



**FYUGP
VALUE ADDED COURSES
(VAC)**

FOR UNDER GRADUATE COURSES UNDER RANCHI UNIVERSITY, RANCHI



Common Syllabus for Semester-I, II & IV

Implemented from Academic Session 2025-26 Onwards



Syllabus for the Value added courses in Four-Year Undergraduate Programme (FYUGP) from Academic Session 2025-26 onwards

The Syllabus of Value Added Courses (VAC) has been approved by the NEP Implementation and Monitoring Committee of R.U., duly forwarded by the H.O.D. of concerned departments; it will be offered to the Students of FYUGP. It is implemented from the 1st Semester of the Academic Session 2025-26 and onwards.

There will be **an objective-type test** consisting of questions worth 1 mark each. Examinees are required to mark their answers on the **OMR Sheet** provided by the University.

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Students are Instructed to
Refer Syllabus of Allied/ Opted Subjects from the R.U. Website

HIGHLIGHTS OF VALUE ADDED COURSES IN FYUGP**CREDIT OF COURSES**

The term 'credit' refers to the weightage given to a course, usually in terms of the number of instructional hours per week assigned to it. The workload relating to a course is measured in terms of credit hours. It determines the number of hours of instruction required per week over the duration of a semester (minimum 15 weeks).

- a) One hour of teaching/ lecture or two hours of laboratory /practical work will be assigned per class/interaction.

One credit for Theory = 15 Hours of Teaching i.e., 15 Credit Hours

One credit for Practicum = 30 Hours of Practical work i.e., 30 Credit Hours

- b) For credit determination, instruction is divided into three major components:

Hours (L) – Classroom Hours of one-hour duration.

Tutorials (T) – Special, elaborate instructions on specific topics of one-hour duration

Practical (P) – Laboratory or field exercises in which the student has to do experiments or other practical work of two-hour duration.

Internship – Students can either complete two 4-week internships worth 2 credits each or one 8-week internship for all 4 credits. This practical experience connects academic learning with real-world applications, offering valuable exposure to professional environments in their fields of study

VALUE ADDED COURSES (VAC) Common to All UG Students (6 credits)

1. **Understanding India:** The course aims at enabling the students to acquire and demonstrate the knowledge and understanding of contemporary India with its historical perspective, the basic framework of the goals and policies of national development, and the constitutional obligations with special emphasis on constitutional values and fundamental rights and duties. The course would also focus on developing an understanding among student-teachers of the Indian knowledge systems, the Indian education system, and the roles and obligations of teachers to the nation in general and to the school/community/society. The course will attempt to deepen knowledge about and understanding of India's freedom struggle and of the values and ideals that it represented to develop an appreciation of the contributions made by people of all sections and regions of the country, and help learners understand and cherish the values enshrined in the Indian Constitution and to prepare them for their roles and responsibilities as effective citizens of a democratic society.
2. **Health & Wellness, Yoga education, Sports and fitness:** Course components relating to health and wellness seek to promote an optimal state of physical, emotional, intellectual, social, spiritual, and environmental well-being of a person. Sports and fitness activities will be organized outside the regular institutional working hours. Yoga education would focus on preparing the students physically and mentally for the integration of their physical, mental, and spiritual faculties, and equipping them with basic knowledge about one's personality, maintaining self-discipline and self-control, to learn to handle oneself well in all life situations. The focus of sports and fitness components of the courses will be on the improvement of physical fitness including the improvement of various components of physical and skills-related fitness like strength, speed, coordination, endurance, and flexibility; acquisition of sports skills including motor skills as well as basic movement skills relevant to a particular sport; improvement of tactical abilities; and improvement of mental abilities.
3. **Environment Science/education:** The course seeks to equip students with the ability to apply the acquired knowledge, skills, attitudes, and values required to take appropriate actions for mitigating the effects of

environmental degradation, climate change, and pollution, effective waste management, conservation of biological diversity, management of biological resources, forest and wildlife conservation, and sustainable development and living. The course will also deepen the knowledge and understanding of India's environment in its totality, its interactive processes, and its effects on the future quality of people's lives. Environmental science.

4. The National Education Policy (NEP) 2020 underlines the importance of making environmental education an integral part of curricula and encouraging environmental awareness and sensitivity towards its conservation and sustainable development.
5. Out of the 17 Sustainable Development Goals (SDGs), six goals are directly linked to environmental protection and resource conservation. In the National Statement at UNFCCC CoP 26 Global Leaders' Summit in Glasgow, the Hon'ble Prime Minister's mantra was Lifestyle for Environment, and he also stressed setting a target for Net Zero Carbon Emissions by 2030. On October 20th, 2022 the Prime Minister launched Mission LiFE (Lifestyle for Environment), a global movement to safeguard our environment from the impact of climate change. Environment Education, therefore, needs to include areas such as climate change, pollution, waste management, sanitation, conservation of biological diversity, management of biological resources and biodiversity, forest and wildlife conservation, and sustainable development.
6. Earlier in 2003, UGC had come out with a core module syllabus for compulsory implementation of Environmental Studies at the undergraduate level as per directives of the Hon'ble Supreme Court of India. Further, in 2015, UGC framed an 8-unit module syllabus for the Ability Enhancement Compulsory Course (AECC-Environmental Studies) under the Choice Based Credit System (CBCS).
7. In June 2023, UGC issued the "Guidelines and Curriculum Framework for Environment Education at the Undergraduate level," which is incorporated in the current source of Environment Studies.

Note:

1. **VAC-1 (2 credits):**

- a. The first Value Added course (VAC-1) will be offered in the First semester.
- b. A course related to 'Understanding India' bearing two credits will be offered in Semester-I of FYUGP.

2. **VAC-2 (2 credits):**

- a. A course related to 'Health & Wellness, Yoga education, Sports and Fitness' (VAC-2A) will be offered in the second Semester with an elective course (VAC-2B) in 'Global Citizenship & Sustainable Development'. The University may offer a greater no. of electives in this VAC-2.

3. **VAC-3 (2 credits):**

- a. The End Semester University Examination (ESUE) in the Environmental Science (EVS) will be carried at the end of Fourth semester of Second year of the four year undergraduate programme, however, Activities/classes of the course may be spread in both semesters of the academic session of second year of FYUGP, depending upon the resources and faculty available in the institution.

PATTERN OF EXAMINATION:

1. There will be **Objective type test** consisting of questions of 1 mark each.
2. There will be 50 questions asked in the Examination of 1.5 hrs. in each VAC courses.
3. Examinees are required to mark their answer on **OMR Sheet** provided by the University.

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COURSE STRUCTURE FOR FYUGP 'HONOURS/ RESEARCH/ PG DIPLOMA'

Table 1: Credit Framework for Four Year Undergraduate Programme (FYUGP) under State Universities of Jharkhand [Total Credits = 164]

Academic Level	Level of Courses	Semester	MJ; Discipline Specific Courses – Core or Major (60)	AC; Associated core courses from discipline/ Interdisciplinary/ vocational (8)		ELC; Elective courses may be opted from four paths [Follow table 4, 5 & 6] (16)	MDC; Multidisciplinary Courses (From a pool of Courses) (9)	AEC; Ability Enhancement Courses (Modern Indian Language and English) (8)	SEC; Skill Enhancement Courses (9)	VAC; Value Added Courses (6)	IKS; (i) Indian Knowledge System (2) & (ii) Social awareness (2)	RC; Research Courses (12)	AMJ; Advanced Courses instead of Research (12)	Total Credits	IAP; Internship/Apprenticeship/ Project/ Vocational course/ Dissertation (4)	
	1	2	3 (80)	4 (32)			5	6	7	8	9	10	11	12	13	
Level 4.5	Level 100-199: Foundation or Introductory courses	I	4	4	---	---	3	2	3	2	2	---	---	20	4	
		II	4	---	4	---	3	2	3	2	2	---	---	20		
	Exit Point: Undergraduate Certificate provided with Summer Internship/ Project/ Vocational course/ Dissertation (4 credits)															
Level 5	Level 200-299: Intermediate-level courses	III	4+4	---	4	3	2	3	---	---	---	---	20			
		IV	4+4+4	---	4	---	2	---	2	---	---	---	20			
	Exit Point: Undergraduate Diploma provided with Summer Internship/ Project/ Vocational course/ Dissertation (4 credits)															
Level 5.5	Level 300-399: Higher-level courses	V	4+4+4+4	---	4	---	---	---	---	---	---	---	20			
		VI	4+4+4+4	---	4	---	---	---	---	---	---	---	20			
	Exit Point: Bachelor's Degree with Summer Internship/ Project/ Vocational course/ Dissertation (4 credits)													120		+4
	Honours with Research															
Level 6	Level 400-499: Advanced courses A) Honours with Research (>7.5 CGPA)	VII	4+4+4	---	4	---	---	---	---	---	---	4	---	20	---	
		VIII	4+4	---	4	---	---	---	---	---	---	8	---	20		
	Exit Point: Bachelor's Degree with Hons. with Research													OR		
OR	Honours															
Level 6	Level 400-499: Advanced courses B) Honours (>6.0 CGPA)	VII	4+4+4	---	4	---	---	---	---	---	---	---	4	20	---	
		VIII	4+4	---	4	---	---	---	---	---	---	---	4+4	20		
	Exit Point: Bachelor's Degree with Hons.													OR		
OR	P.G. Diploma															
Level 6	Level 400-499: Advanced courses C) P.G. Diploma (>4.5 CGPA)	VII	4+4+4	---	4	---	---	---	---	---	---	---	4	20	---	
		VIII	4+4	---	4	---	---	---	---	---	---	---	4+4	20		
	Exit Point: P.G. Diploma (Level 6)													160	+4	

Note: Honours students not undertaking research will do 3 courses for 12 credits in lieu of a Research project.

Implemented from Academic Session 2025-29 & Onwards

COURSES OF STUDY FOR FOUR YEAR UNDERGRADUATE PROGRAMME **2025 onwards****Table 2: Semester-wise Course Code and Credit Points for Single Major during the First Three Years of FYUGP**

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Credits	
	Code	Papers	Paper	Semester
I	AEC-1	Language and Communication Skills (MIL-1; Modern Indian language Hindi/ English)	2	20
	VAC-1	Value Added Course-1	2	
	IKS-1	Indian Knowledge System-I	2	
	SEC-1	Skill Enhancement Course-1	3	
	MDC-1	Multi-disciplinary Course-1	3	
	AC-1	Associated core courses from discipline/ Interdisciplinary/ vocational	4	
	MJ-1	Major paper 1 (Disciplinary/ Interdisciplinary Major)	4	
II	AEC-2	Language and Communication Skills (MIL-1; Modern Indian language English/ Hindi)	2	20
	VAC-2	Value Added Course-2	2	
	IKS-2	Social Awareness Activities	2	
	SEC-2	Skill Enhancement Course-2	3	
	MDC-2	Multi-disciplinary Course-2	3	
	AC-2	Associated core courses from discipline/ Interdisciplinary/ vocational	4	
	MJ-2	Major paper 2 (Disciplinary/ Interdisciplinary Major)	4	
III	AEC-3	Language and Communication Skills (MIL-2; MIL including TRL)	2	20
	SEC-3	Skill Enhancement Course-3	3	
	MDC-3	IKS-2 as a Multi-disciplinary Course-3	3	
	ELC-1	Elective courses from discipline/ Interdisciplinary/ vocational	4	
	MJ-3	Major paper 3 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-4	Major paper 4 (Disciplinary/ Interdisciplinary Major)	4	
IV	AEC-4	Language and Communication Skills (MIL-2; MIL including TRL)	2	20
	VAC-3	Value Added Course-3	2	
	ELC-2	Elective courses from discipline/ Interdisciplinary/ vocational	4	
	MJ-5	Major paper 5 (Disciplinary/ Interdisciplinary Major having IKS-3)	4	
	MJ-6	Major paper 6 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-7	Major paper 7 (Disciplinary/ Interdisciplinary Major)	4	
V	ELC-3	Elective courses from discipline/ Interdisciplinary/ vocational	4	20
	MJ-8	Major paper 8 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-9	Major paper 9 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-10	Major paper 10 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-11	Major paper 11 (Disciplinary/ Interdisciplinary Major)	4	
VI	ELC-4	Elective courses from discipline/ Interdisciplinary/ vocational	4	20
	MJ-12	Major paper 12 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-13	Major paper 13 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-14	Major paper 14 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-15	Major paper 15 (Disciplinary/ Interdisciplinary Major)	4	
Total Credits excluding one Internship (IAP) of 4 credits =			120+4* =124	120 + 4* =124

*** Either One Internship of 4 credits or Two Internships of 2 credits each is required to complete in either of six semesters.**

Table 3A: Semester-wise Course Code and Credit Points for Single Major during the Fourth Year of FYUGP for Bachelor's Degree (Honours with Research)

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Credits	
	Code	Papers	Paper	Semester
VII A	ELC-5	Elective courses from discipline/ Interdisciplinary/ vocational	4	20
	MJ-16	Major paper 16 (Research Methodology)	4	
	MJ-17	Major paper 17 (Disciplinary/Interdisciplinary Major)	4	
	MJ-18	Major paper 18 (Disciplinary/Interdisciplinary Major)	4	
	RC-1	Research proposal – Planning & Techniques (Disciplinary/Interdisciplinary Major)	4	
VIII A	ELC-6	Elective courses from discipline/ Interdisciplinary/ vocational	4	20
	MJ-19	Major paper 19 (Disciplinary/Interdisciplinary Major)	4	
	MJ-20	Major paper 20 (Disciplinary/Interdisciplinary Major)	4	
	RC-2	Research Internship/Field Work/Project/Dissertation/Thesis	8	
Total Credits excluding one Internship of 4 credits =			160+4	160+4

Table 3B: Semester-wise Course Code and Credit Points for Single Major during the Fourth Year of FYUGP for Bachelor's Degree (Honours)

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Credits	
	Code	Papers	Paper	Semester
VII B	ELC-5	Elective courses from discipline/ Interdisciplinary/ vocational	4	20
	MJ-16	Major paper 16 (Disciplinary/Interdisciplinary Major)	4	
	MJ-17	Major paper 17 (Disciplinary/Interdisciplinary Major)	4	
	MJ-18	Major paper 18 (Disciplinary/Interdisciplinary Major)	4	
	AMJ-1	Advanced Major paper-1 (Disciplinary/Interdisciplinary Major)	4	
VIII B	ELC-6	Elective courses from discipline/ Interdisciplinary/ vocational	4	20
	MJ-19	Major paper 19 (Disciplinary/Interdisciplinary Major)	4	
	MJ-20	Major paper 20 (Disciplinary/Interdisciplinary Major)	4	
	AMJ-2	Advanced Major paper-2 (Disciplinary/Interdisciplinary Major)	4	
	AMJ-3	Advanced Major paper-3 (Disciplinary/Interdisciplinary Major)	4	
Total Credits excluding one Internship of 4 credits =			160+4	160+4

Table 3C: Semester-wise Course Code and Credit Points for Single Major during the Fourth Year of FYUGP for Bachelor's Degree (Postgraduate Diploma)

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Credits	
	Code	Papers	Paper	Semester
VII C	ELC-5	Elective courses from discipline/ Interdisciplinary/ vocational	4	20
	MJ-16	Major paper 16 (Disciplinary/Interdisciplinary Major)	4	
	MJ-17	Major paper 17 (Disciplinary/Interdisciplinary Major)	4	
	MJ-18	Major paper 18 (Disciplinary/Interdisciplinary Major)	4	
	JOC-1	Skill based Job Oriented paper (Disciplinary/Interdisciplinary Major)	4	
VIII C	ELC-6	Elective courses from discipline/ Interdisciplinary/ vocational	4	20
	MJ-19	Major paper 19 (Disciplinary/Interdisciplinary Major)	4	
	MJ-20	Major paper 20 (Disciplinary/Interdisciplinary Major)	4	
	JOC-2	Skill based Job Oriented paper (Disciplinary/Interdisciplinary Major)	4	
	JOC-3	Skill based Job Oriented paper (Disciplinary/Interdisciplinary Major)	4	
Total Credits excluding one Internship of 4 credits =			160+4	160+4

Note: Abbreviations used in Tables-2 - 3:

AEC	Ability Enhancement Courses
SEC	Skill Enhancement Courses
IAP	Internship/Apprenticeship/ Project
IKS	Indian Knowledge System
MDC	Multidisciplinary Courses
ELC	Elective Courses
MJ	Major Disciplinary/Interdisciplinary Courses
AC	Associated core courses from discipline/ Interdisciplinary/ vocational
MN	Minor Disciplinary/Interdisciplinary/vocational Courses
AMJ	Advanced Major Disciplinary/Interdisciplinary Courses
RC	Research Courses
JOC	Skill based Job Oriented course

SEMESTER - I

VALUE ADDED COURSE-1 (VAC-1):

(Credits: Theory-02)

Marks: 50 (ESE: 1.5 Hrs) = 50

Pass Marks: Th (ESE) = 20

Instruction to Question Setter for

End Semester University Examination (ESE 50 marks):

1. There will be **Objective type test** consisting of questions of 1 mark each.
2. There will be 50 questions in the first paper of 2 credits in Semester-I.
3. The End Semester University Examination (ESUE) of 50 marks in Semester-I (VAC-1) will be of 1.5 Hrs.
4. Examinees are required to mark their answer on **OMR Sheet** provided by the University.

UNDERSTANDING INDIA

(Credits: Theory-02)

Course Learning Outcomes:

This course is designed:

1. to enable the students to acquire and demonstrate the knowledge and understanding of contemporary India with its historical perspective
2. to demonstrate the basic framework of the goals and policies of national development
3. to demonstrate the constitutional obligations with special emphasis on constitutional values and fundamental rights and duties.
4. to develop the understanding of Indian knowledge systems, Indian education system and the roles and obligations of teachers to the nation in general and to the society.
5. to deepen knowledge about and understanding of India's freedom struggle and of the values and ideals that it represented.
6. to prepare the learners for their roles and responsibilities as effective citizens of a democratic society.
7. A unit in the context of Jharkhand.

Course Content:

Theory: 30 Periods of 01 Hr. each

UNIT I: Introducing India

(8 Lectures)

1. **The Land of India:** Geographical Setting; Physical and Natural Environment
2. **The People of India:** The migration of people into India, such as Indo-Aryans speaking people, the Persians, the Greeks, the Kushanas, the Shakas, the Arabs, the Turks, the Mughals, etc., and their contribution to the making of Indian History and Culture
3. **The Name of our Country:** Jambudvipa, Bharat, Sindhu (Indus), Inde, Hind, Hindustan, India.
4. **Historical Background of India:** Historical Background of India through the ages: Culture, Literature, Science and Technology in pre-modern days.

UNIT II: The Knowledge System of India

(5 Lectures)

1. Traditional Knowledge System: *Gurukuls, Pathshalas, Tols, Maktabas, Madarsas*
2. Beginnings of Modern Education: The British Government's Educational Policies
3. Expansion of Higher and Technical Education in India
4. Role and obligations of Teachers in National Development.
5. Education Policy of government. 1986 and 2020.

UNIT III: The Indian Economy

(7 Lectures)

1. **Goals and Policies:** Post Independent Goals and Policies of National Development.
2. Features of National Dev.
 - a. Social Justice and Economic Equality.
 - b. Goals and Policies and National Development during 21st Century.

3. Indian Economy through the Ages (Agriculture, Industry and Trade)
4. Directive Principles and Fundamental Rights and Duties.

UNIT IV: The Making of Contemporary India**(10 Lectures)**

1. National Movements, Social and religious aspects (1750-1950)
2. The Struggle for Independence (1885-1947)
3. The Making of the Indian Constitution; Concept of Fundamental Rights and Duties
4. India's Foreign Policy: Main Elements (Non Alignment, Panchsheel)
5. Secular- Constitutional role of a citizen in Democratic India.
6. Formation of Jharkhand: Challenges
7. Panchayati Raj in India with special reference to PESA in Jharkhand

Reference Books:

1. A.L. Basham, *A Cultural History of India*, Oxford University Press, 1997
 2. A.L. Basham, *A Wonder that was India*, Rupa, New Delhi, 1994
 3. N. R. Ray, *An Approach to Indian Art*, Publication Bureau, Chandigarh, 1974
 4. S Abid Hussain: *The National Culture of India*
 5. Jawaharlal Nehru: *Discovery of India*, Delhi
 6. Namavar Singh: *Dusari Parampara ki khoj*, Rajkamal, Delhi
 7. Kanjiv Lochan: *Medicines of Early India*, Delhi
 8. Hitendra Patel: *Adhunik Bharat ka Aitihasik Yatharth*, Rajkamal, Delhi
 9. Nayanjot Lahiri, *Marshaling the Past: Ancient India and its Modern Histories*, Permanent Black, 2012
 10. R.C. Majumdar (ed.), *History and Culture of Indian People* (Relevant Volumes and Chapters),
 11. Bhartiya Vidya Bhawan, Bombay.
 12. S. C. Ghosh, *History of Education in Modern India, 1758-1986*, Orient Longman, Hyderabad, 1995
 13. Tirthankar Ray, *The Economic History of India 1857-1947*, OUP, 2006
 14. Vijay Joshi and I.M.D. Little, *India's Economic Reforms, 1991-2001*, OUP, 1996
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SEMESTER - II

VALUE ADDED COURSE-2A (VAC-2A):

(Credits: Theory-02)

Marks: 50 (ESE: 3 Hrs) = 50

Pass Marks: Th (ESE) = 20

Instruction to Question Setter for

End Semester University Examination (ESE 50 marks):

1. There will be **Objective type test** consisting of questions of 1 mark each.
2. There will be 50 questions in the first paper of 2 credits in Semester-2.
3. The End Semester University Examination (ESUE) of 50 marks in Semester-II (VAC-2) will be of 3 Hrs.
4. Examinees are required to mark their answer on **OMR Sheet** provided by the University.

HEALTH & WELLNESS, YOGA EDUCATION, SPORTS AND FITNESS

Course Learning Outcomes:

(Credits: 02 Credits)

This course is designed:

1. To promote an optimal state of physical, emotional, intellectual, social spiritual and environmental wellbeing of a person.
2. To organise sports and fitness activities outside the regular institutional working hours.
3. Yoga education focusing on preparing the students physically and mentally for the integration of their physical, mental, and spiritual faculties, to maintain self-discipline, self-control,
4. To learn to handle oneself well in all life situations.
5. The focus of sports and fitness components of the courses will be on the improvement of physical fitness including the improvement of various components of physical and skills related fitness like strength, speed, coordination, endurance and flexibility;
6. Acquisition of sports skills relevant to a particular sport; improvement of tactical abilities; and improvement of mental abilities.

Course Content:

PART 'A': YOGA (योग परिचय)

Theory: 07 Periods of 01 Hr. each

ईकाई 1 :- योग की परिभाषा, योग की व्याख्या, योग का महत्व, योगी का व्यक्तित्व एवं वेशभूषा**ईकाई 2** :- योग के प्रकार, ज्ञानयोग, कर्मयोग, भक्तियोग, षट्कर्म परिचय ।**ईकाई 3** :- आसन की परिभाषा, प्रकार, आसन के शारीरिक एवं मानसिक लाभ ।**ईकाई 4** :- प्राणायाम की परिभाषा, प्रकार, प्राणायाम के शारीरिक एवं मानसिक लाभ, ध्यान का परिचय ।

YOGA PRACTICAL (योग प्रायोगिक अभ्यास)

Practical: 08 Periods of 02 Hrs. each

आसन

1. पवनमुक्तासन

क) गठिया निरोधक अभ्यास :- पैरों की अंगुलियों और टखने के अभ्यास घुटने एवं मेरुदण्ड के अभ्यास,

अर्ध व पूर्ण तितली, कौआ चाल, हाथों की अंगुलियाँ, कलाई केहुनियों, गर्दन व कंधों के अभ्यास ।

ख) वायु (बात) निरोधक अभ्यास :- पैर घुमाना, साइकिल चालन, नौकासन ।

ग) शक्तिबन्ध के आसन :- नौका-संचालन, चक्की चालन, रस्सी खींचना, लकड़ी काटना, उदराकर्षणासन ।

घ) शिथिलीकरण के आसन :- शवासन, मकरासन, मत्स्य-क्रीड़ासन ।

2. वज्रासन समूह के अभ्यास :- वज्रासन, सिंहासन, भद्रासन, उष्ट्रसन, सुप्त वज्रासन, शशांकासन ।

3. खड़े होकर किये जाने वाले आसन – हस्त उत्तासन, पादहस्तासन, कटि चक्रासन, ताडासन, त्रियंक ताडासन, त्रिकोणासन ।

Implemented from Academic Session 2025-29 & Onwards

4. संतुलन के आसन :- वृक्षासन, बकासन, गरुड़ासन, नटराज आसन ।
5. आगे की ओर झुकने के आसन :- पश्चिमोत्तनासन, जानु शिरासन ।
6. पीछे की ओर झुकने के आसन :- भुजंगासन, शलभासन, धनुरासन, गोमुखासन, चक्रासन ।
7. सूर्य नमस्कार ।
8. प्राणायाम :- कपालभाति भस्त्रिका भ्रामरी अनुलोम-विलोम, नाडीशोधन प्राणायाम ।
9. मुद्रा :- ज्ञान मुद्रा, चिन्ह मुद्रा ।
10. षट्कर्म :- कुंजन, जल नेति ।
11. ध्यान :- अजपा-जप ।

PART 'B': SPORTS AND FITNESS**Theory: 07 Periods of 01 Hr. each****UNIT -I: Introduction to Health and Wellness**

1. Meaning and definition of Health and Health education.
2. Objectives and Importance of Health education.
3. Stretching exercises
4. Warming up and Limbering down
 - a) General warm up exercises
 - b) Specific warm up exercises

UNIT-II: Health and Wellness through Physical Exercise

1. Components of Physical Fitness and Wellness
2. Means of fitness development
3. Advantages of wellness
4. Rules & Regulations of the games:
 - a) Football,
 - b) Volleyball,
 - c) Basketball,
 - d) Badminton,
 - e) Table Tennis (T.T.),
 - f) Hockey,
 - g) Archery

SPORTS PRACTICAL**Practical: 08 Periods of 02 Hrs. each**

1. Exercises for Health and Wellness
 - a) Warming up
 - b) Stretching Exercises
 - c) Strengthening Exercises
 - d) Cardiovascular Exercises
 - e) Flexibility and Agility Exercises
 - f) Relaxation Techniques
 2. Basic Techniques and Tactics of any of the following games:
(Football, Volleyball, Basketball, Badminton, T.T, Hockey, Archery).
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OR

VALUE ADDED COURSE-2B (VAC-2B):

(Credits: Theory-04)

Marks: 50 + 50 (ESE: 3 Hrs) = 100**Pass Marks: Th (ESE) = 40*****Instruction to Question Setter for******End Semester University Examination (ESE 100 marks):***

1. There will be **Objective type test** consisting of questions of 1 mark each.
2. There will be 100 questions in the first paper of 4 credits in Semester-I.
3. The End Semester University Examination (ESUE) of 100 marks in Semester-I (VAC-1) will be of 3 Hrs.
4. Examinees are required to mark their answer on **OMR Sheet** provided by the University.

GLOBAL CITIZENSHIP & SUSTAINABLE DEVELOPMENT**Introduction:**

The NEP, 2020 notes that “as the world is becoming increasingly interconnected, Global Citizenship Education (GCED), a response to contemporary global challenges, will be provided to empower learners to become aware of and understand global issues and to become active promoters of more peaceful, tolerant, inclusive, secure, and sustainable societies”. The NEP 2020 highlights certain aspects which have a direct linkage with citizenship education.

Globally, the programmes relating to the Global Citizenship Education is guided by the SDG4 – Education 2030 agenda, especially Target 4.7 of the Sustainable Development Goal 4 (SDG 4) on Education, which calls on countries to “ensure that all learners are provided with the knowledge and skills to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development”.

Therefore, the course ‘Global Citizenship & Sustainable Development will provide conceptual clarity, infused with Indian values.

Course Objectives:

(Credits: Theory-02)

This course is designed to achieve the following objectives:

1. To understand the concept and structure of global governance
2. To empower learners to become aware of and understand global and sustainable development issues.
3. To become active promoters of more peaceful, tolerant, inclusive, secure, and sustainable societies.
4. Enabling students to embrace and practice constitutional, humanistic, ethical, and moral values in conducting one's life, including universal human values and citizenship values.
5. To practice responsible global citizenship required for responding to contemporary global challenges
6. To enable the students in recognizing environmental and sustainability issues, climate change impacts and to participate in actions to promote sustainable development.
7. To instill integrity in students and enable them to identify gender issues, human rights issues, ethical issues, related to work and follow just and ethical practices both at home and workplace.
8. To situate the role and scope of our country as Global leader.

Course Content:**Theory: 30 Periods of 1 Hr each****UNIT I:****6 Periods**

1. The concept of Citizenship and Citizenship Education
2. The Concept of Global Citizenship and Global Citizenship Education (GCED)
3. Aims of Global Citizenship Education
4. Global governance – concept and structure
5. Cultural diversity and tolerance

UNIT II:**8 Periods**

1. Inequality and Global Citizenship
2. Social Justice
3. Gender Equality
4. Multi culturalism

UNIT III:**6 Periods**

1. Human Right Education
2. Peace and non-violence
3. Global Economy

UNIT IV:**4 Periods**

1. Combating climate change
2. Environmental sustainability

UNIT V:**6 Periods**

1. Global Citizenship and leaders
2. G-20 and India's role in it
3. Global Citizenship and Indian Ethos

Reference Books:

1. Peter N. Stearn- Education Global Citizens in College and University; Routledge Publication
 2. Adeel Jalil, A.K. Kari, Kathrine Meleg- Global Citizenship Education, A Critical and International Perspectives Springer
 3. Eva, Aboagye & S. Nomburo Dlamini, global Citizenship Education: Challenges and Successes.
 4. William Gaudelli, global Citizenship Education.
 5. A text book of Environmental Studies- E. Bharucha (English/ Hindi)
 6. Fundamental Concepts in Environmental sciences DD Mishra- Sultan Chand publication
 7. A textbook of environmental studies; C. Rajgopalan
 8. A text book of environmental studies: SVS Rana
 9. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.
 10. Gadgil, M., & Guha, R. 1993. This Fissured Land: An Ecological History of India. Univ. Of California Press.
 11. Odum, E.P., Odum, H.T. & Andrews, J. 1971. Fundamentals of Ecology. Philadelphia
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SEMESTER - IV

VALUE ADDED COURSE-3 (VAC-3):

(Credits: Theory-02)

Theory: 30 Lectures**Marks: 50 (ESE: 1.5 Hrs) = 50****Pass Marks: Th (ESE) = 20*****Instruction to Question Setter for******End Semester University Examination (ESE 50 marks):***

1. There will be **Objective type test** consisting of questions of 1 mark each.
2. There will be 50 questions in the paper of 2 credits in Semester-IV.
3. The End Semester University Examination (ESUE) of 50 marks in Semester-IV (VAC-2) will be of 1.5 Hrs.
4. Examinees are required to mark their answer on **OMR Sheet** provided by the University.

ENVIRONMENTAL STUDIES**Course Learning Outcomes:****After completing this unit, students will be able to:**

1. Appreciate the historical context of human interactions with the environment.
2. Gain insights into the international efforts to safeguard the Earth's environment and resources
3. Understand the concept of natural resources; and their conservation and management.
4. Develop a critical understanding of ecosystems, biodiversity
5. Develop an understanding of pollution and its types and Sensitize themselves to adverse health impacts of pollution.
6. Gain a comprehensive knowledge of climate change, its science and response measures and have an overview of national and global efforts to address climate change adaptation and mitigation.
7. Develop a critical understanding of the complexity of environmental management.
8. Learn about how the nations of the world work together for the environment by understanding about the major international treaties and our country's stand on and responses to the major international agreements.

Course Content:**UNIT I: Humans and the Environment****(2 lectures)**

1. The man-environment interaction; Humans as hunter-gatherers; Mastery of fire; Great ancient civilizations and the environment.
2. UN Conference on Human Environment 1972; Environmental Ethics and emergence of environmentalism; World Commission on Environment and Development and the concept of sustainability; Indic Knowledge and Culture of sustainability.

UNIT II: Ecosystem**(4 lectures)**

1. Concepts of ecosystem; Structure and function of ecosystem; Food chains, Food webs, Energy flow in an ecosystem.
2. Indicator species, keystone species and their role in ecosystem.
3. Major ecosystem types in India and their basic characteristics;
 - a. Forest ecosystem
 - b. Grassland ecosystem
 - c. Desert ecosystem
 - d. Aquatic ecosystems (Fresh water & marine water ecosystem) Importance of Wetland, Mangroves, Coral reef.

UNIT III: Natural Resources and Sustainable Development**(4 lectures)**

1. Overview of natural resources: renewable and non-renewable.
2. Water resources; Water scarcity and stress; issues and challenges; Conflicts over water. Water conservation methods; Rain water harvesting, check dams and other traditional methods.

3. Mineral resources; important minerals of Jharkhand; Environmental problems due to extraction of minerals.
4. Soil as a resource and its degradation; Soil erosion, effects of soil erosion, remedial measures of soil erosion. Desertification; effects of desertification, remedial measures of Desertification.
5. Forest Resources: Importance, deforestation, Afforestation
6. Energy resources: Conventional energy sources- coal, oil, natural gas, nuclear energy; Non- conventional energy sources- solar, wind, tidal, hydro, wave, ocean thermal, geothermal, biomass, hydrogen and fuel cells.
7. Introduction to sustainable development: Sustainable Development Goals (SDGs) - targets and indicators, challenges and strategies for SDGs.

UNIT IV: Biodiversity and its conservation**(5 lectures)**

1. Biodiversity and its distribution: Biodiversity as a natural resource; Levels and types of biodiversity; genetic, species and ecosystem diversity.
2. Hot spots of biodiversity; biodiversity hot spots of world; Biodiversity hot spots of India; endemic species; microbes and biodiversity.
3. Threats to biodiversity; Habitat loss, poaching of wildlife, man-wildlife conflicts, Invasive species.
4. Conservation of biodiversity; In-situ and Ex-situ conservation approaches; Project Tiger; Cheetah reintroduction and translocation program; Major protected areas of Jharkhand. Role of traditional knowledge, Gender and conservation.
5. IUCN and its role in biodiversity conservation, endangered species of India.
6. Ecosystem and Biodiversity services: Aesthetic, Ethical, Economic, Informational, social value.

UNIT V: Environmental Pollution and Health**(5 lectures)**

1. Definition of pollution; Point sources and non-point sources of pollution; Structure of atmosphere.
2. Types of Pollution; Air pollution; Sources of air pollution; Primary and secondary pollutants; Criteria pollutants- carbon monoxide, lead, nitrogen oxides, ground-level ozone, particulate matter and sulphur dioxide.
3. National Ambient Air Quality Standards.; Indoor air pollution; Adverse health impacts of air pollutants
4. Elementary idea about Ozone layer, Ozone layer depletion and its harmful effects
5. Water pollution: Sources of water pollution; marine pollution, Water quality parameters and standards; adverse health impacts of water pollution on human and aquatic life. Plastic pollution, Biomagnifications, Eutrophication.
6. Noise pollution: Definition of noise; Unit of measurement of noise pollution; Sources of noise pollution; Noise standards; adverse impacts of noise on human health.
7. Thermal and Radioactive pollution and impact on human health.

UNIT VI: Climate Change: Impacts, Adaptation and Mitigation**(5 lectures)**

1. Understanding global warming and climate change: Natural variations in climate; Anthropogenic climate change from greenhouse gas emissions– past, present and future; Projections of global climate change with special reference to temperature, rainfall, climate variability and extreme events; Importance of 1.5 °C and 2.0 °C limits to global warming.
2. Climate change projections for the Indian sub-continent. Impacts, vulnerability and adaptation to climate change.
3. Adaptation vs. resilience; Climate-resilient development; Indigenous knowledge for adaptation to climate change.
4. Mitigation of climate change: Synergies between adaptation and mitigation measures; Green House Gas (GHG) reduction vs. sink enhancement; Concept of carbon intensity and carbon neutrality; National and international policy instruments for mitigation, decarbonizing pathways and net zero targets for the future; Carbon capture and storage.
5. National climate action plan and Intended Nationally Determined Contributions (INDCs); Mission LiFE, Climate justice.

UNIT VII: Environmental Management**(2 lectures)**

1. Introduction to environmental laws and regulation: Constitutional provisions- Article 48A, Article 51A (g) and other derived environmental rights.
2. Environmental management system: ISO 14001 (elementary).
3. Waste Management- Concept of 3R (Reduce, Recycle and Reuse), Ecolabeling/Ecomark scheme.

UNIT VIII: Environmental Treaties and Legislation**(3 lectures)**

1. An overview of major International Environmental Agreements and India's status as a party
2. Kyoto Protocol; Paris Agreement; Intergovernmental Panel on Climate Change (IPCC), ISA-International Solar Alliance.
3. Convention on Biological Diversity (CBD); Nagoya Protocol on Access and Benefit-sharing.
4. United Nations Convention to Combat Desertification (UNCCD).
5. Montreal Protocol on Substances that Deplete the Ozone Layer and the Kigali Amendment; Status phase-out of production and consumption of Ozone Depleting Substances by India.
6. Major Indian Environmental Legislations; The Wild Life (Protection) Act, 1972; The Environment (Protection) Act, 1986; The Biological Diversity Act, 2002; The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.
7. The Pollution Control Act, 1989 and updates.
8. National Green Tribunal; Some landmark Supreme Court judgments.

SELF-LEARNING MODULE**Case Studies and Field Work:**

1. The students are expected to be engaged in some of the following or similar identified activities:
2. In each unit as prescribed, wherever possible, references and examples from the State Jharkhand should be considered
3. Discussion of FLAGSHIP programs of Indian government
4. Discussion on one national and one international case study related to the environment and sustainable development.
5. Field visits to identify local/regional environmental issues, make observations including data collection and prepare a brief report.
6. Participation in plantation drive and nature camps.
7. Documentation of campus biodiversity.
8. Campus environmental management activities such as solid waste disposal, water
9. Management and sanitation, and sewage treatment.

Suggested Readings:

1. A text book of Environmental Studies- E. Bharucha (English/ Hindi)
 2. Fundamental Concepts in Environmental sciences DD Mishra- Sultan Chand publication
 3. Fundamental of ecology; by MC Dash
 4. A textbook of environmental studies; C. Rajgopalan
 5. Comprehensive environmental studies- Laxmi publication
 6. Environmental studies: Asthann
 7. A text book of environmental studies: SVS Rana
 8. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt. 2. Gadgil, M., & Guha, R. 1993. This Fissured Land: An Ecological History of India. Univ. Of California Press.
 9. Odum, E.P., Odum, H.T. & Andrews, J. 1971. Fundamentals of Ecology. Philadelphia
 10. Sengupta, R. 2003. Ecology and economics: An approach to sustainable development. OUP
 11. Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi
 12. World Commission on Environment and Development. 1987. Our Common Future. Oxford University Press.
 13. Thapar, V. 1998. Land of the Tiger: A Natural History of the Indian Subcontinent
 14. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. Environmental and Pollution Science. Academic Press
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