AND KNOW THE WORLD, Author : Dr. K.ALEX, Publication : S.CHAND, First Edition : 2009, Reprint : 2023
- Barnlund, Dean C. “A Transactional Model of Communication,” in Foundations of Communication Theory, eds. Kenneth K. Sereno and C. David Mortensen (New York, NY: Harper and Row, 1970), 83–92.
- Burleson, Brant R. Sandra Metts, and Michael W. Kirch, “Communication in Close Relationships,” in Close Relationships: A Sourcebook, eds. Clyde Hendrick and Susan S. Hendrick (Thousand Oaks, CA: Sage, 2000).
- Dance, F. E. X. (1972). Speech Communication; Concepts and Behavior. New York: Holt, Rinehart and Winston.
- Frank E. X. Dance and Carl E. Larson, The Functions of Human Communication: A Theoretical Approach (New York, NY: Holt, Reinhart, and Winston, 1976)

- De Salvo, V. S. (1980). A Summary of Current Research Identifying Communication Skills in Various Organizational Contexts. *Communication Education*, 29(3), 283.
- Ellis, Richard and Ann McClintock, *You Take My Meaning: Theory into Practice in Human Communication* (London: Edward Arnold, 1990).
- Robert H. Gass and John S. Seiter, *Persuasion, Social Influence and Compliance Gaining* (Boston, MA: Allyn and Bacon, 1999)
- Erving Goffman, *The Presentation of Self in Everyday Life* (New York, NY: Anchor Books, 1959)
- Greene, Kathryn, Valerian J. Derlega, and Alicia Mathews, "Self-Disclosure in Personal Relationships," in *The Cambridge Handbook of Personal Relationships*, eds. Anita L. Vangelisti and Daniel Perlman (Cambridge: Cambridge University Press, 2006).
- Hargie, Owen . *Skilled Interpersonal Interaction: Research, Theory, and Practice* (London: Routledge, 2011).
- National Association of Colleges and Employers, *Job Outlook 2011* (2010): 25.
- Schramm, Wilbur . *The Beginnings of Communication Study in America* (Thousand Oaks, CA: Sage, 1997).
- Gunter Senft, "Phatic Communion," in *Culture and Language Use*, eds. Gunter Senft, Jan-Ola Ostman, and Jef Verschueren (Amsterdam: John Benjamins Publishing Company, 2009), 226–33.
- Shannon, Claude and Warren Weaver, *The Mathematical Theory of Communication* (Urbana, IL: University of Illinois Press, 1949).
- Williams, Kipling D. and Lisa Zadro, "Ostracism: On Being Ignored, Excluded, and Rejected," in *Interpersonal Rejection*, ed. Mark R. Leary (New York, NY: Oxford University Press, 2001).
- Zabava, Wendy S. and Andrew D. Wolvin, "The Differential Impact of a Basic Communication Course on Perceived Communication Competencies in Class, Work, and Social Contexts," *Communication Education* 42 (1993)

Semester- II

Curriculum for Introduction to Indic Education System

Course Code: 127-F

For all Undergraduate Programs

(Indian Knowledge System/Value Added Course)

Objective Of the Course

The history of Indic Education is also the history of Indian civilization. Ancient education system of India was based on spirituality. सा विद्या या विमुक्तये। Education provides liberation and self-realization. The learning process of the Indian education system was helpful in manifestation of inner qualities of human beings. It enabled the individual to play a useful role in the society through required personality development and character building. It used to give a real view of life and nation to the person and enabled him to overcome the challenges of the life with positivity and continue to grow in spiritual progress. Our ancient Gurukuls were world famous for their education system. As a result of this education system of India, India was called 'Vishwa guru'.

Outcome of the Course (CO)

Learner will be able to....

- Learn about the process of ancient indic education system
- Be aware of the contribution of the indic education system in the development of various regions and civilizations.
- Link the ancient education system with the context of the present education system
- Know about prominent Indian gurus and their Gurukuls in various disciplines
- Understand and know the education system of ancient Universities and colleges.
- Develop a positive attitude towards the Indic education system
- Increase subject- awareness and self - esteem
- Develop a comprehensive understanding of how all knowledge is ultimately intertwined.

D.K. Bhatt

V. A.

Ram

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Rajput

Prerequisite: 12th Pass

Corequisite: Learner can join our other online certificate and diploma courses for knowledge enhancement.

1. Certificate Course in Indic Knowledge Tradition

Get a glimpse of Indian scientific and technological heritage, know about the totality of Indic Knowledge & Tradition

2. Diploma in Indic Manuscriptology

Get acquainted with the different types of Indian scripts, their origin, materials used for them, writing styles, etc. as well as cataloging, scribble notes and manuscript libraries, know about Indic Manuscriptology

3. Diploma in Indic Paleography

Get acquainted with the ancient scripts, their origin, style of writing, their preservation techniques and the materials used for them, know about Indic Paleography

4. Diploma in Indic Education System

Ancient learning system process - training for the fulfillment of life and character building to overcome the challenges of life with positivity. Know about Indic Education System

5. Diploma in Indic Philosophy

Develop an understanding of Indian culture and history, know and understand the mysteries of life and nature, know about Indic Philosophy

6. Certificate in Vedant

Comprehensive overview of the teachings of our Shastra along with a roadmap to live a fulfilling life and attaining the highest human goal, that is Moksha through our Online Certificate Course Vedant

Evaluation Pattern

	Total Marks
Internal	25
External	25

Semester: 2

Course Credit: 2

Course Duration: 40 Hrs.

Unit	Topic
1	<ul style="list-style-type: none">• Introduction to Indic Education System• History of Indic Education System• Indic Educational Institutions.
2	<ul style="list-style-type: none">• Management of Indic Education System• Chronology of declination of Indic Education System• Contemporary Indic Education System• Case Study

Reference Books

Text Books:

- Introduction to Indian Knowledge System- Concept and Application by B. Mahadevan, Vinayak Rajat Bhat, Nagendra Pavan R.N.
- R.M. Pujari, Pradeep Kolhe, N. R. Kumar, 'Pride of India: A Glimpse into India's Scientific Heritage', Samskrita Bharati Publication.
- 'Indian Contribution to science', compiled by Vijnana Bharati.
- 'Knowledge traditions and practices of India', Kapil Kapoor, Michel Danino, CBSE, India.

Reference Books:

- Dr. Subhash Kak , Computation in Ancient India,Mount, Meru Publishing (2016)
- Dharampal, Indian Science and Technology in the Eighteenth Century, Academy of Gandhian Studies, Hyderabad, 1971, republ. Other India Bookstore, Goa, 2000
- Robert Kanigel, The Man Who Knew Infinity: A Life of the Genius Ramanujan, Abacus,London, 1999
- Alok Kumar, Sciences of the Ancient Hindus: Unlocking Nature in the Pursuit of Salvation, CreateSpace Independent Publishing, 2014
- B.V. Subbarayappa, Science in India: A Historical Perspective, Rupa, New Delhi, 2013
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- Bibhutibhushan Datta & Avadhesh Narayan Singh, History of Hindu Mathematics, 1935,repr. Bharatiya Kala Prakashan, Delhi, 2004
- George Gheverghese Joseph, The Crest of the Peacock, Penguin Books, London & New Delhi, 2000
- J. McKim Malville & Lalit M. Gujral, Ancient Cities, Sacred Skies: Cosmic Geometries and City Planning in Ancient India, IGNC&A & Aryan Books International, New Delhi,2000).
- Clemency Montelle, Chasing Shadows: Mathematics, Astronomy and the Early History of Eclipse Reckoning, Johns Hopkins University Press, 2011
- Anisha Shekhar Mukherji, Jantar Mantar: Maharaja Sawai Jai Singh's Observatory in Delhi, AMBI Knowledge Resources, New Delhi, 2010
- Thanu Padmanabhan, (ed.), Astronomy in India: A Historical Perspective, Indian National Science Academy, New Delhi & Springer (India), 2010
- Acharya Prafulla Chandra Ray, A History of Hindu Chemistry, 1902, republ., Shaibya Prakashan Bibhag, centenary edition, Kolkata, 2002

- R. Balasubramaniam, Delhi Iron Pillar: New Insights, Indian Institute of Advance Study, Shimla & Aryan Books International, New Delhi, 2002
- R. Balasubramaniam, Marvels of Indian Iron through the Ages, Rupa & Infinity Foundation, New Delhi, 2008
- Anil Agarwal & Sunita Narain, (eds), Dying Wisdom: Rise, Fall and Potential of India's Traditional Water-Harvesting Systems, Centre for Science and Environment, New Delhi, 1997
- Fredrick W. Bunce: The Iconography of Water: Well and Tank Forms of the Indian Subcontinent, DK Print world, New Delhi, 2013.

Semester- II

Curriculum for Introduction to Indic Knowledge Tradition

Course Code: 127-9

For all Undergraduate Programs

(Indian Knowledge System/Value Added Course)

Objective Of the Course

The ancient Indic knowledge tradition has contributed in many fields like research, medicine, mathematics, science, politics and social life. For example, physician Shsutruta in his book Shsutruta Samhita described Rhinoplasty surgery in 600 BCE. Similarly, according to field medalist mathematician Manjul Bhargava, the concept of Pythagoras theorem first appears in Baudhyana's shulbh sutra around 800 BCE. The Western world is finally accepting the fact that Indian mathematicians had mastered the basic mathematical algorithms of addition, subtraction, and division at least a thousand years earlier than the Europeans. The word algorithm is associated with AI Khwaizmi, who borrowed and translated basic mathematical concepts and texts from India in his book Hisab e Hind in 9th century CE. We now also know that Calculus was spread in the West through the Kerala School of Mathematics.

Indian Knowledge traditions governed on a conceptual interdisciplinary framework, with such coordination, scholars from different fields joined together for the expansion of the subject scope. This framework has also made possible dialogue between different schools of thoughts.

This course aids to understand and analyses the totality of Indian Knowledge tradition. This course provides a basic understanding of the Indian Knowledge System and its traditions. This course will introduce to various ancient Indian thoughts and their relevance in contemporary times.

Outcome of the Course (CO)


Learner will be able to ...

- Learn about the process of ancient Indian traditions.

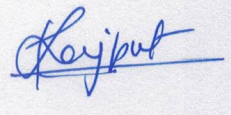
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- Understand the contribution of Indian minds in various fields.
- Link ancient wisdom in the current context
- Learn about the leading Indian inventors and thinkers in various disciplines.
- Develop a positive attitude towards Indian traditions and practices.
- Increase subject-awareness and self-esteem.
- Develop a comprehensive understanding of how all knowledge is ultimately intertwined.

Prerequisite: 12th Pass

Corequisite: Learner can join our other online certificate and diploma courses for knowledge enhancement.

1. Certificate Course in Indic Knowledge Tradition

Get a glimpse of Indian scientific and technological heritage, know about the totality of Indic Knowledge & Tradition

2. Diploma in Indic Manuscriptology

Get acquainted with the different types of Indian scripts, their origin, materials used for them, writing styles, etc. as well as cataloging, scribble notes and manuscript libraries, know about Indic Manuscriptology

3. Diploma in Indic Paleography

Get acquainted with the ancient scripts, their origin, style of writing, their preservation techniques and the materials used for them, know about Indic Paleography

4. Diploma in Indic Education System

Ancient learning system process - training for the fulfillment of life and character building to overcome the challenges of life with positivity. Know about Indic Education System

5. Diploma in Indic Philosophy

Develop an understanding of Indian culture and history, know and understand the mysteries of life and nature, know about Indic Philosophy

6. Certificate in Vedant

Comprehensive overview of the teachings of our Shastra along with a roadmap to live a fulfilling life and attaining the highest human goal, that is Moksha through our Online Certificate Course Vedant

Evaluation Pattern

Internal	Total Marks
	25
External	25

Semester: 2

Course Credit: 2

Course Duration: 40 Hrs.

Unit	Topic
1	Introduction of Indic Knowledge Traditions <ul style="list-style-type: none">• Education,• Trade and Commerce• Governance• Science and Technology• Architecture &• Literature
2	Importance of Indic Knowledge Traditions Contribution of IKS to the World <ul style="list-style-type: none">• Importance of Indic Knowledge Traditions in contemporary period• How to do research in Indic Knowledge Tradition• Methods to study relevant Books.

Reference Books

Text Books:

- Introduction to Indian Knowledge System- Concept and Application by B. Mahadevan, Vinayak Rajat Bhat, Nagendra Pavan R.N.
- R.M. Pujari, Pradeep Kolhe, N. R. Kumar, 'Pride of India: A Glimpse into India's Scientific Heritage', Samskrita Bharati Publication.
- 'Indian Contribution to science', compiled by Vijnana Bharati.
- 'Knowledge traditions and practices of India', Kapil Kapoor, Michel Danino, CBSE, India.

Reference Books:

- Dr. Subhash Kak , Computation in Ancient India, Mount, Meru Publishing (2016)
- Dharampal, Indian Science and Technology in the Eighteenth Century, Academy of Gandhian Studies, Hyderabad, 1971, republ. Other India Bookstore, Goa, 2000
- Robert Kanigel, The Man Who Knew Infinity: A Life of the Genius Ramanujan, Abacus, London, 1999
- Alok Kumar, Sciences of the Ancient Hindus: Unlocking Nature in the Pursuit of Salvation, CreateSpace Independent Publishing, 2014
- B.V. Subbarayappa, Science in India: A Historical Perspective, Rupa, New Delhi, 2013
- S. Balachandra Rao, Indian Mathematics and Astronomy: Some Landmarks, Jnana Deep Publications, Bangalore, 3rd edn, 2004
- S. Balachandra Rao, Vedic Mathematics and Science In Vedas, Navakarnataka Publications, Bengaluru, 2019
- Bibhutibhushan Datta, Ancient Hindu Geometry: The Science of the Śulba, 1932, repr. Cosmo Publications, New Delhi, 1993
- Bibhutibhushan Datta & Avadhesh Narayan Singh, History of Hindu Mathematics, 1935, repr. Bharatiya Kala Prakashan, Delhi, 2004
- George Gheverghese Joseph, The Crest of the Peacock, Penguin Books, London & New Delhi, 2000

- J. McKim Malville & Lalit M. Gujral, *Ancient Cities, Sacred Skies: Cosmic Geometries and City Planning in Ancient India*, IGNCA & Aryan Books International, New Delhi, 2000).
- Clemency Montelle, *Chasing Shadows: Mathematics, Astronomy and the Early History of Eclipse Reckoning*, Johns Hopkins University Press, 2011
- Anisha Shekhar Mukherji, *Jantar Mantar: Maharaja Sawai Jai Singh's Observatory in Delhi*, AMBI Knowledge Resources, New Delhi, 2010
- Thanu Padmanabhan, (ed.), *Astronomy in India: A Historical Perspective*, Indian National Science Academy, New Delhi & Springer (India), 2010
- Acharya Prafulla Chandra Ray, *A History of Hindu Chemistry*, 1902, republ., Shaibya Prakashan Bibhag, centenary edition, Kolkata, 2002
- R. Balasubramaniam, *Delhi Iron Pillar: New Insights*, Indian Institute of Advance Study, Shimla & Aryan Books International, New Delhi, 2002
- R. Balasubramaniam, *Marvels of Indian Iron through the Ages*, Rupa & Infinity Foundation, New Delhi, 2008
- Anil Agarwal & Sunita Narain, (eds), *Dying Wisdom: Rise, Fall and Potential of India's Traditional Water-Harvesting Systems*, Centre for Science and Environment, New Delhi, 1997
- Fredrick W. Bunce: *The Iconography of Water: Well and Tank Forms of the Indian Subcontinent*, DK Print world, New Delhi, 2013.

Semester- II

Curriculum for Vedant

Course Code: 127-H

For all Undergraduate Programs

(Indian Knowledge System/Value Added Course)

Objective Of the Course

Vedanta is one of the ancient spiritual philosophies based on the vedas. वेदान्त is a combination of two words: "वेद" which means "Knowledge" and "अंत" which means "the end of" or "the goal of." In this context the goal of knowledge is "Self-Realization". Who am I? What is my real purpose in life? How do I achieve it? How do I know what is the right thing to do? What is Dharma? What is God? What is the whole universe? Why is happiness so short - lived? Many such questions bother us. In this course not just these, but many more such fundamental questions are answered based on the Knowledge given by the vedas and as preserved by the teaching tradition.

This course is designed to enhance the understanding of Vedant. This course provides a comprehensive understanding of Vedant based on the knowledge given by the Vedas and as preserved by the teaching tradition. This course gives a comprehensive overview of the teachings of our shastra along with a roadmap to living a fulfilling life and attaining the highest human goal, that is Moksha.

Outcome of the Course (CO)

Learner will be able to ...

- Learn about the process of ancient Indian traditions.
- Understand the contribution of Indian minds in various fields.
- Link ancient wisdom in the current context
- Learn about the leading Indian inventors and thinkers in various disciplines.
- Develop a positive attitude towards Indian traditions and practices.
- Increase subject-awareness and self-esteem.
- Develop a comprehensive understanding of how all knowledge is ultimately intertwined.

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Prerequisite: 12th Pass

Corequisite: Learner can join our other online certificate and diploma courses for knowledge enhancement.

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Get a glimpse of Indian scientific and technological heritage, know about the totality of Indic Knowledge & Tradition

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Evaluation Pattern

	Total Marks
Internal	25
External	25

Semester: 2

Course Credit: 2

Course Duration: 40 Hrs.

Unit	Topics
1	<ul style="list-style-type: none">• Concept of Purushartha & Dharma• Sadhana for Moksha• Atma-Gnyaanam• The Early Vedanta of The Brahma Sutra.
2	<ul style="list-style-type: none">• Theory of Causation• Four Mahavakyas of Upanishads and its connection with Vedanta• Illusion and Its types according to Vedanta

Reference Books

Text Books:

- Introduction to Indian Knowledge System- Concept and Application by B. Mahadevan, Vinayak Rajat Bhat, Nagendra Pavan R.N.
- R.M. Pujari, Pradeep Kolhe, N. R. Kumar, 'Pride of India: A Glimpse into India's Scientific Heritage', Samskrita Bharati Publication.
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Reference Books:

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- Robert Kanigel, The Man Who Knew Infinity: A Life of the Genius Ramanujan, Abacus, London, 1999
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- S. Balachandra Rao, *Vedic Mathematics and Science In Vedas*, Navakarnataka Publications, Bengaluru, 2019
- Bibhutibhushan Datta, *Ancient Hindu Geometry: The Science of the Śulba*, 1932, repr. Cosmo Publications, New Delhi, 1993
- Bibhutibhushan Datta & Avadhesh Narayan Singh, *History of Hindu Mathematics*, 1935, repr. Bharatiya Kala Prakashan, Delhi, 2004
- George Gheverghese Joseph, *The Crest of the Peacock*, Penguin Books, London & New Delhi, 2000
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- Thanu Padmanabhan, (ed.), *Astronomy in India: A Historical Perspective*, Indian National Science Academy, New Delhi & Springer (India), 2010
- Acharya Prafulla Chandra Ray, *A History of Hindu Chemistry*, 1902, republ., Shaibya Prakashan Bibhag, centenary edition, Kolkata, 2002
- R. Balasubramaniam, *Delhi Iron Pillar: New Insights*, Indian Institute of Advance Study, Shimla & Aryan Books International, New Delhi, 2002
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- Anil Agarwal & Sunita Narain, (eds), *Dying Wisdom: Rise, Fall and Potential of India's Traditional Water-Harvesting Systems*, Centre for Science and Environment, New Delhi, 1997
- Fredrick W. Bunce: *The Iconography of Water: Well and Tank Forms of the Indian Subcontinent*, DK Print world, New Delhi, 2013.



GUJARAT UNIVERSITY

PROGRAM /COURSE STRUCTURE AND SYLLABUS
as per the Choice Based Credit System (CBCS)
designed in accordance with
Learning Outcomes - Based Curriculum Framework
(LOCF)
of National Education Policy (NEP) 2020
for Undergraduate Program in NCC
Semester - II
Course Code : VAC - NCC -127 - I.
Subject : Value Added Course (NCC)Course
Title : NCC - II

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COURSE STRUCTURE OF
U. G. Honours Programme
U. G. Honours Value Added Course Semester - II (U. G. Certificate)

Semester – II								
Sr. No	Course Category	Course Title	Course Credits			Exam Marks		
			Theory	Practical	Total	IM	EM	Total
1	Value Added Course VAC- II VAC-NCC-127	NCC-II	2	0	2	25	25	50

BA / BCOM / BSC Value Added Course Semester- II

Programme / Class: Certificate	Year : First	Semester : Second
Subject : Skill Enhancement Course (NCC)		
Course Code : VAC – NCC – 127	Course Title : NCC- II	
Course Credit : 2	Course Type : VAC- II	
Teaching Hours : 30 (Hours)	Total Marks : 50 (25+25)	
Teaching Methodology : Lecture & Demonstration		

Objectives	(1) To inculcate the concept of National Cadet Corp among the Students
	(2) Students develop an understanding of the objectives of National Cadet Corp.
Outcome	(1) Students will know the process of National Cadet Corp.
	(2) Students will know the importance of National Cadet Corp.

	Unit – I : Introduction To Map Reading,
1.1	Definition of Map
1.2	Conventional Signs, Scales and Grid System
1.3	Methods of expressing a scale, Definition of Grid and Grid lines
1.4	Cardinal points and types of the North.
	Unit – II : Civil Defense And Disaster Management
2.1	Introduction, National Disaster Management Authority (NDMA)
2.2	Types of Disasters, Classification of disasters
2.3	Role of NCC cadets in maintaining essential services during disasters
2.4	Methods of providing NCC assistance during disasters.

REFERENCES :	
1	NCC Cadet Handbook
2	Text Book:- NCC Cadet's Handbook (Specialized Subjects) SD/SW. (Year: 2019)
3	Text Book:- NCC Cadet's Handbook (Common Subjects) SD/SW. (Year: 2019)

Value Added Course

Semester -2

National Service Scheme (NSS)

Course Code: 127 - J

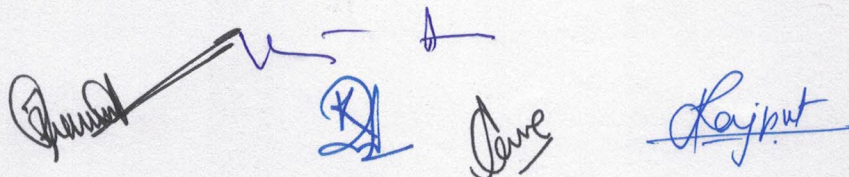
For all Undergraduate Programs

National Service Scheme (NSS) is an Indian Government sponsored public service program; conducted by the Ministry of youth affairs & sports of the govt: of India. Popularly known as NSS, the scheme was launched in Gandhi's centenary year in 1969. The motto of NSS 'Not me but you' declares the selfless characteristics of the scheme. It aims at developing amongst students a sense of participation in nation building through social work. This deepens understanding of the social environment and enriches his/her personality through actual participation in the day-to-day life of society. This experimental learning is a desirable supplement to classroom education and develops in the student a sense of responsibility, tolerance, and cooperation. National Service Scheme (NSS) plays a vital role in the development of the latent aspects of a student's personality.

Course Outcome(CO):

- Development of the personality of students through community service.
- To work with and among people.
- To enhance creative and constructive social action.
- To enhance knowledge of self and the community through a confrontation with reality.
- To enable them to understand the growing up process and awareness on youth health issues: alcoholism, smoking, substance abuse, sexually transmitted diseases, etc.
- To acquire skills in program development for future self-employment.

D.K. Bhatt-



- To gain skills in the exercise of democratic leadership and to form an idea on the dynamics of marriage and family as a social institution.
- To promote the will to serve the weaker sections of the community.

Activities can be done. (following list of activities are inclusive and not exhaustive)

- Blood Donation Camps
- Tree Plantations; Environmental Awareness Camp
- Celebration of various important National and International Days; Helping the university in organising various important functions.
- Workshops and Lectures on: Leadership, Peace building, Personality Development and Adolescent Health Issue.
- Outreach activities in the adopted localities/villages
- Active Participation in various immunisation programme/camp
- National Covid-19 campaign (prevention and awareness)
- Cycle rallies/marathon on different social issues to generate awareness.
- NSS volunteers should be part of organised camps like: Adventure Camp, 10-day Mega Camp, National Integration Camp, Pre-republic day, Republic Day Camp, Youth Festivals and Youth exchange programmes.
- Any other activities in purview of the social services can be done by the students.