



પરિપત્ર:

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટીની સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજોનાં આચાર્યશ્રીઓને સવિનય જણાવવાનું કે સાયન્સ વિદ્યાશાખા હેઠળનો NEP-૨૦૨૦ અંતર્ગતનો એબીલીટી એનહાંસમેન્ટ કોર્સનો સેમેસ્ટર-૧ નો અભ્યાસક્રમ આ સાથે સામેલ છે. આ બાસ્કેટમાં ચાર વિષયો (અંગ્રેજી, ગુજરાતી, હિન્દી, સંસ્કૃત) આપવામાં આવેલ છે. તેમાંથી કોઈ પણ એક ભાષા સાયન્સ વિદ્યાશાખાનાં વિદ્યાર્થીઓએ પસંદ કરવાની રહેશે.

માનનીય કુલપતિશ્રીની મંજૂરી અનુસાર સદર અભ્યાસક્રમ શૈક્ષણિક વર્ષ જુન, ૨૦૨૩થી અમલવારી કરવાની રહે છે. સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજો ધ્વારા તેની અમલવારી કરવા જણાવવામાં આવે છે.



કા.કુલસચિવશ્રી

ક્રમાંક/બીકેએનએમયુ/એકેડેમિક/૧૪૭૧/૨૦૨૩-૨૦૨૪

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી,  
સરકારી પોલીટેકનિક કેમ્પસ,  
ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી રોડ,  
ખડીયા, જૂનાગઢ-૩૬૨૨૬૩  
તા.૨૦/૦૭/૨૦૨૩

પ્રતિ,

- ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી સંલગ્ન સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમો ચલાવતી તમામ કોલેજોના આચાર્યશ્રીઓ તરફ....

નકલ સાદર રવાના:-

- (૧) માન.કુલપતિશ્રી/કુલસચિવશ્રીનાં અંગત સચિવશ્રી.
- (૨) પરીક્ષા નિયામકશ્રી, ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ

નકલ રવાના જાણ તથા યોગ્ય કાર્યવાહી અર્થે:

- (૧) સીસ્ટમ મેનેજરશ્રી, આઈ.ટી.સેલ વિભાગ (વેબસાઇટ ઉપર પ્રસિદ્ધ થવા અર્થે.)



# **BHAKTA KAVI NARSINH MEHTA UNIVERSITY JUNAGADH**



**BOARD OF STUDIES IN ENGLISH**  
**CURRICULUM OF ENGLISH**  
**FOR SCIENCE FACULTY**  
**(SEMESTER-I)**  
**UNDER**  
**ABILITY ENHANCEMENT COURSE (AEC)**  
**EFFECTIVE FROM JUNE 2023-2024**

**BHAKTA KAVI NARSINH MEHTA UNIVERSITY**  
**Ability Enhancement Course (AEC)**  
**Syllabus of English subject for Faculty of Science as per NEP**  
**Effective from June 2023**  
**Subject: English for Science Faculty**  
**SEMESTER-1**

|                       |                                    |                           |           |
|-----------------------|------------------------------------|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                                | <b>Course Code</b>        |           |
| <b>Programme</b>      | Science Faculty                    | <b>Internal Marks</b>     | 15        |
| <b>Semester</b>       | 1                                  | <b>External Marks</b>     | 35        |
| <b>Course Type</b>    | Ability Enhancement Course (AEC)-1 | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | English Language-1                 | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                                 | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                             | <b>Exam Duration</b>      | 1:30 Hrs. |

**Course Objectives:**

1. To make students able to comprehend literary texts for developing their critical thinking and ethics.
2. To develop basic proficiency in English language for communication
3. To motivate students in enhancing their writing skills
4. To explain essentials of grammar for strengthening students' language

**Course Learning Outcomes:** After completion of the course:

1. Student will improve linguistic competency and ethical values by comprehending literary texts
2. Student will learn the importance of writing in English in present era.
3. Student will express in English confidently.
4. Student will understand the essentials of grammar to attain linguistic perfection through practice professional write-ups.

## Table of Contents

**Prescribed Text:** *Confluence* by K.N.Shoba published by Cambridge University Press, New Delhi

| Sem | Unit No. | Syllabi                                                                                                                                                                                                                                                                                                                                                                                             |
|-----|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 1        | <b>Prose</b> <ul style="list-style-type: none"> <li>Ethics: Humanities Vs Sciences by S.Radhakrishnan (Chpt..1.1)</li> <li>Learning: Wings of Fire (Extract) by A.P.J.Abdul Kalam (Chpt. 1.2)</li> </ul> <b>Short Stories</b> <ul style="list-style-type: none"> <li>Attitude: Witches' Loaves by O.Henry (Chpt.3.1)</li> <li>Fantasy: The Country of the Blind by H.G.Wells (Chpt. 3.2)</li> </ul> |
|     | 2        | <b>Grammar:</b> <ul style="list-style-type: none"> <li>Tenses (Chpt.1.1)</li> <li>Coordinating Conjunctions: for, and, nor, but, or, yet, and so. (Chpt. 1.2)</li> </ul> <b>Writing:</b> <ul style="list-style-type: none"> <li>Developing a creative paragraph. (Chpt. 3.2)</li> </ul>                                                                                                             |

### Suggested Reading:

1. Business Communication by Urmila Rai and S.M. Rai. Himalaya Publishing House
2. Effective Technical Communication by M Ashraf Rizvi. Tata Mc Graw hill
3. Spoken English: A Foundation Course by Kamlesh Sadanand and Susheela Punitha (Part I and Part II)
4. Intermediate English Grammar: Reference and Practice for South Asian Students by Raymond Murphy. Cambridge University Press
5. Malgudi Days by R.K. Narayan. Indian Thought Publications
6. The Best of Ruskin Bond published by Penguin Books
7. The Collect Short Stories of Khushwant Singh published by Ravi Dayal Publisher
8. W. Somerset Maugham The Complete Short Stories Vol-I published by Heinemann : London

| <b>INTERNAL EVALUATION SCHEME</b> |                    |              |
|-----------------------------------|--------------------|--------------|
| <b>NO</b>                         | <b>Particulars</b> | <b>Marks</b> |
| 1                                 | Mid Semester Exam  | 05           |
| 2                                 | MCQ Test           | 05           |
| 3                                 | Assignments        | 05           |
|                                   | <b>Total</b>       | <b>15</b>    |

## Paper Style

| <b>Ques. No.</b> | <b>Particulars</b>                                                                                                                                                                                 | <b>Marks</b>               |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>Q.1</b>       | <b>(A) Answer the following questions (2/4)</b><br><b>(B) Short Questions/MCQs (One liner) (6/8)</b><br>(Question from Unit-1)                                                                     | <b>(08)</b><br><b>(06)</b> |
| <b>Q.2</b>       | <b>(A) Fill the blanks with appropriate form of the verb. (7/9)</b><br><b>(B) Combine the sentences using appropriate conjunction given in the bracket/Blanks. (7/9)</b><br>(Question from Unit-2) | <b>(07)</b><br><b>(07)</b> |
| <b>Q.3</b>       | <b>(A) Write Short Notes (1/2)</b><br><b>(B) Develop a creative and meaningful paragraph from the below given points. (1/1)</b><br>(One from Unit-1 and One from Unit-2)                           | <b>(04)</b><br><b>(03)</b> |
|                  | Marks                                                                                                                                                                                              | <b>35</b>                  |

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**BHAKTA KAVI NARSINH MEHTA UNIVERSITY**  
**Ability Enhancement Course (AEC)**  
**Syllabus of Gujarati for Faculty of Science as per NEP**  
**Effective from June 2023**  
**SUBJECT: GUJARATI (FOR SCIENCE FACULTY)**

|                |                               |                |           |
|----------------|-------------------------------|----------------|-----------|
| Course Level   | 4.5                           | Teaching Hours | 30        |
| Programme      | UG                            | Internal Marks | 15        |
| Semester       | I                             | External Marks | 35        |
| Course Type    | ABILITY ENHANSMENT COURSE     | Total          | 50        |
| Credit         | 02                            | Exam Duration  | 1:30 Hrs. |
|                |                               | Course Code    |           |
| Course Title : | ગુજરાતી કાવ્ય પરિચય (સાયન્સ ) |                |           |

**COURSE OBJECTIVES:**

- વિદ્યાર્થીઓમાં ગુજરાતી પદ્ય સ્વરૂપને જાણે.
- વિદ્યાર્થીઓ ગુજરાતી ભાષાની કવિતાઓ વિષે સમજ વિકસે.

**COURSE LEARNING OUTCOMES:**

- વિદ્યાર્થીઓ ગુજરાતી ભાષાની કવિતાઓ વિષે સમજ આવશે અને ગુજરાતી ભાષાની કવિતા પ્રત્યે પ્રેમ જાગશે.

**TEACHING PEDAGOGY:**

- ઇન્ટરેક્ટિવ ક્લાસરૂમ સત્ર, જૂથ ચર્ચા, પરિસંવાદ, પ્રદર્શન-સંબંધિત કાર્યો, ફિલ્ડવર્ક અથવા અન્ય કોઈપણ પદ્ધતિઓનો ઉપયોગ કરી શકાય છે. શિક્ષણ અને શીખવાની પ્રક્રિયાને અસરકારક અને રસપ્રદ બનાવવા માટે મલ્ટિમીડિયા ઉપકરણ અને અન્ય સંબંધિત સાધનો અને આધુનિક તકનીકનો ઉપયોગ કરવો જોઈએ.

**BHAKTA KAVI NARSINH MEHTA UNIVERSITY**  
**Ability Enhancement Course (AEC)**  
**Syllabus of Gujarati for Faculty of Science as per NEP**  
**Effective from June 2023**  
**SUBJECT: GUJARATI (FOR SCIENCE FACULTY)**

| COURSE CONTENTS |                                                                                                                                                                                              |                 |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Units           | Title of the Unit and the Topics                                                                                                                                                             | No. of Lectures |
| Unit 1          | કાવ્ય સ્વરૂપોનો પ્રાથમિક પરિચય<br>ગીત, હાઇકુ, ખંડકાવ્ય                                                                                                                                       |                 |
| Unit 2.         | ગુજરાતી પ્રશિષ્ટ કાવ્યો<br>૧ વીજળીના ચમકારે- ગંગા સતી<br>૨ જનનીની જોડ સખી –બોટાદકર<br>૩ કસુંબીનો રંગ –મેઘાણી<br>૪ કોઈને કઈ પડી છે જ કયાં –મનોજ ખંડેરિયા<br>૫ દેખ્યાનો દેશ –ભાનુપ્રસાદ પંડ્યા |                 |

**REFERNCE BOOKS:**

| ક્રમ | ગ્રંથ                      | લેખક –પ્રકાશક           |
|------|----------------------------|-------------------------|
| ૧    | ગુજરાતી સાહિત્યનો ઇતિહાસ   | ગુજરાતી સાહિત્ય પ્રકાશન |
| ૨    | ગુજરાતી સાહિત્યનો ઇતિહાસ   | ગુજરાતી સાહિત્ય પરિષદ   |
| ૩    | સમગ્ર કવિતા                | ઉમાશંકર જોશી            |
| ૪    | ગુજરાતી કવિતાનો આસ્વાદ     | સુરેશ જોશી              |
| ૫    | ઉમાશંકર જોશી               | હરીન્દ્ર દવે            |
| ૬    | પ્રશિષ્ટ ગુજરાતી કાવ્ય ઝલક | સં. ચંદ્રકાંત શેઠ       |
| ૭    | ગુજરાતી કવિતાનો આસ્વાદ     | સુરેશ જોશી              |
| ૮    | કાવ્યલોક                   | જયંત પાઠક               |
| ૯    | એકાંતની સભા                | જગદીશ જોશી              |
| ૧૦   | કાવ્યપ્રયાગ                | વેણીભાઈ પુરોહિત         |

**BHAKTA KAVI NARSINH MEHTA UNIVERSITY**  
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**Syllabus of Gujarati for Faculty of Science as per NEP**  
**Effective from June 2023**  
**SUBJECT: GUJARATI (FOR SCIENCE FACULTY)**

|    |                                |                         |
|----|--------------------------------|-------------------------|
| ૧૧ | કવિ અને કવિતા                  | સુરેશ દલાલ              |
| ૧૨ | ગુજરાતી સાહિત્યનો ઇતિહાસ       | ગુજરાતી સાહિત્ય પ્રકાશન |
| ૧૩ | ગુજરાતી સાહિત્યનો ઇતિહાસ       | ગુજરાતી સાહિત્ય પરિષદ   |
| ૧૪ | સમગ્ર કવિતા                    | ઉમાશંકર જોશી            |
| ૧૫ | આપણા ખંડકાવ્યો                 | ધીરુ પરીખ               |
| ૧૬ | સત્તર સાહિત્ય સ્વરૂપો          | પ્રસાદ બ્રહ્મભટ્ટ       |
| ૧૭ | સ્વરૂપ સાન્નિધાન               | સુમન શાહ                |
| ૧૮ | છંદ અને અલંકાર                 | દક્ષેશ ઠાકોર            |
| ૧૯ | અર્વાચીન કવિતા                 | સુંદરમ                  |
| ૨૦ | ખંડકાવ્ય સ્વરૂપ અને વિકાસ      | ચિનુ મોદી               |
| ૨૧ | ગુજરાતી સાહિત્યનો ઇતિહાસ ૩-૪-૫ | ગુજરાતી સાહિત્ય પરિષદ   |

| INTERNAL EVALUATION SCHEME |                   |           |
|----------------------------|-------------------|-----------|
| NO                         | Particulars       | Marks     |
| 1                          | Mid Semester Exam | 05        |
| 2                          | MCQ Test          | 05        |
| 3                          | Assignments       | 05        |
|                            | <b>Total</b>      | <b>15</b> |



**BHAKTA KAVI NARSINH MEHTA UNIVERSITY**  
**Ability Enhancement Course (AEC)**  
**Syllabus of Gujarati for Faculty of Science as per NEP**  
**Effective from June 2023**  
**SUBJECT: GUJARATI (FOR SCIENCE FACULTY)**

**Paper Style:**

| EXTERNAL ASSESSMENT BY UNIVERSITY |                                                                                           |       |
|-----------------------------------|-------------------------------------------------------------------------------------------|-------|
| Que. No.                          | Particulars                                                                               | Marks |
| Que-1                             | (A) Answer the following Questions in Brief (2/3)<br>(From Unit-1)                        | (07)  |
|                                   | (B) Fill in the Blanks/One liner questions/MCQs (7/9)<br>(From Unit-2)                    | (07)  |
| Que-2                             | (A) Answer the following Questions in Brief (2/3)<br>(From Unit-1)                        | (07)  |
|                                   | (B) Fill in the Blanks/One liner questions/MCQs (7/9)<br>(From Unit-2)                    | (07)  |
| Que-3                             | Write Short Notes. (2/4)<br>(Two Short Notes from Unit-1 and Two Short Notes from Unit-2) | (07)  |

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**BHAKTA KAVI NARSINH MEHTA UNIVERSITY**

**JUNAGADH**



**भक्तकवि नरसिंह महेता युनिवर्सिटी, जूनागढ – 362263**  
**(गुजरात)**

**संस्कृतविभागः**

**DEPARTMENT OF SANSKRIT**

**CURRICULUM OF SANSKRIT FOR SCIENCE FACULTY**

**AEC-1**

**CHOICE BASED CREDIT SYSTEM**

**B.Sc. (SANSKRIT SEM - 1)**

**(SEMESTER SYSTEM)**

**EFFECTIVE FROM JUNE, 2023 - 2024**

**BHAKTA KAVI NARSINH MEHTA UNIVERSITY**  
**Syllabus of SANSKRIT**  
**Semester-1**  
**Effective from June, 2023**

**STRUCTURE OF PROGRAMME (Science Faculty)**

| SN | Semester                | Category<br>of<br>Course | Title of the Course                     | Course Code | Credit | Teaching<br>Hours | Internal<br>Marks | External<br>Marks | Practical Marks |      | Total<br>Marks | Exam<br>Time |
|----|-------------------------|--------------------------|-----------------------------------------|-------------|--------|-------------------|-------------------|-------------------|-----------------|------|----------------|--------------|
|    |                         |                          |                                         |             |        |                   |                   |                   | Int.            | Ext. |                |              |
| 1  | 1<br>science<br>faculty | AEC-1                    | Sanskrit<br>ayurved<br>संस्कृत आयुर्वेद | AEC – 101   | 02     | 30                | 15                | 35                | --              | --   | 50             | 1.5          |

**BHAKTA KAVI NARSINH MEHTA UNIVERSITY****Syllabus of B.Sc. Sanskrit****Semester-1****Effective from June, 2023****AEC - SANSKRIT - 101 - Sanskrit ayurved आयुर्वेद**

|                       |                                  |                           |      |
|-----------------------|----------------------------------|---------------------------|------|
| <b>Course Level</b>   | 4.5                              | <b>Internal Marks</b>     | 15   |
| <b>Semester</b>       | 1                                | <b>External Marks</b>     | 35   |
| <b>Course Type</b>    | AEC-101                          | <b>Practical Internal</b> | ---  |
| <b>Course Title</b>   | <b>Sanskrit AYURVED आयुर्वेद</b> | <b>Practical External</b> | ---  |
| <b>Course Code</b>    | AEC-101                          | <b>Total</b>              | 50   |
| <b>Teaching Hours</b> | 30                               | <b>Exam Duration</b>      | 1.30 |

**Course Objectives:**

|                   |                                                                                                                                                                                                                                                                                                                     |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Objectives</b> | <ul style="list-style-type: none"><li>➤ Will be familiar with Ayurveda.</li><li>➤ The sage will be aware of tradition.</li><li>➤ The value of a healthy life will be understood.</li><li>➤ Become conscious of body composition</li><li>➤ The value of the grand divine Indian culture will be understood</li></ul> |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Course Level Learning outcomes:**

|                          |                                                                                                                                                                                                                                                                                |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Learning Outcomes</b> | <ul style="list-style-type: none"><li>➤ Ability to embraces moral/ethical values in conducting his/her helth.</li><li>➤ Capable of demonstrating the ability to identify ethical issues related to sushrutsamhita.</li><li>➤ born and Development of Ayurveda since.</li></ul> |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| <b>COURSE CONTENTS</b> |                                                                                                                                                     |                        |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Units</b>           | <b>Unit Description</b>                                                                                                                             | <b>No. of Lectures</b> |
| <b>Unit 1</b>          | आयुर्वेद विज्ञान, परियय, प्रयोजन, आयुर्विज्ञाननो ઉદ્ભવ અને વિકાસ, આયુર્વિજ્ઞાનના પ્રમુખ અંગો                                                        | <b>15</b>              |
| <b>Unit 2</b>          | આયુર્વેદના પ્રમુખ ગ્રંથોનો પરિચય<br>ચરકસંહિતા, સુશ્રુતસંહિતા, અષ્ટાંગહૃદય, ભાવપ્રકાશ,<br>માધવનિદાન, શાક્રધરસંહિતા, રસરત્નસમુચ્ચય,<br>ભૈષજયરત્નાવલી. | <b>15</b>              |

**Suggested Reading:**

|   |                                                                                    |
|---|------------------------------------------------------------------------------------|
| 1 | वैद्यकीय सुभाषित साहित्य – भास्कर गोविन्द धाणेकर, चौखम्भा प्रकाशन                  |
| 2 | आयुर्वेद, डॉ. एल. एम. पानाशेरिया, प्रो. जे. डी. भलाणी, रावत प्रकाशन, नई दिल्ली     |
| 3 | संस्कृत वाममय में विज्ञान का इतिहास, राष्ट्रिय शैक्षिक अनुसंधान और प्रशिक्षण परिषद |
| 4 | चरक संहिता – सरस्वती पुस्तक भण्डार –अमदावाद                                        |
| 5 | सुश्रुत संहिता - सरस्वती पुस्तक भण्डार –अमदावाद                                    |
| 6 | YouTube//: Nityanandamshree                                                        |
| 7 | YouTube//: nityanandam Ayurveda                                                    |
| 8 | YouTube//: swasthsamriddhparivar                                                   |

| INTERNAL EVALUATION SCHEME |                   |           |
|----------------------------|-------------------|-----------|
| NO                         | Particulars       | Marks     |
| 1                          | Mid Semester Exam | --        |
| 2                          | MCQ Test          | 05        |
| 3                          | Assignments       | 05        |
| 4                          | Attendance        | 05        |
|                            | <b>Total</b>      | <b>15</b> |

**Paper Style:**

| EXTERNAL ASSESSMENT BY UNIVERSITY |                                                          |       |
|-----------------------------------|----------------------------------------------------------|-------|
| Que. No.                          | Particulars                                              | Marks |
| Que-1                             | Essay Type Question.<br>(From Unit-1)                    | (14)  |
|                                   | OR                                                       |       |
|                                   | Essay Type Question.<br>(From Unit-1)                    | (14)  |
| Que-2                             | Essay Type Question.<br>(From Unit-2)                    | (14)  |
|                                   | OR                                                       |       |
|                                   | Essay Type Question.<br>(From Unit-2)                    | (14)  |
| Que-3                             | Short Notes. ( unit – 1-2)<br>(One from each unit) (2/1) | (07)  |

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**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Hindi as per NEP**  
**Ability Enhancement Course (AEC)**  
**Effective from June 2023**  
**Subject: Hindi for Science Faculty**

|                      |                           |                       |           |
|----------------------|---------------------------|-----------------------|-----------|
| <b>Course Level</b>  | U.G                       | <b>Teaching Hours</b> | 30        |
| <b>Programme</b>     | Hindi (Science Faculty)   | <b>Internal Marks</b> | 15        |
| <b>Semester</b>      | I                         | <b>External Marks</b> | 35        |
| <b>Course Type</b>   | ABILITY ENHANSMENT COURSE | <b>Total</b>          | 50        |
| <b>Credit</b>        | 02                        | <b>Exam Duration</b>  | 1:30 Hrs. |
|                      |                           | <b>Course Code</b>    | AEC-101   |
| <b>Course Title:</b> | विज्ञापन और हिन्दी        |                       |           |

**पाठ्यक्रम उद्देश्य:**

- छात्रों को हिन्दी विज्ञापन से अवगत कराना ।
- छात्र हिन्दी विज्ञापन के माध्यम से आत्मनिर्भर बने ।
- छात्रों को हिन्दी विज्ञापन का महत्व समझाना ।
- छात्र हिन्दी विज्ञापन के व्यावसायिक उद्देश्य से परिचित हो ।

| COURSE CONTENTS |                                                                                                                  |                 |
|-----------------|------------------------------------------------------------------------------------------------------------------|-----------------|
| Units           | Title of the Unit and the Topics                                                                                 | No. of Lectures |
| Unit 1          | विज्ञापन : अर्थ, परिभाषा और स्वरूप<br>विज्ञापन का महत्व<br>विज्ञापन का व्यावसायिक उद्देश्य<br>विज्ञापन के प्रकार |                 |
| Unit 2.         | विज्ञापन की भाषा<br>विज्ञापन की विशेषताएँ<br>विज्ञापन से फायदे<br>विज्ञापन का कार्य                              |                 |

**REFERENCE BOOKS:**

१. भारतीय विज्ञापन में नैतिकता, मधु अग्रवाल, प्रकाशन विभाग, भारत सरकार, नई दिल्ली ।
२. जन सम्पर्क : प्रचार एवं विज्ञापन, विजय कुलश्रेष्ठ, राजस्थान प्रकाशन, जयपुर ।
३. विज्ञापन सिद्धांत और प्रयोग, विजय कुलश्रेष्ठ, माया प्रकाशन, जयपुर ।
४. विज्ञापन व्यवसाय एवं कला, डॉ. रामचंद्र तिवारी, आलेख प्रकाशन, नई दिल्ली ।
५. हिन्दी विज्ञापनों की भाषा, आशा पाण्डेय, ब्लेकी एण्ड पब्लिशर, दिल्ली ।

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Hindi as per NEP**  
**Ability Enhancement Course (AEC)**  
**Effective from June 2023**  
**Subject: Hindi for Science Faculty**

| <b>INTERNAL EVALUATION SCHEME</b> |                    |              |
|-----------------------------------|--------------------|--------------|
| <b>NO</b>                         | <b>Particulars</b> | <b>Marks</b> |
| 1                                 | Mid Semester Exam  | 05           |
| 2                                 | MCQ Test           | 05           |
| 3                                 | Assignments        | 05           |
|                                   | <b>Total</b>       | <b>15</b>    |

**Paper Style:**

| <b>Que. No.</b> | <b>Particulars</b>                                                                        | <b>Marks</b> |
|-----------------|-------------------------------------------------------------------------------------------|--------------|
| <b>Que-1</b>    | (A) Answer the following Questions in Brief (2/3)<br>(From Unit-1)                        | <b>(07)</b>  |
|                 | (B) Fill in the Blanks/One liner questions/MCQs (7/9)<br>(From Unit-2)                    | <b>(07)</b>  |
| <b>Que-2</b>    | (A) Answer the following Questions in Brief (2/3)<br>(From Unit-1)                        | <b>(07)</b>  |
|                 | (B) Fill in the Blanks/One liner questions/MCQs (7/9)<br>(From Unit-2)                    | <b>(07)</b>  |
| <b>Que-3</b>    | Write Short Notes. (1/2)<br>(One Short Notes from Unit-1 and One Short Notes from Unit-2) | <b>(07)</b>  |

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પરિપત્ર:

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટીની સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજોનાં આચાર્યશ્રીઓને સવિનય જણાવવાનું કે સાયન્સ વિદ્યાશાખા હેઠળનો NEP-૨૦૨૦ અંતર્ગતનો એબીલીટી એન્હાન્સમેન્ટ કોર્સનો સેમેસ્ટર-૨ નો અભ્યાસક્રમ આ સાથે સામેલ છે. આ બાસ્કેટમાં સાયન્સનાં વિષયો આપવામાં આવેલ છે. તેમાંથી કોઈ પણ એક કોર્સ (પેપર) સાયન્સ વિદ્યાશાખાનાં વિદ્યાર્થીઓએ પસંદ કરવાનો રહેશે.

માનનીય કુલપતિશ્રીની મંજૂરી અનુસાર સદર અભ્યાસક્રમ શૈક્ષણિક વર્ષ જુન, ૨૦૨૩થી અમલવારી કરવાની રહે છે. સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજો ધ્વારા તેની અમલવારી કરવા જણાવવામાં આવે છે.



ખાસ ફરજ પરના અધિકારી  
(એકેડેમિક)

ક્રમાંક/બીકેએનએમયુ/એકેડેમિક/૨૮૩/૨૦૨૪

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી,  
સરકારી પોલીટેકનિક કેમ્પસ,  
ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી રોડ,  
ખડીયા, જૂનાગઢ-૩૬૨૨૬૩  
તા.૩૧/૦૧/૨૦૨૪

પ્રતિ,

- ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી સંલગ્ન સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમો ચલાવતી તમામ કોલેજોના આચાર્યશ્રીઓ તરફ....

નકલ સાદર રવાના:-

- માન.કુલપતિશ્રી/કુલસચિવશ્રીનાં અંગત સચિવશ્રી.
- પરીક્ષા નિયામકશ્રી, ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ

નકલ રવાના જાણ તથા યોગ્ય કાર્યવાહી અર્થે:

- સીસ્ટમ મેનેજરશ્રી, આઈ.ટી.સેલ વિભાગ (વેબસાઇટ ઉપર પ્રસિદ્ધ થવા અર્થે.)





# Bhakta Kavi Narsinh Mehta University Junagadh



FACULTY OF SCIENCE  
SYLLABUS FOR  
ABILITY ENHANCEMENT COURSE BASKET  
FOR  
SCIENCE FACULTY  
(HONOURS) PROGRAMME  
(SEMESTER- II)  
EFFECTIVE FROM JUNE, 2023

## INDEX

| Sr.No | Topic                                | Page No. |
|-------|--------------------------------------|----------|
| 1.    | English Language-2                   | 1        |
| 2.    | ગુજરાતી કથા સાહિત્યનો પરિચય (સાયન્સ) | 5        |
| 3.    | પટકથા લેખન                           | 9        |
| 4.    | AYURVED આયુર્વેદ                     | 11       |

**BHAKTA KAVI NARSINH MEHTA UNIVERSITY**  
**Ability Enhancement Course (AEC)**  
**Syllabus of English subject for Faculty of Science as per NEP**  
**Effective from June 2023**  
**Subject: English for Science Faculty**  
**SEMESTER-2**

|                       |                                    |                           |           |
|-----------------------|------------------------------------|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                                | <b>Course Code</b>        |           |
| <b>Programme</b>      | Science Faculty                    | <b>Internal Marks</b>     | 25        |
| <b>Semester</b>       | II                                 | <b>External Marks</b>     | 25        |
| <b>Course Type</b>    | Ability Enhancement Course (AEC)-1 | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | English Language-2                 | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                                 | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                             | <b>Exam Duration</b>      | 1:00 Hrs. |

**Course Objectives:**

1. To make students able to comprehend literary texts for developing their critical thinking.
2. To develop basic proficiency in English Writing Skill
3. To make students able to fill forms correctly
4. To enable students write informal letters.
5. To explain essentials of grammar for strengthening students' language

**Course Learning Outcomes:**

After completion of the course:

1. Student will improve their writing skills
2. To enable students to identify the fake news and their consequences.
3. Student will understand the essentials of grammar.

# Table of Contents

**Prescribed Text:** *Confluence* by K.N.Shoba published by Cambridge University Press, New Delhi

| Sem | Unit No. | Syllabi                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2   | 1        | <b>(A) Short Stories:</b> <ul style="list-style-type: none"> <li>Humour: The Boy Who Broke the Bank by Ruskin Bond (Chpt.3.3)</li> <li>Social Justice: The Squirrel by Ambai (Chpt.3.4)</li> </ul> <b>(B) Non Fiction;</b> <ul style="list-style-type: none"> <li>Artificial Intelligence: AI and Literature: The Muse in the Machine by John Thornhill (Chpt.4.1)</li> <li>Social Media: Facebook is Making Us Miserable by Daniel Gulati (Chpt.4.2)</li> </ul> |
|     | 2        | <b>(A) Grammar:</b> <ul style="list-style-type: none"> <li>Direct and Indirect Speech (Chpt.3.3)</li> </ul> <b>(B) Writing:</b> <ul style="list-style-type: none"> <li>Filling Forms (Chpt. 3.4)</li> <li>Informal Letters (Chpt. 3.4)</li> </ul>                                                                                                                                                                                                                |

## Suggested Reading:

1. Intermediate English Grammar: Reference and Practice for South Asian Students by Raymond Murphy. Cambridge University Press
2. Business Communication by Urmila Rai and S.M. Rai. Himalaya Publishing House
3. Effective Technical Communication by M Ashraf Rizvi. Tata Mc Graw hill
4. Spoken English: A Foundation Course by Kamlesh Sadanand and Susheela Punitha (Part I and Part II)

| INTERNAL EVALUATION SCHEME |                            |           |
|----------------------------|----------------------------|-----------|
| NO                         | Particulars                | Marks     |
| 1                          | <b>Mid Semester Exam</b>   | <b>13</b> |
| 2                          | Class Test                 | 03        |
| 3                          | Open book exam/test        | 03        |
| 4                          | Open note exam/test        | 03        |
| 5                          | Self-test/ Online test     | 03        |
| 6                          | Essay/Article writing      | 03        |
| 7                          | Quizzes/Objective test     | 03        |
| 8                          | Class assignment           | 03        |
| 9                          | Home assignment            | 03        |
| 10                         | Reports Writing            | 03        |
| 11                         | Research/Dissertation      | 03        |
| 12                         | Case Studies               | 03        |
| 13                         | Viva/Oral exam             | 03        |
| 14                         | Group Discussion           | 03        |
| 15                         | Role Play                  | 03        |
| 16                         | Paper presentation/Seminar | 03        |
| 17                         | Language Lab work          | 03        |
| 18                         | Interview                  | 03        |
| 19                         | Craft work                 | 03        |
| 20                         | Co-curricular work         | 03        |
| 21                         | Field Assignment           | 03        |
| 22                         | Poster Presentation        | 03        |
| 23                         | Attendance                 | 03        |
|                            | <b>Total</b>               | <b>25</b> |

**Note: Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 23. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.**

## Paper Style

| <b>Ques.<br/>No.</b> | <b>Particulars</b>                                                   | <b>Marks</b> |
|----------------------|----------------------------------------------------------------------|--------------|
| <b>Q.1</b>           | <b>(A) Answer the following questions (2/4)</b><br>(From Unit-1 (A)) | <b>(05)</b>  |
|                      | <b>(B) Short Questions/MCQs/One liner) (5/6)</b><br>(From Unit-1(B)) | <b>(05)</b>  |
| <b>Q.2</b>           | <b>(A) Fill the form appropriately. (1/1)</b><br>(From Unit-2 (B))   | <b>(05)</b>  |
|                      | <b>(B) Write a Letter. (1/2)</b><br>(From Unit-2 (B))                | <b>(05)</b>  |
| <b>Q.3</b>           | <b>(A) Do as Directed. (3/5)</b><br>(From Unit-2 (A))                | <b>(03)</b>  |
|                      | <b>(B) MCQs. (2/3)</b><br>(From Unit-1(A & B))                       | <b>(02)</b>  |
|                      | <b>Total Marks</b>                                                   | <b>25</b>    |

**Note: Student should secure 09 Marks for passing in External Exam.**

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**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Bachelor of Arts (B.A) as per NEP**  
**Effective from June 2023**  
**Subject: B.Sc. (GUJARATI)**  
**Sem-II**

|               |                                      |                |           |
|---------------|--------------------------------------|----------------|-----------|
| Course Level  | U.G (SCIENCE)                        | Teaching Hours | 30        |
| Semester      | II                                   | Internal Marks | 25        |
| Course Type   | ABILITY ENHANCEMENT COURSE           | External Marks | 25        |
| Course title  | ગુજરાતી કથા સાહિત્યનો પરિચય (સાયન્સ) | Total          | 50        |
| Course Number | AEC-201                              | Exam Duration  | 1:00 Hrs. |
| Credit        | 02                                   |                |           |

**COURSE OBJECTIVES:**

1. વિદ્યાર્થીઓ ગુજરાતી ગદ્ય સ્વરૂપથી પરિચિત થાય.
2. ગુજરાતી લઘુનવલ અને એકાંકી સ્વરૂપને જાણે.

**COURSE LEARNING OUTCOMES:**

વિદ્યાર્થીઓ ગુજરાતી ગદ્ય સ્વરૂપથી પરિચિત થશે અને લઘુનવલ તથા એકાંકી સ્વરૂપને જાણશે.

**Teaching Pedagogy :**

ઇન્ટરેક્ટિવ ક્લાસરૂમ સત્ર, જૂથ ચર્ચા, પરિસંવાદ, પ્રદર્શન-સંબંધિત કાર્યો, ફિલ્ડવર્ક અથવા અન્ય કોઈપણ પદ્ધતિઓનો ઉપયોગ કરી શકાય છે. શિક્ષણ અને શીખવાની પ્રક્રિયાને અસરકારક અને રસપ્રદ બનાવવા માટે મલ્ટિમીડિયા ઉપકરણ અને અન્ય સંબંધિત સાધનો અને આધુનિક તકનીકનો ઉપયોગ કરવો જોઈએ.

**COURSE CONTENTS**

| Units   | Title of the Unit and the Topics                                                                                                                                 | No. of Lectures |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Unit 1  | કથા સાહિત્યના સ્વરૂપોનો પરિચય<br>લઘુનવલ ,એકાંકી                                                                                                                  | 15              |
| Unit 2. | ગુજરાતી પ્રશિષ્ટ નવલિકાઓ<br>૧ વહુ અને ઘોડો- મેઘાણી<br>૨ વાની મારી કોયલ- યુનીલાલ મડિયા<br>૩ સુખ દુઃખના સાથી -પન્નાલાલ પટેલ<br>૪ કાન- મધુરાય<br>૫ મહોતું- રામ મોરી | 15              |

## REFERENCE BOOKS

| ક્રમ | ગ્રંથ                                | લેખક -પ્રકાશક               |
|------|--------------------------------------|-----------------------------|
| ૧    | ગુજરાતી નવલકથા                       | રઘુવીર ચોધરી                |
| ૨    | ગુજરાતી કથાવિશ્વ                     | બાબુ દાવલપુરા અને નરેશ વેદ  |
| ૩    | સ્વરૂપ સાન્નિધાન                     | સુમન શાહ                    |
| ૪    | ગુજરાતી સાહિત્યનો ઇતિહાસ             | ગુજરાતી સાહિત્ય પરિષદ       |
| ૫    | અર્વાચીન ગુજરાતી સાહિત્યનો ઇતિહાસ    | રમેશ ત્રિવેદી               |
| ૬    | કથાચન                                | બાબુ દાવલપુરા               |
| ૭    | આપણા પ્રમુખ નવલકથાકરો                | રવીન્દ્ર ઠાકુર              |
| ૮    | નવલકથા સ્વરૂપ                        | પ્રવીણ દરજી                 |
| ૯    | નવલકથા                               | શિરીષ પંચાલ                 |
| ૧૦   | ટૂંકીવાર્તા સાહિત્ય સ્વરૂપ શ્રેણી    | વિજય શાસ્ત્રી               |
| ૧૧   | ટૂંકીવાર્તા અભ્યાસ અને આકલન          | બિપિન આશર                   |
| ૧૨   | અધીત : પર્વ -૩                       | જે.એમ ચન્દ્રવાડીયા અને અન્ય |
| ૧૩   | પન્નાલાલ પટેલ વ્યક્તિત્વ અને વાંગ્મય | બાબુ દાવલપુરા               |
| ૧૪   | સાંઠોતરી ગુજરાતી ટૂંકીવાર્તા         | પારુલ પ્રસાદ પ્રધાન         |
| ૧૫   | ટૂંકીવાર્તામાં કથનકેન્દ્ર            | શિરીષ વીજળીવાળા             |
| ૧૬   | સ્થિત્યન્તર                          | અજીત ઠાકોર                  |
| ૧૭   | વીણેલી નવલિકાઓ                       | પન્નાલાલ પટેલ               |



| <b>INTERNAL EVALUATION SCHEME</b> |                            |              |
|-----------------------------------|----------------------------|--------------|
| <b>NO</b>                         | <b>Particulars</b>         | <b>Marks</b> |
| 1                                 | <b>Mid Semester Exam</b>   | <b>13</b>    |
| 2                                 | Class Test                 | 03           |
| 3                                 | Open book exam/test        | 03           |
| 4                                 | Open note exam/test        | 03           |
| 5                                 | Self-test/ Online test     | 03           |
| 6                                 | Essay/Article writing      | 03           |
| 7                                 | Quizzes/Objective test     | 03           |
| 8                                 | Class assignment           | 03           |
| 9                                 | Home assignment            | 03           |
| 10                                | Reports Writing            | 03           |
| 11                                | Research/Dissertation      | 03           |
| 12                                | Case Studies               | 03           |
| 13                                | Viva/Oral exam             | 03           |
| 14                                | Group Discussion           | 03           |
| 15                                | Role Play                  | 03           |
| 16                                | Paper presentation/Seminar | 03           |
| 17                                | Language Lab work          | 03           |
| 18                                | Interview                  | 03           |
| 19                                | Craft work                 | 03           |
| 20                                | Co-curricular work         | 03           |
| 21                                | Field Assignment           | 03           |
| 22                                | Poster Presentation        | 03           |
| 23                                | Attendance                 | 03           |
|                                   | <b>Total</b>               | <b>25</b>    |

**Note: Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 23. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.**

## Paper Style

| EXTERNAL ASSESSMENT BY UNIVERSITY |                                                                                           |       |
|-----------------------------------|-------------------------------------------------------------------------------------------|-------|
| Que. No.                          | Particulars                                                                               | Marks |
| Que-1                             | (A) Answer the following Questions in Brief (2/3)<br>(From Unit-1)                        | (05)  |
|                                   | (B) Fill in the Blanks/One liner questions/MCQs (5/7)<br>(From Unit-1)                    | (05)  |
| Que-2                             | (A) Answer the following Questions in Brief (5/7)<br>(From Unit-1)                        | (05)  |
|                                   | (B) Fill in the Blanks/One liner questions/MCQs (5/7)<br>(From Unit-2)                    | (05)  |
| Que-3                             | Write Short Notes. (2/4)<br>(Two Short Notes from Unit-1 and Two Short Notes from Unit-2) | (05)  |

भक्त कवि नरसिंह मेहता विश्व-विद्यालय, जूनागढ़  
राष्ट्रीय शिक्षा नीति – २०२०  
AEC-2: पटकथा लेखन – स्नातक हिन्दी पाठ्यक्रम – द्वितीय सत्र - वर्ष २०२३

| क्रम | कक्षा  | सत्र    | पाठ्यक्रम प्रकार | पाठ्यक्रम क्रमांक | पाठ्यक्रम (पेपर) शीर्षक | क्रेडिट (मूल्य) | आंतरिक अंक | बाह्य अंक | कुल अंक |
|------|--------|---------|------------------|-------------------|-------------------------|-----------------|------------|-----------|---------|
| १    | स्नातक | द्वितीय | AEC-102          | २                 | पटकथा लेखन              | ०२              | २५         | २५        | ५०      |
| कुल  |        |         |                  |                   |                         | ०२              | २५         | २५        | ५०      |

|                         |                                                                      |
|-------------------------|----------------------------------------------------------------------|
| विषय                    | हिन्दी                                                               |
| सत्र                    | ०२                                                                   |
| पाठ्यक्रम प्रकार        | Ability Enhancement Course (AEC) - क्षमता वृद्धि पाठ्यक्रम – AEC-102 |
| पाठ्यक्रम क्रमांक       | ०२                                                                   |
| पाठ्यक्रम (पेपर) शीर्षक | पटकथा लेखन                                                           |
| परीक्षा समयावधि         | १:०० घण्टे                                                           |

| पाठ्यक्रम कक्षा | सत्र | पाठ्यक्रम प्रकार                                             | पाठ्यक्रम क्रमांक | क्रेडिट (मूल्य) | आंतरिक अंक | बाह्य अंक | कुल अंक |
|-----------------|------|--------------------------------------------------------------|-------------------|-----------------|------------|-----------|---------|
| स्नातक          | ०२   | Ability Enhancement Course AEC-102 - क्षमता वृद्धि पाठ्यक्रम | ०२                | ०२              | २५         | २५        | ५०      |

- पाठ्यक्रम उद्देश्य :
- ☐ छात्रों को पटकथा लेखन से परिचित कराना।
  - ☐ छात्रों को पटकथा लेखन का महत्व समझाना।
  - ☐ छात्रों को पटकथा लेखन ले ज्ञान से आत्मनिर्भर बने।
  - ☐ छात्रों पटकथा लेखन के व्यावसायिक ज्ञान से परिचित हो।

| पाठ्य क्रम | पाठ्य ईकाई | पाठ्य-विषय                            | अंक                                                                                                                 |
|------------|------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| स्नातक     | ईकाई-१     | पटकथा लेखन का अर्थल परिभाषा और स्वरूप | इनमें से तीन प्रश्न पूछे जाएँगे ।<br>प्रश्न × अंक<br>०२ × १० = २० (आलोचनात्मक)<br>०१ × ०५ = ०५ (टिप्पणी-२ में से १) |
|            |            | पटकथा लेखन की शैलियाँ                 |                                                                                                                     |
|            |            | पटकथा के तत्व                         |                                                                                                                     |
|            | ईकाई-२     | पटकथा के प्रकार                       |                                                                                                                     |
|            |            | पटकथा की विषयवस्तु                    |                                                                                                                     |
|            |            | पटकथा लेखक के गुण                     |                                                                                                                     |
|            |            |                                       |                                                                                                                     |

**आंतरिक मूल्यांकन**

| पाठ्यक्रम | मूल्यांकन विषय    | पाठ्य-विषय                                                                                          | अंक |
|-----------|-------------------|-----------------------------------------------------------------------------------------------------|-----|
| स्नातक    | आंतरिक कसौटी      | आंतरिक कसौटी के लिए तेरह अंक निर्धारित हैं।                                                         | १३  |
|           | सेमिनार           | सेमिनार के लिए तीन अंक निर्धारित हैं।                                                               | ०३  |
|           | होम असाईन्मेन्ट   | निर्धारित पाठ्य-विषय में से किसी एक विषय पर केन्द्रित हस्त लिखित होम असाईन्मेन्ट तैयार करना होगा।   | ०३  |
|           | क्लास असाईन्मेन्ट | निर्धारित पाठ्य-विषय में से किसी एक विषय पर केन्द्रित हस्त लिखित क्लास असाईन्मेन्ट तैयार करना होगा। | ०३  |
|           | उपस्थिति          | सत्र दौरान छात्र की उपस्थिति के तीन अंक निर्धारित हैं।                                              | ०३  |
|           | कुल अंक           |                                                                                                     | २५  |

**प्रश्नपत्र का स्वरूप एवं अंक विभाजन**

| क्रम | प्रश्न का स्वरूप           | समय  | कुल प्रश्न | अंक | कुल अंक |
|------|----------------------------|------|------------|-----|---------|
| १.   | आलोचनात्मक प्रश्न          | १.०० | ०२         | १०  | २०      |
| २.   | संक्षिप्त प्रश्न (टिप्पणी) |      | ०१         | ०५  | ०५      |

|                                                                                                                                |                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>नोट :</b> ★ परीक्षार्थी के लिए प्रश्नपत्र का समय १.०० घण्टे का रहेगा ।<br>★ परीक्षार्थी के लिए प्रश्नपत्र २५ अंक का रहेगा । | <b>पाठ्य पुस्तक :</b> पटकथा लेखन : एक परिचय<br><b>लेखन :</b> मनोहरश्याम जोशी<br><b>प्राप्ति स्थान :</b> वाणी प्रकाशन, नई दिल्ली |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|

**संदर्भ ग्रंथ :**

१. पटकथा लेखनल कुलदीप सिन्हा ।
२. स्क्रीन प्ले फॉर्मेटल राकेश सैनी ।
३. स्क्रिप्ट राइटिंगल पृथ्वीराज सिन्हा ।
४. फिल्मों में पटकथा लेखनल रतन प्रकाश ।

**BHAKTA KAVI NARSINH MEHTA UNIVERSITY**  
**U.G. COURSES IN SANSKRIT**  
**CHOICE BASED CREDIT SYSTEM FIRST YEAR B.SC.**  
**SEMESTER: II ABILITY ENHANCEMENT COURSE (LANGUAGE)**  
**AEC - SANS - 201 - Sanskrit AYURVED आयुर्वेद**

**Preamble**

|                       |                           |                           |      |
|-----------------------|---------------------------|---------------------------|------|
| <b>Course Level</b>   | 4.5                       | <b>Internal Marks</b>     | 25   |
| <b>Semester</b>       | 2                         | <b>External Marks</b>     | 25   |
| <b>Course Type</b>    | AEC                       | <b>Practical Internal</b> | ---  |
| <b>Course Title</b>   | Sanskrit AYURVED आयुर्वेद | <b>Practical External</b> | ---  |
| <b>Course Code</b>    | AEC - SANS - 201          | <b>Total</b>              | 50   |
| <b>Teaching Hours</b> | 30                        | <b>Exam Duration</b>      | 1.00 |

**Course Objectives:**

|                   |                                                                                                                                                                                                                                                                                                       |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Objectives</b> | <ul style="list-style-type: none"> <li>➤ Will gain knowledge of Ayurveda</li> <li>➤ Will know the tridoshas of the body</li> <li>➤ The nature of one's own body will be known</li> <li>➤ Will gain knowledge about menstruation</li> <li>➤ The effect of seasons on the body will be known</li> </ul> |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Learning outcomes:**

|                          |                                                                                                                                                                                                                                                                                    |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Learning Outcomes</b> | <ul style="list-style-type: none"> <li>➤ Ability to embraces moral/ethical values in conducting his/her helth.</li> <li>➤ Capable of demonstrating the ability to identify ethical issues related to sushrutsamhita.</li> <li>➤ born and Development of Ayurveda since.</li> </ul> |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**COURSE CONTENTS**

| <b>Units</b>  | <b>Unit Description</b>                                                                                                   | <b>No. of Lectures</b> |
|---------------|---------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Unit 1</b> | आयुर्वेद शब्दनी निरुक्ति, आयुर्वेदना आठ अंग, त्रिदोष (वात, पित्त, कफ), प्रकृतिनी उत्पत्ति अने स्वरूप.                     | 15                     |
| <b>Unit 2</b> | ऋतुचर्या अने रस विज्ञान (हेमंत, शिशिर, वसंत, ग्रीष्म, वर्षा, शरद) (मधुर, अम्ल, लवण, कटु, तिक्त, कषाय, परस्पर विरोधी आहार) | 15                     |

## Suggested Reading:

| Reference Books |                                                                             |
|-----------------|-----------------------------------------------------------------------------|
| 1               | अष्टांग हृदयम्, व्या. ब्रह्मानंद त्रिपाठी, चौखम्बा संस्कृत प्रतिष्ठान, २०१७ |
| 2               | माधव निदानम्, व्या. ब्रह्मानंद त्रिपाठी, चौखम्बा संस्कृत प्रतिष्ठान, २०१७   |
| 3               | अनुपान मंजरी, आचार्य विश्राम, गुजरात आ. युनिवर्सिटी, १९९३                   |
| 4               | आपका स्वास्थ्य आपके हाथ, डॉ. चंचलमल चोरडिया, स्वराज प्रकाशन समूह, २००४      |
| 5               | आयुर्वेदीय रोग विज्ञान एवं विकृति विज्ञान, चौखम्भा सुरभारती प्रकाशन, २०१६   |

| INTERNAL EVALUATION SCHEME |                        |       |
|----------------------------|------------------------|-------|
| NO                         | Particulars            | Marks |
| 1                          | Mid Semester Exam      | 13    |
| 2                          | Class Assignments      | 03    |
| 3                          | Home Assignments       | 03    |
| 4                          | Attendance             | 03    |
| 5                          | Seminar/Objective test | 03    |
|                            | <b>Total</b>           | 25    |

## Paper Style:

| EXTERNAL ASSESSMENT BY UNIVERSITY |                                       | 50    |
|-----------------------------------|---------------------------------------|-------|
| Marks                             |                                       |       |
| Que. No.                          | Particulars                           | Marks |
| Que-1                             | Essay Type Question.<br>(From Unit 1) | (10)  |
|                                   | OR                                    |       |
| Que-1                             | Essay Type Question.<br>(From Unit 1) | (10)  |
| Que-2                             | Essay Type Question.<br>(From Unit 2) | (10)  |
|                                   | OR                                    |       |
| Que-2                             | Essay Type Question.<br>(From Unit 2) | (10)  |
| Que-3                             | Short Notes. (all units) (2/1)        | (05)  |

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પરિપત્ર:

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટીની સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજોનાં આચાર્યશ્રીઓને સવિનય જણાવવાનું કે સાયન્સ વિદ્યાશાખા હેઠળનો NEP-2020 અંતર્ગતનો સ્કીલ એનહાન્સમેન્ટ કોર્સનો સેમેસ્ટર-૧ નો અભ્યાસક્રમ આ સાથે સામેલ છે. ઉપરોક્ત વિદ્યાશાખાનાં બધાજ પ્રોગ્રામ્સ માટે આ અભ્યાસક્રમ સમાન રહેશે. આપેલ બાસ્કેટમાં વિવિધ કોર્સમાંથી કોઈ પણ એક કોર્સ (પેપર) સાયન્સ વિદ્યાશાખાનાં વિદ્યાર્થીઓએ પસંદ કરવાનો રહેશે.

માનનીય કુલપતિશ્રીની મંજૂરી અનુસાર સદર અભ્યાસક્રમ શૈક્ષણિક વર્ષ જુન, 2023થી અમલવારી કરવાની રહે છે. સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજો ધ્વારા તેની અમલવારી કરવા જણાવવામાં આવે છે.



*M. K. Mehta*  
17/08/2023  
OSD  
(Academic)

ક્રમાંક/બીકેએનએમયુ/એકેડેમિક/૧૫૭૦/૨૦૨૩-૨૦૨૪

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી,

સરકારી પોલીટેકનિક કેમ્પસ,

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી રોડ,

ખડીયા, જૂનાગઢ-૩૬૨૨૬૩

તા.૧૭/૦૮/૨૦૨૩

પ્રતિ,

- ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી સંલગ્ન સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમો ચલાવતી તમામ કોલેજોના આચાર્યશ્રીઓ તરફ....

નકલ સાદર રવાના:-

- માન.કુલપતિશ્રી/કુલસચિવશ્રીનાં અંગત સચિવશ્રી.
- પરીક્ષા નિયામકશ્રી, ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ

નકલ રવાના જાણ તથા યોગ્ય કાર્યવાહી અર્થે:

- સીસ્ટમ મેનેજરશ્રી, આઈ.ટી.સેલ વિભાગ (વેબસાઇટ ઉપર પ્રસિદ્ધ થવા અર્થે.)

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

| <b>SNO</b> | <b>Course Title</b>                                                  | <b>Page No</b> |
|------------|----------------------------------------------------------------------|----------------|
| <b>1</b>   | <a href="#"><u>Office Automation</u></a>                             | <b>2</b>       |
| <b>2</b>   | <a href="#"><u>Clothing Construction</u></a>                         | <b>7</b>       |
| <b>3</b>   | <a href="#"><u>Horticulture</u></a>                                  | <b>9</b>       |
| <b>4</b>   | <a href="#"><u>Laboratory Skills and Safety</u></a>                  | <b>11</b>      |
| <b>5</b>   | <a href="#"><u>Apiculture</u></a>                                    | <b>15</b>      |
| <b>6</b>   | <a href="#"><u>Mushroom Cultivation</u></a>                          | <b>17</b>      |
| <b>7</b>   | <a href="#"><u>Introduction to SciLab (FOSS)</u></a>                 | <b>20</b>      |
| <b>8</b>   | <a href="#"><u>English for Competitive Exams</u></a>                 | <b>23</b>      |
| <b>9</b>   | <a href="#"><u>Application of Microscopy in Forensic Biology</u></a> | <b>31</b>      |
| <b>10</b>  | <a href="#"><u>Laboratory skills in physics</u></a>                  | <b>32</b>      |
| <b>11</b>  | <a href="#"><u>Fashion Studies</u></a>                               | <b>34</b>      |



**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

## 1. OFFICE AUTOMATION

|                       |                            |  |                                |            |
|-----------------------|----------------------------|--|--------------------------------|------------|
| <b>Programme</b>      | UG (Science Faculty)       |  | <b>External Marks</b>          | 25         |
| <b>Semester</b>       | I                          |  | <b>Practical</b>               | 10         |
| <b>Course Type</b>    | Skill Enhancement Course-1 |  | <b>Total</b>                   | 50         |
| <b>Credit</b>         | 02                         |  | <b>Exam Duration</b>           | 1:00 Hour  |
| <b>Teaching Hrs.</b>  | 30 + 15(Practical) = 45    |  | <b>Practical Exam Duration</b> | 30 Minutes |
| <b>Internal Marks</b> | 10 + 5(Practical) =15      |  | <b>Course Code</b>             |            |
| <b>Course Title</b>   | <b>Office Automation</b>   |  |                                |            |

### COURSE OBJECTIVES:

- Acquire confidence in using computers in Office and General Life.
- Understand file management.
- Create documents using word processor, spreadsheet & presentation software.

### COURSE OUTCOMES:

- Well acquainted with Operating System and its applications for both desktop and Laptop.
- Able to identify various desktop screen components and modify various properties, date, time etc.
- Able to add and remove new program and features, manage files and folders.
- Well versed with printing and know various types of file extensions.
- Gaining Knowledge of Word Processing, their usage, details of word processing screen.
- After completion of Ms Excel, Students will have Knowledge of Spreadsheet Processing, their usage, details of Spreadsheet screen in depth.
- After completion of Ms- PowerPoint, Students will have Knowledge of PowerPoint presentations in depth.

| <b>COURSE CONTENT</b> |                                                                                                                                                                                                                                                            |                        |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Units</b>          | <b>Title of the Unit and the Topics</b>                                                                                                                                                                                                                    | <b>No. of Lectures</b> |
| <b>Unit 1</b>         | <b>WORDPROCESSING</b><br>Introduction<br>Objective<br>Word Processing Basics <ul style="list-style-type: none"> <li>• Opening Word Processing Package</li> <li>• Title Bar, Menu Bar, Toolbars &amp; Sidebar</li> <li>• Creating a New Document</li> </ul> | <b>05</b>              |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|                | <ul style="list-style-type: none"> <li>• Opening and Closing Documents</li> <li>• Opening Documents</li> <li>• Save and Save As</li> <li>• Closing Document</li> <li>• Using The Help</li> <li>• Page Setup</li> <li>• Print Preview</li> <li>• Printing of Documents</li> <li>• PDF file and Saving a Document as PDF file</li> </ul> <p>Text Creation and manipulation</p> <ul style="list-style-type: none"> <li>• Document Creation</li> <li>• Editing Text</li> <li>• Text Selection</li> <li>• Cut, Copy and Paste</li> <li>• Font, Color, Style and Size selection</li> <li>• Alignment of Text</li> <li>• Undo &amp; Redo</li> <li>• Auto Correct, Spelling &amp; Grammar</li> <li>• Find and Replace</li> </ul> <p>Formatting the Text</p> <ul style="list-style-type: none"> <li>• Paragraph Indentation</li> <li>• Bullet sand Numbering</li> <li>• Change case</li> <li>• Header &amp; Footer</li> </ul> <p>Table Manipulation</p> <ul style="list-style-type: none"> <li>• Insert &amp; Draw Table</li> <li>• Changing cell width and height</li> <li>• Alignment of Text in cell</li> </ul> <p>Delete / Insertion of Row, Column and Merging &amp; Splitting of Cells<br/> Border and Shading.</p> |           |
| <b>Unit 2.</b> | <p><b>SPREADSHEET</b></p> <p>Introduction</p> <p>Objectives</p> <p>Elements of Spread Sheet</p> <p>Creating of Spread Sheet</p> <ul style="list-style-type: none"> <li>• Concept of Cell Address [Row and Column] and selecting a Cell</li> <li>• Entering Data [text, number, date in Cells]</li> <li>• Page Setup</li> <li>• Printing of Sheet</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>05</b> |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|                | <ul style="list-style-type: none"> <li>• Saving Spreadsheet</li> <li>• Opening and Closing</li> </ul> <p>Manipulation of Cells &amp; Sheet</p> <ul style="list-style-type: none"> <li>• Modifying/ Editing Cell Content</li> <li>• Formatting Cell (Font, Alignment, Style)</li> <li>• Cut, Copy, Paste &amp; Paste Special</li> <li>• Changing Cell Height and Width</li> <li>• Inserting and Deleting Rows, Column</li> <li>• AutoFill</li> <li>• Sorting Filtering</li> <li>• Freezing panes</li> </ul> <p>Formulas, Functions and Charts</p> <ul style="list-style-type: none"> <li>• Using Formulas for Numbers (Addition, Subtraction, Multiplication &amp; Division, IF)</li> <li>• AutoSum</li> <li>• Functions (Sum, Count, MAX, MIN, AVERAGE)</li> </ul> <p>Charts (Bar, Pie, Line)</p>                                                                                                                                                                                                                              |           |
| <b>Unit 3.</b> | <p><b>PRESENTATION</b></p> <p>Introduction</p> <p>Objectives</p> <p>Creation of Presentation</p> <ul style="list-style-type: none"> <li>• Creating a Presentation Using a Template</li> <li>• Creating a Blank Presentation</li> <li>• Inserting &amp; Editing Text on Slides</li> <li>• Inserting and Deleting Slides in a Presentation</li> <li>• Saving a Presentation</li> </ul> <p>Manipulating Slides</p> <ul style="list-style-type: none"> <li>• Inserting Table</li> <li>• Adding Clip Art Pictures</li> <li>• Inserting Other Objects</li> <li>• Resizing and Scaling an Object</li> <li>• Creating &amp; using Master Slide</li> </ul> <p>Presentation of Slides</p> <ul style="list-style-type: none"> <li>• Choosing a Set Up for Presentation</li> <li>• Running a Slide Show</li> <li>• Transition and Slide Timings</li> <li>• Automating a Slide Show</li> <li>• Providing Aesthetics to Slides &amp; Printing</li> <li>• Enhancing Text Presentation</li> <li>• Working with Color and Line Style</li> </ul> | <b>05</b> |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

|                |                                                                                                                                                   |           |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|                | <ul style="list-style-type: none"><li>• Adding Movie and Sound</li><li>• Adding Headers, Footers and Notes</li></ul> Printing Slides and Handouts |           |
| <b>Unit -4</b> | <b>PRACTICAL</b><br>LAB SESSIONS<br>Practical exercises based on unit -1 to 3                                                                     | <b>30</b> |

**REFERENCE BOOKS:**

1. Microsoft Office for Beginners By M. L. Humphrey
2. Microsoft Office 2019 Beginner By M. L. Humphrey
3. Mastering MS Office By Bittu Kumar
4. Microsoft Office Training Guide By Prof. Satish Jain M. Geetha Kratika, BPB Publications
5. Working in Microsoft Office By Ron Mansfield
6. Windows 10 Step By Step By Joan Lambert
7. Windows 10 Inside Out By Ed Bott and Craig Stinson

**REFERENCE WEBSITES:**

1. <https://edu.gcfglobal.org/en/subjects/office/#>
2. <https://www.customguide.com/training/>
3. <https://www.guru99.com/free-microsoft-courses-certifications.html>
4. <https://alison.com/tag/microsoft-office>
5. <https://www.makeuseof.com/tag/microsoft-office-tutorials-courses/>
6. <https://www.udemy.com/topic/microsoft-word/free/>
7. <https://www.w3schools.com/excel/index.php>

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

| <b>INTERNAL EVALUATION SCHEME</b> |                    |              |
|-----------------------------------|--------------------|--------------|
| <b>NO</b>                         | <b>Particulars</b> | <b>Marks</b> |
| 1                                 | Mid Semester Exam  | 02           |
| 2                                 | MCQ Test           | 05           |
| 3                                 | Assignments        | 03           |
| 4                                 | Internal Practical | 05           |
|                                   | <b>Total</b>       | <b>15</b>    |

**Paper Style:**

| <b>EXTERNAL ASSESSMENT BY UNIVERSITY</b> |                       |              |
|------------------------------------------|-----------------------|--------------|
|                                          | <b>Particulars</b>    | <b>Marks</b> |
| <b>Que.1</b>                             | Questions from Unit-1 | <b>13</b>    |
| <b>Que.2</b>                             | Questions from Unit-2 | <b>12</b>    |

**Practical:**

| <b>EXTERNAL ASSESSMENT BY UNIVERSITY</b> |                    |              |
|------------------------------------------|--------------------|--------------|
|                                          | <b>Particulars</b> | <b>Marks</b> |
| <b>Practical</b>                         | External Practical | <b>10</b>    |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

## 2. CLOTHING CONSTRUCTION

|                      |                              |  |                       |           |
|----------------------|------------------------------|--|-----------------------|-----------|
| <b>Programme</b>     | UG (Science Faculty)         |  | <b>Internal Marks</b> | 15        |
| <b>Semester</b>      | I                            |  | <b>External Marks</b> | 35        |
| <b>Course Type</b>   | Skill Enhancement Course-1   |  | <b>Total</b>          | 50        |
| <b>Credit</b>        | 02                           |  | <b>Exam Duration</b>  | 1:30 Hour |
| <b>Teaching Hrs.</b> | 60                           |  | <b>Course Code</b>    |           |
| <b>Course Title</b>  | <b>CLOTHING CONSTRUCTION</b> |  |                       |           |

### Only Practicals

Introduction of Clothing and Construction

Basic of sewing machine, parts and measuring tools and techniques

| <b>COURSE CONTENTS</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Units</b>           | <b>Unit Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>No. of Lectures</b> |
| <b>Practical</b>       | <ol style="list-style-type: none"> <li>Demonstration sewing machine: Prepare a labeling outline diagram of sewing machine.</li> <li>Make a Tools Chart with Sketch</li> <li>Basic Stitches, Seams and Techniques of Fullness               <ol style="list-style-type: none"> <li>Basic Hand Stitches: Taking stitch, Running stitch, Hemming stitch, Backstitch, Buttonhole stitch, Marking stitch, Herringbone stitch, Loop stitch, Slip stitch, Blanket stitch</li> <li>Basic Machine Stitches: Simple stitch, Gather stitch, Reinforce stitch, Zigzag stitch</li> <li>Types of Seams: Plain seam, felling seam, French seam, Overcast seam, Herringbone seam, Plain Left seam, Flat fall seam, Pippin seam, Plain Left seam, Flat fall seam, Pippin seam,</li> </ol> </li> <li>Techniques of Fullness: Type of Tucks, Type of Pleats, Ruffles and Gathering. Basic Stitches / Seams (make anyone)</li> <li>Drafting and stitching anyone garments:</li> <li>Example: - APRON &amp; CUSION</li> </ol> |                        |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

| INTERNAL EVALUATION SCHEME |                   |           |
|----------------------------|-------------------|-----------|
| NO                         | Particulars       | Marks     |
| 1                          | Mid Semester Exam | 05        |
| 2                          | MCQ Test          | 05        |
| 3                          | Assignments       | 05        |
|                            | <b>Total</b>      | <b>15</b> |

**Practical:**

| PRACTICAL ASSESSMENT BY UNIVERSITY |                    |       |
|------------------------------------|--------------------|-------|
| Que. No.                           | Particulars        | Marks |
| Practical                          | External Practical | 35    |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

### 3. HORTICULTURE

|                       |                          |                       |           |
|-----------------------|--------------------------|-----------------------|-----------|
| <b>Programme</b>      | U.G (Science Faculty)    | <b>Internal Marks</b> | 15        |
| <b>Semester</b>       | I                        | <b>External Marks</b> | 35        |
| <b>Course Type</b>    | Skill Enhancement Course | <b>Total</b>          | 50        |
| <b>Credit</b>         | 02                       | <b>Exam Duration</b>  | 1:30 Hrs. |
| <b>Teaching Hours</b> | 30                       | <b>Course Code</b>    |           |
| <b>Course Title:</b>  | Horticulture             |                       |           |

#### Course Level Learning outcomes:

After the completion of the course the students will be able:

- To gain knowledge of gardening, cultivation, multiplication, raising of seedlings of garden plants.
- To get knowledge of new and modern techniques of plant propagation.
- To develop interest in nature and plant life.

| COURSE CONTENTS |                                                                                                                                                                                                                                                                                                                                                            |                 |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Units           | Unit Description                                                                                                                                                                                                                                                                                                                                           | No. of Lectures |
| <b>Unit 1</b>   | <b>HORTICULTURE</b> <ol style="list-style-type: none"> <li>1. Introduction: Aims, Objectives and Scope of Horticulture</li> <li>2. Plant Propagation-Vegetative, Asexual and Sexual reproduction</li> <li>3. Nursery Management</li> <li>4. Ornamental Plants</li> </ol>                                                                                   | <b>10</b>       |
| <b>Unit 2</b>   | <b>HORTICULTURE</b> <ol style="list-style-type: none"> <li>1. Landscape: Principles, Types and Planning</li> <li>2. Floriculture and its implements</li> <li>3. Bonsai</li> <li>4. Important Horticulture crops of Gujarat</li> </ol>                                                                                                                      | <b>10</b>       |
| <b>Unit 3</b>   | <b>HORTICULTURAL TECHNIQUES</b> <ol style="list-style-type: none"> <li>1. Hydroponics</li> <li>2. Propagation Methods: asexual (grafting, cutting, layering, budding)</li> <li>3. Scope and limitations.</li> <li>4. Field visits to gardens, standing crop sites, nurseries, vegetable gardens and horticultural fields at suitable locations.</li> </ol> | <b>10</b>       |



**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

**REFERENCE BOOKS:**

1. C.R. Adams (2018). Principles of Horticulture. Amsterdam. Boston.
2. Chadha K. L. (2003). Handbook of Horticulture. Indian Council of Agricultural Research.
3. Michael A. Dirr (2009). Manual of Woody and land Plants. Stipes Pub .
4. Salaria and Salaria (2013). A2Z Solutions Horticulture at a glance Vol.I. Jain Bros.

| INTERNAL EVALUATION SCHEME |                   |           |
|----------------------------|-------------------|-----------|
| NO                         | Particulars       | Marks     |
| 1                          | Mid Semester Exam | 05        |
| 2                          | MCQ Test          | 05        |
| 3                          | Assignments       | 05        |
|                            | <b>Total</b>      | <b>15</b> |

**Paper Style:**

| EXTERNAL ASSESSMENT BY UNIVERSITY |                                            |       |
|-----------------------------------|--------------------------------------------|-------|
| Que. No.                          | Particulars                                | Marks |
| Que-1                             | (A) Essay Type Question.<br>(From Unit-1)  |       |
|                                   | <b>OR</b>                                  |       |
|                                   | (B) Essay Type Question.<br>(From Unit-1)  |       |
| Que-2                             | (A) Essay Type Question.<br>(From Unit-2)  |       |
|                                   | <b>OR</b>                                  |       |
|                                   | (B) Essay Type Question.<br>(From Unit-2)  |       |
| Que-3                             | (A) Essay Type Question.<br>(From Unit-3)  |       |
|                                   | <b>OR</b>                                  |       |
|                                   | (B) Essay Type Question.<br>(From Unit-3)  |       |
| Que-4                             | (A) Essay Type Question.<br>(From Unit-4)  |       |
|                                   | <b>OR</b>                                  |       |
|                                   | (B) Essay Type Question.<br>(From Unit-4)  |       |
| Que-5                             | Short Notes. (2/4)<br>(One from each unit) |       |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

#### 4. LABORATORY SKILLS AND SAFETY

|                      |                                 |                                 |               |
|----------------------|---------------------------------|---------------------------------|---------------|
| <b>Course Level</b>  | U.G (Science Faculty)           | <b>Teaching Hours</b>           | 30            |
| <b>Semester</b>      | I                               | <b>Practical Internal Marks</b> | 15            |
| <b>Course Type</b>   | Skills Enhancement Course (SEC) | <b>Practical External Marks</b> | 35            |
| <b>Credit</b>        | 02                              | <b>Total</b>                    | 50            |
|                      |                                 | <b>Exam Duration</b>            | 1:30 Hrs.     |
|                      |                                 | <b>Course Code</b>              | SECHEM 111(P) |
| <b>Course Title:</b> | Laboratory skills and safety    |                                 |               |

#### COURSE OBJECTIVES & OUTCOMES:

The course will provide its learners a primary practical exposure to the chemistry laboratory skills in terms of handling of chemicals, primary analytical techniques, various types of hazards and its safety measures including first aid and disaster management.

On completion of the course the student should be able to:

- Identify various laboratory glass apparatus and handle it properly.
- Use chainomatic balance as well as electronic weighing machine to weigh smaller samples.
- Use, handle and maintain miscellaneous apparatus including electric heating devices.
- Classify various chemicals w.r.t. requirements for safe storage.
- Prepare laboratory reagents, calculate and weigh chemicals for solution preparation antitrations.
- Carry out simple quantitative exercises like acid base titration.
- Carry out qualitative exercises like crystallization, m.p, determination, TLC for identification of two component, and lassaigne Test for elements analysis in organic compounds.
- Learn about fire hazards and its response techniques.
- Learn about MSDS and use it effectively to demonstrate laboratory skills and avoid chemical hazards.
- Learn about detection and handling of LPG gas leakages.
- Know about gas hazards and develop handling skills.
- Provide First Aid including CPR in case of any medical emergency.
- Serve as a skilled person/volunteer during any natural or man-made disaster in the laboratory or elsewhere.

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

| COURSE CONTENTS |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Units           | Title of the Unit and the Topics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No. of Lectures |
| Unit 1          | <p><b>LABORATORY INTRODUCTION:</b></p> <p><b>A. Introduction of Lab Apparatus</b></p> <p><b>Glass apparatus</b> - Beaker, Test tube, boiling tube, funnel, separating funnel, filtration flask, round bottom flask, flat bottom flask, condenser, watch glass etc. measuring conical or condenser, petri dish, desiccator.</p> <p><b>Volumetric Apparatus</b> - Measuring cylinder, burette, pipette, volumetric flask</p> <p><b>Weight and Measurement</b> – Weighing of chemicals for preparation of solutions using chainomatic balance, analytical balance, single-pan electronic balance etc.</p> <p><b>Miscellaneous apparatus-</b> Buchner funnel, effective handing of Bunsen burner, burette stand, retort clamp, China clay dish/evaporating basin, wire gauze, filter pumps, crucible, clay pipe triangle, pestle and mortar, spirit lamp, spatulas, thermometer, pH meter/pH paper etc. and laboratory centrifuge.</p> <p><b>Apparatus for heating:</b> Bunsen burner, water bath, oil bath, hot plate, sand bath, hot air oven, heating mantle etc.</p> <p><b>B. Chemical handling and storage</b></p> <ul style="list-style-type: none"> <li>• Classification of Inorganic compounds based on negative ion</li> <li>• Classification of organic compounds based on chemical nature</li> <li>• Storage requirement of different chemicals [Low Temperature, sun light, Fume wood]</li> </ul> |                 |
| Unit 2.         | <p><b>Laboratory Skills:</b></p> <p><b>Quantitative aspects</b></p> <ul style="list-style-type: none"> <li>• Solution Preparation: Preparation of solutions, indicators and reagents (concentration of solutions: percentage, molarity, normality, molality (in ppm) calculation of masses and volumes for preparation of solutions solids, liquids.)</li> <li>• Simple acid-base titration.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|                | <b>Qualitative aspects</b> <ul style="list-style-type: none"> <li>• Purification and Crystallization of organic compounds using appropriate solvents.</li> <li>• Determination of boiling point and melting point of organic compounds</li> <li>• Chromatographic separation of components. TLC-preparation and identification of number components.</li> <li>• Detection of nitrogen, Sulphur and halogen in given sample using Lassigne test.</li> </ul>                                                                                                                                                                                                                                                                          |  |
| <b>Unit 3.</b> | <b>Laboratory Safety:</b> (Precautions, Demonstrations and Drill)<br><b>Fire Hazards:</b> Causes of fires, classification of fires, fire prevention protocols for different types of fires, fire Extinguishers and its drill. (in coordination with expert of fire department or NGS)<br><b>Chemical Hazards:</b> Classification and handling of hazardous chemicals, storage of chemicals, transfer from large containers. Use of MSDS for efficient handling of chemicals (Assignment/Project report preparation for some specific chemicals may be given to students)<br><b>Gas Hazards:</b><br>Safe usage of LPG in the laboratory,<br>Detection and handling of Gas Leakage, Precautions and first aid related to gas hazards. |  |
| <b>Unit 4.</b> | <b>Medical emergency and First Aid including CPR-(Demonstrations/ Drill and training):</b> Through collaboration/coordination with various Health care service providers, GOs/NGOs like Indian Red Cross Society etc.<br><b>Natural or Man-made Disaster and its response management (Demonstrations/ Drill and training).</b> Through collaboration/coordination with various GOs District disaster management cell/NGOs like Indian Red Cross Society etc.                                                                                                                                                                                                                                                                        |  |

**REFERENCE BOOKS:**

1. Computer Fundamentals by P.K.Sinha
2. Fundamental of IT for BCA–By S.Jaiswal

**Note:** Use the latest edition of the books.

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

| <b>INTERNAL EVALUATION SCHEME</b> |                    |              |
|-----------------------------------|--------------------|--------------|
| <b>NO</b>                         | <b>Particulars</b> | <b>Marks</b> |
| 1                                 | Mid Semester Exam  | 05           |
| 2                                 | MCQ Test           | 05           |
| 3                                 | Assignments        | 05           |
|                                   | <b>Total</b>       | <b>15</b>    |

**Paper Style for Practical Exam:**

| <b>EXTERNAL ASSESSMENT BY UNIVERSITY</b> |                                                                                                                                                                                                                         |                   |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>Que. No.</b>                          | <b>Particulars</b>                                                                                                                                                                                                      | <b>Marks (35)</b> |
| <b>P-1</b>                               | Acid base titration of an unknown sample/Gravimetric analysis.                                                                                                                                                          |                   |
| <b>P-2</b>                               | Viva/Demonstration of practical skills related to identification and handling of equipment, chemicals handling and storage, safety protocol, CPR, First aid, etc / Explanation of practical assignment work undertaken. |                   |
| <b>P-3</b>                               | Continuous internal assessment may also include active participation in activities and demonstration of skill achievement                                                                                               |                   |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

## 5. APICULTURE

|                       |                          |  |                                |           |
|-----------------------|--------------------------|--|--------------------------------|-----------|
| <b>Programme</b>      | U.G (Science Faculty)    |  | <b>Internal Marks</b>          | 15        |
| <b>Semester</b>       | I                        |  | <b>External Marks</b>          | 35        |
| <b>Course Type</b>    | Skill Enhancement Course |  | <b>Total Marks</b>             | 50        |
| <b>Credit</b>         | 02                       |  | <b>Practical Exam Duration</b> | 1:30 Hrs. |
| <b>Teaching Hours</b> | 60                       |  | <b>Course Code</b>             | SEC-101   |
| <b>Course title</b>   | Apiculture               |  |                                |           |

### **COURSE OBJECTIVES:**

- The learner will be able to understand the basics of beekeeping tools, equipment, and managing beehives.
- The learner will be able to understand the primary life cycle of the honeybees, bee keeping tools and equipment.
- The learner will be able to learn and manage beehives for honey production and pollination.
- The course will be useful for providing self-employment to the learner.
- The learner will be able to understand the marketing of various bee products.

### **COURSE OUTCOMES:**

- The learner will be able to understand:
- The learner will be able to manage beehives for honey production and pollination.
- The course will be useful for providing self-employment to the learner.
- The learner will be able to understand the marketing of various bee products.

| <b>COURSE CONTENTS</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Units</b>           | <b>Title of the Unit and the Topics</b>                                                                                                                                                                                                                                                                                                                                                                                                              | <b>No. of Lectures</b> |
| <b>Practical</b>       | <b>Practical 1:</b> History and Classification of Honey Bees<br><b>Practical 2:</b> Biology of Bees<br><b>Practical 3:</b> Social Organization of Bee Colony<br><b>Practical 4:</b> Rearing of Bees<br><b>Practical 5:</b> Selection of Bee Species for Apiculture<br><b>Practical 6:</b> Bee Keeping Equipment<br><b>Practical 7:</b> Artificial Bee rearing (Apiary)<br><b>Practical 8:</b> Methods of Extraction of Honey (Indigenous and Modern) |                        |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

|  |                                                                                                                                                                                                                                                                    |  |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | <b>Practical 9:</b> Bee Diseases and Enemies, Control and Preventive measures<br><b>Practical 10:</b> Bee Economy and Entrepreneurship in Apiculture<br><b>Practical 11:</b> Products of Apiculture Industry and its Uses (Honey, Bees Wax, Propolis, Pollen etc.) |  |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

**REFERENCE BOOKS:**

1. Text book of applied entomology.....Srivastava
2. Economic zoology.....Shukla & Upadhyaya
3. Honey bees and their management in India (ICAR).....R. C. Mishra
4. Beekeeping in India (ICAR).....S. Singh
5. Apiculture (Beekeeping).....Dr D K Belsareet

**Paper Style:**

| <b>PRACTICAL ASSESSMENT BY UNIVERSITY</b> |                                                                    |              |
|-------------------------------------------|--------------------------------------------------------------------|--------------|
| <b>Que. No.</b>                           | <b>Particulars</b>                                                 | <b>Marks</b> |
| Que-1                                     | Do as per instruction and show it to examiner (Practical-1/2)..... | <b>07</b>    |
| Que-2                                     | Do as per instruction and show it to examiner (Practical-3/4)      | <b>07</b>    |
| Que-3                                     | Do as per instruction and show it to examiner (Practical-5/6)      | <b>07</b>    |
| Que-4                                     | Do as per instruction and show it to examiner (Practical-7/8)      | <b>07</b>    |
| Que-5                                     | Do as per instruction and show it to examiner (Practical-9/10)     | <b>06</b>    |
| Que-6                                     | Do as per instruction and show it to examiner (Practical-11)       | <b>06</b>    |
| Que-7                                     | Report and Viva-voice.                                             | <b>05</b>    |
| Que-8                                     | Certified Journal.                                                 | <b>05</b>    |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

## 6. MUSHROOM CULTIVATION

|                       |                          |                                |           |
|-----------------------|--------------------------|--------------------------------|-----------|
| <b>Programme</b>      | U.G (Science Faculty)    | <b>Internal Marks</b>          | 15        |
| <b>Semester</b>       | I                        | <b>External Marks</b>          | 35        |
| <b>Course Type</b>    | Skill Enhancement Course | <b>Total</b>                   | 50        |
| <b>Credit</b>         | 02                       | <b>Practical Exam Duration</b> | 1:30 Hrs. |
| <b>Teaching Hours</b> | 60                       | <b>Course Code</b>             | PHISE101  |
| <b>Course Title:</b>  | Mushroom Cultivation     |                                |           |

### Course Level Learning outcomes:

By the conclusion of this course, the students will benefit as:

- Have developed a very good understanding of nutritional aspects and commercial use of mushrooms for human consumption.
- Have developed a very good understanding of practical cultivation of mushrooms, management of diseases affecting mushrooms, mushroom harvesting and various avenues for using it into an entrepreneurship.
- Enhance the skill of mushroom cultivation in control environment.

| COURSE CONTENTS |                                                                                                                                                                                                                                                                                                                                 |                 |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Units           | Unit Description                                                                                                                                                                                                                                                                                                                | No. of Lectures |
| <b>Unit 1</b>   | <b>Introduction of Mushroom</b><br>Introduction: Morphology, Classification and identification of edible & non-edible/poisonous mushroom. Nutritional and Medicinal value of mushroom, Scope of mushroom cultivation.                                                                                                           |                 |
| <b>Unit 2</b>   | <b>Structure and Life cycle of Mushroom</b><br>Structure & Life cycle: Button mushroom ( <i>Agaricus bisporus</i> ), Milky mushroom ( <i>Calocybe indica</i> ), Oyster mushroom ( <i>Pleurotus sajor caju</i> ) and paddy straw mushroom ( <i>Volvariella volvacea</i> ). Breeding and genetic improvement of mushroom strains. |                 |
| <b>Unit 3</b>   | <b>Cultivation Conditions</b><br>Principles & Requisites: Sterilization and disinfections of substrates, Pasteurization of different substrates, Isolation, growth media, Spawns production and their maintenance.                                                                                                              |                 |



**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

|               |                                                                                                                                                                                                                                                                                                                                                                                                               |  |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Unit 4</b> | <b>Techniques of Cultivation</b><br>Techniques of Cultivation: Structure and construction of mushroom<br>House, layout of Traditional and Greenhouse method.<br>Multiplication of spawn, Composting, bed and polythene bag preparation, spawning - casing – cropping.<br>Pest management: chemical control Harvest and Post-harvest technology; freezing, dry freezing, drying, canning and entrepreneurship. |  |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

**PRACTICAL COURSE:**

1. Introduction to Mushrooms
2. Collection & Identification of Mushrooms
3. Cultivation techniques of button Mushrooms
4. Cultivation Technology Oyster Mushrooms
5. Cultivation Technology of Paddy Straw Mushroom
6. Cultivation Technology of Milky Mushroom
7. Post Harvest Technology- Preservation of Mushrooms

**REFERENCE BOOKS:**

1. Handbook on Mushrooms by Bahl N.
2. Benjamin Hirst Mushrooms: A Beginners Guide to Home Cultivation Paperback (20150)
3. V. N. Pathak .Mushroom Production and Processing Technology IST Edition Hardcover – 2011.
4. Eiri Staff Hand Book of Mushroom Cultivation, Processing and Packaging Paperback – Import, 2007

**ONLINE RESOURCES:**

1. <http://ecoursesonline.iasri.res.in/course/view.php?id=596>

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**

| <b>INTERNAL EVALUATION SCHEME</b> |                    |              |
|-----------------------------------|--------------------|--------------|
| <b>NO</b>                         | <b>Particulars</b> | <b>Marks</b> |
| 1                                 | Mid Semester Exam  | 05           |
| 2                                 | MCQ Test           | 05           |
| 3                                 | Assignments        | 05           |
|                                   | <b>Total</b>       | <b>15</b>    |

**Paper Style:**

| <b>EXTERNAL ASSESSMENT BY UNIVERSITY</b> |                                                   |              |
|------------------------------------------|---------------------------------------------------|--------------|
| <b>Que. No.</b>                          | <b>Particulars</b>                                | <b>Marks</b> |
| <b>Que-1</b>                             | <b>(A) Essay Type Question.</b><br>(From Unit-1)  |              |
|                                          | <b>OR</b>                                         |              |
|                                          | <b>(B) Essay Type Question.</b><br>(From Unit-1)  |              |
| <b>Que-2</b>                             | <b>(A) Essay Type Question.</b><br>(From Unit-2)  |              |
|                                          | <b>OR</b>                                         |              |
|                                          | <b>(B) Essay Type Question.</b><br>(From Unit-2)  |              |
| <b>Que-3</b>                             | <b>(A) Essay Type Question.</b><br>(From Unit-3)  |              |
|                                          | <b>OR</b>                                         |              |
|                                          | <b>(B) Essay Type Question.</b><br>(From Unit-3)  |              |
| <b>Que-4</b>                             | <b>(A) Essay Type Question.</b><br>(From Unit-4)  |              |
|                                          | <b>OR</b>                                         |              |
|                                          | <b>(B) Essay Type Question.</b><br>(From Unit-4)  |              |
| <b>Que-5</b>                             | <b>Short Notes. (2/4)</b><br>(One from each unit) |              |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**

**Effective from June 2023**

## 7. INTRODUCTION TO SCILAB (FOSS)

|                      |                                      |                       |           |
|----------------------|--------------------------------------|-----------------------|-----------|
| <b>Programme</b>     | UG (Science Faculty)                 | <b>Internal Marks</b> | 15        |
| <b>Semester</b>      | I                                    | <b>External Marks</b> | 35        |
| <b>Course Type</b>   | Skill Enhancement Course-1           | <b>Total</b>          | 50        |
| <b>Credit</b>        | 02                                   | <b>Exam Duration</b>  | 1:30 Hour |
| <b>Teaching Hrs.</b> | 30                                   | <b>Course Code</b>    |           |
| <b>Course Title</b>  | <b>Introduction to SciLab (FOSS)</b> |                       |           |

**Note:** Practical based learning course

### COURSE LEARNING OUTCOMES:

- Student will learn to perform various matrix related operations in SciLab like matrix addition, matrix multiplication, matrix inversion etc.
- Student will learn to solve system of simultaneous linear equations in SciLab.
- Student will be able to plot and analyze conics, graphs of trigonometric functions, hyperbolic trigonometric functions, exponential functions and their inverses using plot command.
- Student will also be equipped with some basic programming skills after finishing this course.
- Student will get self motivated to make use of Free and Open Source Software “SciLab” over MatLab software, for their scientific research and development.

| <b>Practical</b> | <b>Title of the Unit and the Topics</b>                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                | Become familiar with the software and its interface:<br>a) What is <i>SciLab</i> ? and Why <i>SciLab</i> ?<br>b) Understanding its general environment and menu bar.<br>c) The Editor window ( <i>SciNotes</i> ), <i>Console</i> and <i>Graphics</i> window<br>d) Some user defined workspace customizations.                                                                                                                             |
| 2                | To realize <i>SciLab</i> as a powerful Calculator :<br>a) Use of Arithmetic, relational and assignment operators in <i>SciLab</i> .<br>b) Learn and use some predefined constant strings like %e, %pi, %eps.<br>c) Learn keywords of inbuilt Mathematical functions in <i>SciLab</i> like trigonometric & inverse trigonometric functions, exponential & logarithmic functions, hyperbolic trigonometric functions, polynomial functions. |
| 3                | To input matrices (of any order) using console as well as editor window :<br>a) Input a row vector, a column vector.<br>b) Input a rectangular array (matrix) and use “ <i>rand</i> ” function to generate matrices with random entries.<br>c) Learn use of matrix functions: <i>zeros</i> , <i>ones</i> , <i>eye</i> , <i>rand</i> , <i>det()</i> , <i>inv()</i> , <i>transpose</i> “ “ ”.                                               |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

|           |                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4</b>  | To perform various kinds of operation(s) / procedure(s) on matrices :<br>a) To perform arithmetic operations (+, -, *, / ) on matrices of suitable dimension and also scalar multiplication of matrix.<br>b) Learn to access ( <i>and/or modify</i> ) any (i,j) <sup>th</sup> entry of given matrix ( <i>or row(s) or column(s)</i> ).<br>c) Learn to obtain sub-matrices of given matrix and also delete row(s) / column(s). |
| <b>5</b>  | a) To find Minors, Cofactors and Adjoint of a matrix and thus get inverse of a matrix by using adjoint method.<br>b) To solve system of simultaneous equations by adjoint method (only up to 4 variables).                                                                                                                                                                                                                    |
| <b>6</b>  | a) To plot any given set of points or sequences in 2D .<br>b) To plot a line segment joining two given points in 2D .<br>c) To plot a line in 2D whose equation is known .<br>d) To manipulate properties of above plot(s) in terms of colour, thickness, position, label marking, title etc.                                                                                                                                 |
| <b>7</b>  | To draw graph of circle, parabola, ellipse, hyperbola for any general equation of type $ax^2 + by^2 + gx + fy + c = 0$ and describe (plot) centre, focus, directrix, asymptotes etc. (whichever applicable) of given conic.                                                                                                                                                                                                   |
| <b>8</b>  | To draw graph of trigonometric functions:<br>$\sin(x)$ , $\cos(x)$ , $\tan(x)$ , $\operatorname{cosec}(x)$ , $\sec(x)$ , $\cot(x)$                                                                                                                                                                                                                                                                                            |
| <b>9</b>  | To draw graph of inverse-trigonometric functions:<br>$\sin^{-1}(x)$ , $\cos^{-1}(x)$ , $\tan^{-1}(x)$ , $\operatorname{cosec}^{-1}(x)$ , $\sec^{-1}(x)$ , $\cot^{-1}(x)$                                                                                                                                                                                                                                                      |
| <b>10</b> | To draw graph of Hyperbolic trigonometric functions:<br>$\sinh(x)$ , $\cosh(x)$ , $\tanh(x)$ , $\operatorname{cosech}(x)$ , $\operatorname{sech}(x)$ , $\coth(x)$                                                                                                                                                                                                                                                             |
| <b>11</b> | To draw graph of inverse Hyperbolic trigonometric functions:<br>$\sinh^{-1}(x)$ , $\cosh^{-1}(x)$ , $\tanh^{-1}(x)$ , $\operatorname{cosech}^{-1}(x)$ , $\operatorname{sech}^{-1}(x)$ , $\coth^{-1}(x)$                                                                                                                                                                                                                       |
| <b>12</b> | To draw graph of logarithmic and exponential functions:<br>$\log_e(x)$ , $\log_{10}(x)$ and $\exp(x)$ , $10^x$                                                                                                                                                                                                                                                                                                                |

**REFERENCE SOURCES:**

- 1) Web resource: Getting started by Scilab Enterprises, <https://www.scilab.org/tutorials/getting-started>
- 2) E-book: SciLab for very beginners by Scilab Enterprises, [https://www.scilab.org/sites/default/files/prg/att/1764/Scilab\\_beginners\\_0.pdf](https://www.scilab.org/sites/default/files/prg/att/1764/Scilab_beginners_0.pdf)
- 3) E-book: Programming in SciLab by Michael Baudin, [https://www.scilab.org/sites/default/files/progscilab-v.0.10\\_en.pdf](https://www.scilab.org/sites/default/files/progscilab-v.0.10_en.pdf)

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

| INTERNAL EVALUATION SCHEME |                   |           |
|----------------------------|-------------------|-----------|
| NO                         | Particulars       | Marks     |
| 1                          | Mid Semester Exam | 05        |
| 2                          | MCQ Test          | 05        |
| 3                          | Assignments       | 05        |
|                            | <b>Total</b>      | <b>15</b> |

**Practical:**

| PRACTICAL ASSESSMENT BY UNIVERSITY |                    |       |
|------------------------------------|--------------------|-------|
| Que. No.                           | Particulars        | Marks |
| Practical                          | External Practical | 35    |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

## **8. ENGLISH FOR COMPETITIVE EXAMS-1**

|               |                                 |  |                |           |
|---------------|---------------------------------|--|----------------|-----------|
| Programme     | U.G (Science Faculty)           |  | Internal Marks | 15        |
| Semester      | I                               |  | External Marks | 35        |
| Course Type   | Skill Enhancement Course        |  | Total          | 50        |
| Credit        | 02                              |  | Exam Duration  | 1:30 Hrs. |
| Teaching Hrs. | 30                              |  | Course Code    | SEC-1     |
| Course Title  | English for competitive Exams-1 |  |                |           |

### **Objectives of the Course:**

Competitive Exams aim at a basic but comprehensive understanding of English language. The present syllabus focuses on four aspects of English language.

1. Grammar Proficiency
2. Vocabulary Enhancement
3. Reading Comprehension
4. Writing Skills

### **Learning Outcomes:**

1. The students will develop a basic understanding of grammar, enabling them to spot and correct mistakes in sentences.
2. The syllabus will enhance the students' vocabulary, enabling them to understand words and their roots, prefixes, and suffixes.
3. Reading comprehension skills will be improved, empowering the students to grasp the main ideas of passages and answer questions accordingly.
4. Writing skills will be honed, enabling the students to effectively communicate in formal situations, which will be beneficial before and after acquiring a job.

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

**Detailed Syllabus**

| UNIT | ITEMS                                                                                                                               | Marks | Teaching Hours |
|------|-------------------------------------------------------------------------------------------------------------------------------------|-------|----------------|
| I    | <ul style="list-style-type: none"> <li>Articles &amp; Quantifiers</li> <li>Subject-Verb Agreement</li> <li>Phrasal Verbs</li> </ul> | 18    | 15             |
| II   | <ul style="list-style-type: none"> <li>Modal Auxiliaries</li> <li>Tenses</li> <li>Comprehension</li> </ul>                          | 17    | 15             |

**Note:** Above mentioned topics must be taught keeping in mind competitive exams.

| INTERNAL EVALUATION SCHEME |                   |       |
|----------------------------|-------------------|-------|
| NO                         | Particulars       | Marks |
| 1                          | Mid Semester Exam | 05    |
| 2                          | MCQ Test          | 05    |
| 3                          | Assignments       | 05    |
|                            | <b>Total</b>      | 15    |

**Paper Style:**

| Ques. No. | Particulars                                                                                                                                             | Marks        |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Q.1       | <b>a. Fill in the blanks (7/9)</b><br><b>b. Identify the error from the sentence (7/9)</b><br>(From Unit-1)                                             | (07)<br>(07) |
| Q.2       | <b>Do as directed (14/16)</b><br>(From Unit-2)                                                                                                          | (14)         |
| Q.3       | <b>a. Give meaning of the Phrasal Verb and make a meaningful sentence using it. (2/3) (From unit-1)</b><br><b>b. Comprehension. (1/1) (From Unit-2)</b> | (02)<br>(05) |

**Suggested Reading**

- Objective General English by S P Bakshi
- High School Wren and Martin English Grammar and Composition

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

3. English Grammar in Use by Raymond Murphy

4. <https://www.grammar-monster.com/>

5. <https://www.englishpage.com/>

**Appendix (Phrasal Verbs)**

**Ask:**

*Ask for* – to demand.

His family *asked for* compensation.

2. *Ask after* – to inquire.

The police had to contact branch office to *ask after* the case.

**Act:**

*Act for* – on behalf of.

I *acted for* my brother while he was out of station.

*Act on* – pursue / follow up on.

Did you *act on* my advice?

*Act upon* – affect / influence.

Over-consumption of alcohol *acts upon* (affects) health.

Her work *acted upon* (influenced) me to pass the exam.

**Back:**

*Back out* – to make a retreat from something agreed.

After my father had refused me, I *backed out* of party plan.

*Back up* – to support.

Can you *back up* your claims?

**Bear:**

**Bear with** – to tolerate.

You have to *bear with* others' criticism to succeed.

**Blow:**

**Blow away** – to remove.

The gust *blew away* all the leaves.

**Blow in / blow into** – to enter noisily

The children *blow in* the classroom.

**Blow off** – to emit.

The vehicles *blow off* black smoke.



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**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

**Break:**

**Brake down** – collapse / crush.

The wall of Berlin *broke down* (collapsed) and an era ended.

Gandhi fought to *break down* (crush) colonialism in India.

**Break off** – to stop / to break a piece.

The bus *broke off* in the middle of its way.

She *broke off* her tooth.

**Break out** – spread.

The Corona virus has *broken out* all over the world.

**Break up** – to end.

The show broke up at 10 p.m.

**Bring:**

**Bring back** – to return / to restore.

No one can *bring* those happy days *back* (return).

This picture *brought* me *back* (restored) sad memories.

**Bring on** – to cause.

Driving carelessly can *bring on* accident.

**Bring out** – to publish.

The book is banned right after it has been *brought out*.

**Call:**

**Call at** – to visit a place.

Jack will *call at* his house later.

**Call on** – to visit a person.

Mr. Morgan will *call on* you soon.

**Call in** – to invite.

Please someone help her and *call in* a doctor.

The doctor *called in* the next patient.

**Call out** – to utter aloud.

The boy *called out*, "I won! I won!"

**Carry:**

**Carry on** – to continue.

Don't be disappointed, *carry on* your hard work.

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**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

**Carry about** – to carry.

My uncle who was a private investigator, always *carries about* a notebook and a pen.

**Carry away** – remove from *certain place* or mental state.

I was *carried away* when I heard my best friend died in an accident.

**Come:**

**Come across** – to meet unexpectedly.

I *came across* her on my way to office.

**Come in** – to enter.

May I *come in*?

**Come out** – to appear / to expose.

The businessman *came out* (appeared) at a video conference.

The reason of his disappearance was *come out* (exposed) then.

**Come after** – to chase.

The dogs *came after* the fox.

**Come off** – to take place.

A campus cleaning programme is going to be *come off*.

**Come round** – to recover / to change position or opinion.

She *came round* (recovered) after an expensive surgery after a long time.

She didn't *come round* (didn't change her opinion) to my point of view.

**Cut:**

**Cut down** – to cut with stroke / to reduce

The wood cutter *cut* the trees *down* with a chain saw.

You should *cut down* (reduce) your daily fat intake.

**Cut off** – to separate / to die.

I am *cut off* (separated) from my family since I got this job.

As her sister was *cut off* (died) and so she is brought up with extra care.

**Get:**

**Get away** – to escape.

The convicted *got away* from the high security prison.

**Get along** – to maintain a friendly relationship.

She *gets along* well with me.

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**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

**Give:**

**Give away** – to distribute.

The Headmaster has *given away* the prizes.

**Give up** – to abandon / to put an end.

You have to work hard, don't *give up* (abandon) until you reach your goal.

*Give up* (put an end) smoking.

**Hold:**

**Hold on** – to stop and wait / to stick to

Please *hold on* a second.

She *held on* (stuck) to encourage me throughout my preparation.

**Keep:**

**Keep away** – to prevent from coming close.

Fire *keeps away* wild animals.

**Keep on** – to continue.

The party *kept on* blaming the voters for their defeat.

= *carry on*.

**Keep up with** – to maintain a pace with.

The public sector units must *keep up* with the latest technology.

**Look:**

**Look after** – to take care.

We must *look after* our parents at their old age.

**Look for** – to search / to expect.

I am *looking for* my glasses.

She didn't *look for* such conduct from you.

**Look through** – to examine carefully.

You didn't *look through* the question papers.

**Make:**

**Make of** – composed of / to understand.

The chair is *made of* (composed of) wood.

What did you *make of* (understand) this lesson?

**Make up** – to catch up with.

I have to *make up* my previous exam today.

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**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

**Pass:**

**Pass away** – to die.

Mr. Bose *passed away* last night.

**Pass by** – go by.

When I looked out the window I saw a Ford *passed by*.

**Put:**

**Put aside** – to set aside / to save.

*Put aside* your toys and come with me.

I must *put aside* enough money for my father's operation. (= *lay by*)

**Put down** – to write / to suppress.

Please *put down* (write) what I'm saying.

The movement has been *put down* (suppressed) effectively by the government.

**Put on** – to wear / to increase.

*Put on* (wear) your overcoat and follow me. Quick.

She joins the gym because she has *put on* (increased) fifteen pounds.

**Run:**

**Run across** – to meet by chance.

We *ran across* her in front of my office after a lapse of five years.

**Run after** – to chase or persuade.

A dog *ran after* the cat.

**Run away** – to flee.

Whenever you see me, you *run away*. Why?

**Set:**

**Set aside** – to put aside / to suspend or cancel.

*Set aside* (put aside) your work and listen to me.

The court has *set aside* (cancelled) the conviction.

**Set about** – to begin.

The US *set about* a war in the middle east years ago.

A bird has *set down* (landed) from the tree.

**See:**

**See off** – to attend someone's departure.

My mother has come to *see me off*.

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**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

***See-through*** – to perceive or discover.

We couldn't *see through* their intention.

**Stand:**

***Stand by*** – to be stick to / to do nothing

She *stood by* me in trouble.

He just *stood by* when the rioters were burning the houses.

***Stand for*** – to represent.

*M.P. stands for* Member of Parliament.

***Stand up for*** – to support.

She *stood up* for me in trouble.

**Take:**

***Take off*** – to remove / to start

I *took off* (removed) my sweater.

The plane will *take off* (start) at 8 p.m.

***Take up*** – to occupy / to adopt.

The table doesn't *take up* (occupy) too much space.

I have *taken up* (adopted) marketing as my hobby.

**Turn:**

***Turn on*** – to switch on or start.

I *turned on* the AC.

***Turn off*** – to switch off.

The refrigerator was *turned off*.

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**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

## 9. Application of Microscopy in Forensic Biology

|                      |                                                      |  |                       |           |
|----------------------|------------------------------------------------------|--|-----------------------|-----------|
| <b>Programme</b>     | U.G (Science Faculty)                                |  | <b>Internal Marks</b> | 15        |
| <b>Semester</b>      | I                                                    |  | <b>External Marks</b> | 35        |
| <b>Course Type</b>   | Skill Enhancement Course                             |  | <b>Total</b>          | 50        |
| <b>Credit</b>        | 02                                                   |  | <b>Exam Duration</b>  | 3:00 Hrs. |
| <b>Teaching Hrs.</b> | 60                                                   |  | <b>Course Code</b>    | SEC-1     |
| <b>Course Title</b>  | <b>Application of Microscopy in Forensic Biology</b> |  |                       |           |

- ❖ Basic principles of Microscopy
- ❖ Types of Microscopes: Light Microscope & Electric Microscope
  - Simple and Compound microscope,
  - Comparison Microscope,
  - Phase contrast Microscope,
  - Stereoscopic microscope,
  - Polarizing microscope,
  - Fluorescent Microscopy,
  - Infra-red Microscopy,
  - Scanning Electron Microscope (SEM) & Transmission Electron Microscope (TEM)
- ❖ Uses of Microscope.

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**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

## 10. Laboratory skills in physics

|                      |                                     |  |                                 |           |
|----------------------|-------------------------------------|--|---------------------------------|-----------|
| <b>Programme</b>     | U.G (Science Faculty)               |  | <b>Internal Marks</b>           | 00        |
| <b>Semester</b>      | I                                   |  | <b>External Practical Marks</b> | 50        |
| <b>Course Type</b>   | Skill Enhancement Course            |  | <b>Total</b>                    | 50        |
| <b>Credit</b>        | 02                                  |  | <b>Exam Duration</b>            | 3:00 Hrs. |
| <b>Teaching Hrs.</b> | 60                                  |  | <b>Course Code</b>              | SEC-1     |
| <b>Course Title</b>  | <b>Laboratory skills in physics</b> |  |                                 |           |

### Course Objectives and learning outcome

The course will provide its learners a primary practical exposure to the physics laboratory skills in terms of handling of electronic and optical instruments, various types of hazards and its safety measures including first aid and disaster management.

- To Understand the basic principles, construction, working of various measuring instruments and their applications.
- To acquire the knowledge about the basic concepts Vernier calipers, Micrometer screw, Spherometer, Wheatstone Bridge etc.
- To understand working function of Wheatstone Bridge

At the end of course students will be able to

- Understands the basic knowledge about working of various instruments and their application.
- Learn and understand construction and use of various measuring instruments.

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**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

**Syllabus**

Unit-1 **Vernier Calipers:** Introduction, Theory, Figure, Description of the instrument, Detail study of Least count, Method of taking observation with the help of Vernier Calipers.

**Micrometer Screw:** Introduction, Theory, Figure, Description of the instrument, Definition of pitch and its determination, study of least count, Method of taking observation with the help of Micrometer Screw.

Unit-2 **Spherometer:** Introduction, Theory, Figure, Description of the instrument, to determine the pitch of the screw, To determine the least count of the spherometer, Zero error, Derivation of the formula for the radius of curvature of a curved surface.

**Wheatstone Bridge:** Introduction, Theory with figure, The figure of meter bridge used in laboratory, construction of Meter bridge. Post-Office box: Introduction, Theory, Circuit Diagram, Theoretical Circuit diagram, explanation of working with necessary formula.

**Practical examination mark distribution:**

- a) Perform practical and calculate parameter for given practical. **[20 marks]**
- b) viva/Demonstration of practical skills related to identification and handling of equipment and Explanation of practical assignment work undertaken. **[15 marks]**
- c) Continuous internal assessment may also include active participation in activities and demonstration of skill achievement **[15 marks]**



**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

## 11. Fashion Studies

|               |                          |  |                          |           |
|---------------|--------------------------|--|--------------------------|-----------|
| Programme     | U.G (Science Faculty)    |  | Internal Marks           | 15        |
| Semester      | I                        |  | External Practical Marks | 35        |
| Course Type   | Skill Enhancement Course |  | Total                    | 50        |
| Credit        | 02                       |  | Exam Duration            | 4:00 Hrs. |
| Teaching Hrs. | 60                       |  | Course Code              | SEC-1     |
| Course Title  | Fashion Studies          |  |                          |           |

### OBJECTIVE

1. This course helps in understanding concept of fashion and the factors that affect fashion.
2. Its enables the students to familiarize with fashion terminology.
3. Understanding of the fashion trends is must for garment designers to make their designs acceptable in Market.
4. Thus this is a very important course for students.

### PRACTICAL

1. To collections of famous designers photographs Garment from internet which is related to the field.
2. To make Fashion Accessories — (Any Two)
  - a. Jewellery
  - b. Hand Bag
  - c. Purses
  - d. Broach
  - e. Belt
3. Sketching of elements design
4. Sketching of Principles design
5. Project work — Fashion Accessories / Fashion Style / Fashion Collection

### RECOMMENDED READINGS

1. Fashion Design Essentials: 100 Principles of Fashion Design - Rockport I Jay Calderin
2. The culture of Fashion - Christopher Breward

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**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

3. Fashion and Modernity O Christopher Breward
4. Fashion logy: An Introduction to Fashion Studies - Yuniya Kawamura
5. Fashion and Its Social Agendas: Class, Gender, and Identity in Clothing – DianaCrane
6. Fashion Cultures: Theories, Explorations and Analysis - Stella Bruzzi
7. Ready to Wear Apparel Analysis. Prentice Hall, Brown, Patty, Rice J., 1998.
8. Individuality in Clothing & Personal, Marshall S G, Jackson H O, Stanley MS, Kefge M &Specht T, 2009.
9. Appearance, 6th Edition, Pearson Education, USA.
10. The Complete Book of Fashion Design, Harper and Row Publications, Tate S.L., Edwards M.S., 1982, New York
11. Dr.veena s. samani(2012) :apparel making part- I Saurashtra university — Rajkot

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**Syllabus of Science Faculty (UG) as per NEP**  
**BASKET FOR SKILL ENHANCEMENT COURSES**  
**Effective from June 2023**

| <b>INTERNAL MARKS BIFURCATION</b> |                      |           |
|-----------------------------------|----------------------|-----------|
| No                                | Particulars          | Marks     |
| 1                                 | Mid sem. Exam        | 5         |
| 2                                 | MCQ test / Practical | 5         |
| 3                                 | Assignment           | 5         |
|                                   | <b>TOTAL</b>         | <b>15</b> |

| <b>PRACTICALS EXAM    STYLE OF SEMESTER EXAM</b> |                                                                      |           |
|--------------------------------------------------|----------------------------------------------------------------------|-----------|
| Question Number                                  | Particulars                                                          | Marks     |
| Q.1                                              | Answer the Following Question<br>OR<br>Answer the Following Question | 10        |
| Q.2                                              | Answer the Following Question<br>OR<br>Answer the Following Question | 10        |
| Q.3                                              | Answer the Following Question<br>OR<br>Answer the Following Question | 15        |
|                                                  | <b>TOTAL</b>                                                         | <b>35</b> |



પરિપત્ર:

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટીની સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજોનાં આચાર્યશ્રીઓને સવિનય જણાવવાનું કે સાયન્સ વિદ્યાશાખા હેઠળનો NEP-૨૦૨૦ અંતર્ગતનો સ્કીલ એન્હાન્સમેન્ટ કોર્સનો સેમેસ્ટર-૨ નો અભ્યાસક્રમ આ સાથે સામેલ છે. આ બાસ્કેટમાં સાયન્સનાં વિષયો આપવામાં આવેલ છે.

માનનીય કુલપતિશ્રીની મંજૂરી અનુસાર સદર અભ્યાસક્રમ શૈક્ષણિક વર્ષ જુન, ૨૦૨૩ થી અમલવારી કરવાની રહે છે. સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજો ધ્વારા તેની અમલવારી કરવા જણાવવામાં આવે છે.



ખાસ ફરજ પરના અધિકારી  
(એકેડેમિક)

ક્રમાંક/બીકેએનએમયુ/એકેડેમિક/૨૮૫/૨૦૨૪  
ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી,  
સરકારી પોલીટેકનિક કેમ્પસ,  
ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી રોડ,  
ખડીયા, જૂનાગઢ-૩૬૨૨૬૩  
તા.૩૧/૦૧/૨૦૨૪

પ્રતિ,

- ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી સંલગ્ન સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમો ચલાવતી તમામ કોલેજોના આચાર્યશ્રીઓ તરફ....

નકલ સાદર રવાના:-

- માન.કુલપતિશ્રી/કુલસચિવશ્રીનાં અંગત સચિવશ્રી.
- પરીક્ષા નિયામકશ્રી, ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ

નકલ રવાના જાણ તથા યોગ્ય કાર્યવાહી અર્થે:

- સીસ્ટમ મેનેજરશ્રી, આઇ.ટી.સેલ વિભાગ (વેબસાઇટ ઉપર પ્રસિદ્ધ થવા અર્થે.)

# Bhakta Kavi Narsinh Mehta University Junagadh



## FACULTY OF SCIENCE SYLLABUS FOR SKILL ENHANCEMENT COURSE BASKET FOR SCIENCE (HONOURS) FACULTY (SEMESTER- II) EFFECTIVE FROM JUNE, 2023

| INDEX  |                                                               |          |
|--------|---------------------------------------------------------------|----------|
| Sr. No | Topic                                                         | Page No. |
| 1.     | English for Competitive Exams-2                               | 01       |
| 2.     | Laboratory Analytical Techniques                              | 03       |
| 3.     | Separation Techniques - CHROMATOGRAPHY                        | 06       |
| 4.     | Natural Resource Management                                   | 08       |
| 5.     | Aquarium Management                                           | 11       |
| 6.     | Microbial Quality Control in Food & Pharmaceutical Industries | 14       |
| 7.     | Laboratory skills in physics                                  | 18       |
| 8.     | Introduction to GeoGebra (FOSS)                               | 20       |
| 9.     | Basic concepts of Networking and Internet                     | 22       |
| 10.    | Basic of Computer Application                                 | 25       |

**BHAKTA KAVI NARSINH MEHTA UNIVERSITY**  
**Skill Enhancement Course (SEC)**  
**Syllabus of English for Competitive Exams**  
**as per NEP**  
**Effective from June 2023**  
**Subject: English for Competitive Exams-2**  
**SEMESTER-2**

**COURSE NO : 1: ENGLISH FOR COMPETITIVE EXAMS-2**

|                     |                                    |                       |           |
|---------------------|------------------------------------|-----------------------|-----------|
| <b>Course Level</b> | 4.5                                | <b>Course Credit</b>  | 02        |
| <b>Programme</b>    | UG (Arts/Com./Science)             | <b>Teaching Hours</b> | 30 Hrs    |
| <b>Semester</b>     | 2                                  | <b>Course Code</b>    |           |
| <b>Course Type</b>  | Skill Enhancement Course-1 (SEC-1) | <b>Internal Marks</b> | 25        |
|                     |                                    | <b>External Marks</b> | 25        |
| <b>Course Title</b> | English for Competitive Exams-2    | <b>Total</b>          | 50        |
|                     |                                    | <b>Exam Duration</b>  | 1:00 Hrs. |

**Objectives of the Syllabus:**

Competitive Exams aim at a basic but comprehensive understanding of English language. The present syllabus focuses on four aspects of English language.

1. Grammar Proficiency
2. Vocabulary Enhancement
3. Writing Skills

**Learning Outcomes:**

1. The students will develop a basic understanding of grammar, enabling them to spot and correct mistakes in sentences.
2. The syllabus will enhance the students' vocabulary, enabling them to understand words and their roots, prefixes, and suffixes.
3. Writing skills will be honed, enabling the students to effectively communicate in formal situations, which will be beneficial before and after acquiring a job.

**Detailed Syllabus**

| <b>UNIT</b> | <b>ITEMS</b>                                                                                                                                                                                  | <b>Teaching Hours</b> |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| I           | <ul style="list-style-type: none"> <li>• Adjectives</li> <li>• Adverbs</li> <li>• Prepositions</li> <li>• Conjunctions</li> <li>• Degree (Positive, Comparative &amp; Superlative)</li> </ul> | 15                    |
| II          | <ul style="list-style-type: none"> <li>• Active-Passive Voice</li> <li>• Degree (Positive, Comparative &amp; Superlative)</li> </ul>                                                          | 15                    |

| INTERNAL EVALUATION SCHEME |                            |           |
|----------------------------|----------------------------|-----------|
| NO                         | Particulars                | Marks     |
| 1                          | <b>Mid Semester Exam</b>   | <b>13</b> |
| 2                          | Class Test                 | 03        |
| 3                          | Open book exam/test        | 03        |
| 4                          | Open note exam/test        | 03        |
| 5                          | Self-test/ Online test     | 03        |
| 6                          | Essay/Article writing      | 03        |
| 7                          | Quizzes/Objective test     | 03        |
| 8                          | Class assignment           | 03        |
| 9                          | Home assignment            | 03        |
| 10                         | Reports Writing            | 03        |
| 11                         | Research/Dissertation      | 03        |
| 12                         | Case Studies               | 03        |
| 13                         | Viva/Oral exam             | 03        |
| 14                         | Group Discussion           | 03        |
| 15                         | Role Play                  | 03        |
| 16                         | Paper presentation/Seminar | 03        |
| 17                         | Language Lab work          | 03        |
| 18                         | Interview                  | 03        |
| 19                         | Craft work                 | 03        |
| 20                         | Co-curricular work         | 03        |
| 21                         | Field Assignment           | 03        |
| 22                         | Poster Presentation        | 03        |
| 23                         | Attendance                 | 03        |
|                            | <b>Total</b>               | <b>25</b> |

**Note:** Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 23. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.

#### **Paper Style:**

| EXTERNAL ASSESSMENT BY UNIVERSITY |                                                                     |             |
|-----------------------------------|---------------------------------------------------------------------|-------------|
| Ques. No.                         | Particulars                                                         | Marks       |
| <b>Q.1</b>                        | <b>(A) Fill in the blanks (5/6)</b> (From Unit-1)                   | <b>(05)</b> |
|                                   | <b>(B) Identify the error from the sentence (5/6)</b> (From Unit-1) | <b>(05)</b> |
| <b>Q.2</b>                        | <b>(A) Do as directed (5/6)</b> (From Unit-2)                       | <b>(05)</b> |
|                                   | <b>(B) Transformation of sentences. (5/6)</b> (From Unit-2)         | <b>(05)</b> |
| <b>Q.3</b>                        | <b>MCQs (5/6)</b> (From Unit-1 & 2)                                 | <b>(05)</b> |

#### **Suggested Reading**

1. Objective General English by S P Bakshi
2. High School Wren and Martin English Grammar and Composition
3. English Grammar in Use by Raymond Murphy
4. <https://www.grammar-monster.com/>
5. <https://www.englishpage.com/>



**Bhakta Kavi Narsinh Mehta University**  
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## COURSE NO-2: LABORATORY ANALYTICAL TECHNIQUES

|                     |                                  |                                           |           |
|---------------------|----------------------------------|-------------------------------------------|-----------|
| <b>Course Level</b> | U.G                              | <b>Teaching Hours</b>                     | 60        |
| <b>Programme</b>    | B.Sc. Chemistry                  | <b>Internal Marks</b>                     | 25        |
| <b>Semester</b>     | II                               | <b>External Marks (Practical)</b>         | 25        |
| <b>Course Type</b>  | Skill Enhancement Course         | <b>Practical Marks</b>                    |           |
| <b>Course title</b> | Laboratory Analytical Techniques | <b>Total</b>                              | 50        |
| <b>Credit</b>       | 02                               | <b>Exam Duration</b>                      |           |
| <b>Course Code</b>  | SECHEM121                        | <b>Practical Exam Duration (External)</b> | 2:00 hrs. |

### Course Objectives and Learning Outcome

The course will provide its learners a practical exposure to various analytical techniques like Redox titrations, pH measurement of live samples using various methods, water analysis, and analysis of some real minerals and oils.

On completion of the course the student should be able to:

- Determine the normality, molarity and gms/liter of each component in a mixture of components like of  $\text{H}_2\text{C}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$  and  $\text{H}_2\text{SO}_4$  /  $\text{H}_2\text{C}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$  and  $\text{K}_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{O} / \text{KMnO}_4$  and  $\text{FeSO}_4 \cdot 7\text{H}_2\text{O} / \text{FeSO}_4 (\text{NH}_4)_2\text{SO}_4 \cdot 6\text{H}_2\text{O}$  and  $\text{K}_2\text{Cr}_2\text{O}_7$  using redox titrimetric methods.
- Determine pH of various real food or other samples using different handy methods.
- Carry out analysis of drinking water of samples across the region
- Learn method to carry out analysis of minerals/ores, oil.

**2 CREDITS (4 Hours/Week)**

**50 MARKS**

### 1-Redox titration

- To determine the normality, molarity and g/lit of each component in a mixture of  $\text{H}_2\text{C}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$  and  $\text{H}_2\text{SO}_4$  using 0.1N NaOH and 0.1 N  $\text{KMnO}_4$  solution.
- To determine the normality, molarity and g/lit of each component in a mixture of  $\text{H}_2\text{C}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$  and  $\text{K}_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{O}$  using 0.1N NaOH and 0.1 N  $\text{KMnO}_4$  solution
- To determine the normality, molarity and g/lit of  $\text{KMnO}_4$  and  $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$  solution using 0.1 N  $\text{H}_2\text{C}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$  solution.
- To determine the normality, molarity and g/lit of  $\text{FeSO}_4 (\text{NH}_4)_2\text{SO}_4 \cdot 6\text{H}_2\text{O}$  and  $\text{K}_2\text{Cr}_2\text{O}_7$  solutions using 0.1 N  $\text{KMnO}_4$  solution.

## 2-pH

- Concept of pH,
- pH scale,
- Determination of pH of various samples like
  - Farming soil, colleges soil...
  - water
  - Fruit
  - Milk
  - Cold drinks by pH strip, indicator [Without instrument]

## 3. Water analysis:

- Concept of Hardness-Total Hardness, Temporary and permanent hardness.
- Removal of Temporary hardness by boiling and filtration.
- Estimation of hardness by complexometric titration with EDTA.
- Measurement of TDS.
- Handy measurement of pH of water using various methods.

## 4. Analysis of real samples using titrimetric methods.

- Dolomite-Estimation of  $\text{Ca}^{+2}/\text{Mg}^{+2}$
- Oil-Saponification value

## Reference books

1. UGC Inorganic Chemistry - H. C. Khera (Pragati Prakashan)
2. Inorganic Chemistry - J. N. Gurtu & H. C. Khera
3. Principles of Inorganic chemistry- B. R. Puri, L. R. Sharma and K. C. Kalia; Vallabh publications, Delhi.
4. Concise Inorganic Chemistry - J. D. Lee
5. Basic Inorganic Chemistry – Gurdeep & Chatwal.
6. Advanced Inorganic Chemistry - Raymond Chang
7. Advanced Inorganic Chemistry- Cotton and Wilkinson
8. Undergraduate Organic Chemistry, Vol-1, Jagdamba Singh, L. D.S. Yadav, Pragati Prakashan, 8th edition-2013
9. Organic Reaction Mechanism, including Reaction Intermediates, V. K. Ahluwalia
10. Organic Chemistry, Vol-1, by Sultanat, Ane's Student Edition, Ane Book Pvt Ltd.
11. Organic Chemistry by Morrison and Boyd.
12. Organic Chemistry by Clayden.
13. Stereochemistry, conformation and mechanism by P.S. Kalsi New Age International publications ISBN:978-9393159947
14. Essentials of Physical Chemistry, B. S. Bahl, G. D. Tuli and Arun Bahl, S. Chand & Co.
15. Elements of Physical Chemistry, B. R. Puri, L. R. Sharma and Madan Pathania, Vishal Publishing

Co. Jalandhar.

16. Physical Chemistry, B. K. Sharma, Goel Publication House. Meerut.
17. Chemical Kinetics, G. R. Chatwal and Harish Mishra, Goel Publication House.
18. A text book of Physical Chemistry by Samuel Glasstone
19. Elements of Physical Chemistry by Samuel Glasstone and D lew
20. Analytical Chemistry Manual by Dr. H. S. Joshi (ISBN-978-93-90855-07-0).
21. How and why in Chemistry Practical by Dr. A. R. Parikh Himanshu Book co. ISBN978- 81-950054-0-6
22. March's Advanced Organic Chemistry Reactions, Mechanism and Structure by Michael B Smith and Jerry March.
23. Vogel's Qualitative inorganic analysis
24. A Text book of practical organic chemistry; including qualitative organic analysis.
25. Analytical Chemistry Manual by Dr. H. S. Joshi (ISBN-978-93-90855-07-0).
26. How and why in Chemistry Practical by Dr. A. R. Parikh Himanshu Book co. ISBN(78-81-950054-0-6

#### **Practical examination mark distribution**

- a) Redox titration of a sample containing mixture
- b) Analysis/Testing of real sample/Explanation/Demonstration of practical assignment work undertaken.
- c) Continuous internal assessment may also include active participation in activities and demonstration of innovative handy analytical skills/Assignment.

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**COURSE NO -3: SEPARATION TECHNIQUES - CHROMATOGRAPHY**

|                     |                                        |                                |           |
|---------------------|----------------------------------------|--------------------------------|-----------|
| <b>Course Level</b> | U.G                                    | <b>Teaching Hours</b>          | 30        |
| <b>Programme</b>    | B.Sc. Forensic Science                 | <b>Internal Marks</b>          | 25        |
| <b>Semester</b>     | II                                     | <b>External Marks</b>          | 25        |
| <b>Course Type</b>  | Skill Enhancement Course               | <b>Practical Marks (Int)</b>   | 00        |
| <b>Course title</b> | Separation Techniques - CHROMATOGRAPHY | <b>Total</b>                   | 50        |
| <b>Credit</b>       | 02                                     | <b>Exam Duration</b>           | 1:00 Hrs. |
| <b>Course Code</b>  | SECFS201                               | <b>Practical Exam Duration</b> | -         |

→ Chemical separation techniques: Chromatography

→ Chromatographic techniques: General principles and function of chromatography

- Paper chromatography
- Column chromatography
- TLC
- Adsorption chromatography
- Partition chromatography
- Gas chromatography
- Gas- liquid chromatography
- Ion-exchange chromatography
- Exclusion (permeation) chromatography
- Affinity chromatography, HPLC

→ Uses of Chromatography.

**REFERENCES BOOKS**

1. B.B. Nanda and R.K. Tiwari, Forensic Science in India: A Vision for the Twenty First Century, Select Publishers, New Delhi (2001).
2. M.K. Bhasin and S. Nath, Role of Forensic Science in the New Millennium, University of Delhi, Delhi (2002).
3. W.G. Eckert and R.K. Wright in Introduction to Forensic Sciences, 2nd Edition, W.G. Eckert (ED.), CRC Press, Boca Raton (1997).
4. R. Saferstein, Criminalistics, 8th Edition, Prentice Hall, New Jersey (2004).

5. S.H. James and J.J. Nord by, Forensic Science: An Introduction to Scientific and Investigative Techniques, 2nd Edition, CRC Press, Boca Raton (2005).
6. David, Kauzlarich and Hugh D. Barlow. (2009) Introduction to criminology (9th ed.) Rowman & Littlefield Publishers.
7. Reid, Sue Titus. (2006). Crime and Criminology. Mc. Graw Hill.
8. Willard's; Instrumental Methods of Analysis.
9. Forensic Biology 2<sup>nd</sup> Edition Richard Li, New York USA.
10. Forensic Chemistry Handbook edited by Lawrence Kobilinsky.
11. Principles and Techniques of biochemistry and molecular biology.

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**Subject: B.Sc. Botany**

**COURSE NO: 4 NATURAL RESOURCE MANAGEMENT**

|                     |                             |                                |           |
|---------------------|-----------------------------|--------------------------------|-----------|
| <b>Course Level</b> | U.G                         | <b>Teaching Hours</b>          | 30        |
| <b>Programme</b>    | B.Sc. Botany                | <b>Internal Marks</b>          | 25        |
| <b>Semester</b>     | II                          | <b>External Marks</b>          | 25        |
| <b>Course Type</b>  | Skill Enhancement Course    | <b>Practical Marks (Ext)</b>   | -         |
| <b>Course title</b> | Natural Resource Management | <b>Total</b>                   | 50        |
| <b>Credit</b>       | 02                          | <b>Exam Duration</b>           | 1:00 Hr.  |
| <b>Course Code</b>  | SEC-201                     | <b>Practical Exam Duration</b> | 2:00 Hrs. |

**Course outcomes:**

After the completion of the course the students will be able:

- Understand the importance, benefits and services of biodiversity.
- To learn the strategies for the conservation of biodiversity.
- This knowledge is critical in evolving strategies for sustainable natural resource management and biodiversity conservation.

**LEARNING OUTCOME:** On completion of the course, the students will be able to

- Understand the concept of different natural resources and their utilization.
- Critically analyze the sustainable utilization land, water, forest and energy resources.
- Evaluate the management strategies of different natural resources.
- Reflect upon the different national and international efforts in resource management and their conservation.

**UNIT: I      Natural Resource Management - I**

- I.1      Natural Resource: Definition, types and management.
- I.2      Sustainable utilization: Concept, approaches (economic, ecological and socio-cultural).
- I.3      Land Utilization: (agricultural, pastoral, horticultural, silvicultural)
- I.4      Soil degradation and management.

**UNIT: II      Natural Resource Management – II**

- II.1      Fresh water: rivers, lakes, groundwater, aquifers, watershed,
- II.2      Marine Water; Estuarine; Wetlands.
- II.3      Forests: Definition, Cover and its significance (with special reference to India).
- II.4      Major and minor forest products; Depletion; Management.

**UNIT: III      Natural Resource Management – III**

- III.1      Energy: Renewable and non-renewable sources of energy.
- III.2      Contemporary practices in resource management: EIA (Environmental Impact Assessment),
- III.3      Resource Accounting, Waste management, National and international efforts in resource management and conservation.

**Suggested Readings:**

1. Rogers, P.P., Jalal, K.F. and Boyd, J.A. (2008). An Introduction to Sustainable Development. Prentice Hall of India Private Limited, New Delhi.
2. Singh, J. S., Singh, S.P. and Gupta, S. (2006). Ecology, Environment and Resource Conservation. Anamaya Publications, New Delhi.
3. Vasudevan, N. (2006). Essentials of Environmental Science. Narosa Publishing House, New Delhi.

**Theory Examination Paper Style NEP 2020**  
**SEMESTER – II**

**Time: 1 Hours**

**Total Marks: 25**

**Instructions:**

1. Illustrate your answer with neat and labelled diagrams.
2. Figure to the right side indicates full marks of questions.

| <b>Que. No.</b> | <b>Particulars</b>          | <b>Marks</b> |
|-----------------|-----------------------------|--------------|
| <b>Que-1</b>    | From Unit : 1<br>(1)<br>(2) | 05<br>05     |
|                 | <b>OR</b>                   |              |
|                 | From Unit : 1<br>(1)<br>(2) | 05<br>05     |
|                 |                             |              |
| <b>Que-2</b>    | From Unit : 2<br>(1)<br>(2) | 05<br>05     |
|                 | <b>OR</b>                   |              |
|                 | From Unit : 2<br>(1)<br>(2) | 05<br>05     |
|                 |                             |              |
| <b>Que-3</b>    | From Unit : 3<br>(1)<br>(2) | 05<br>05     |



**Bhakta Kavi Narsinh Mehta University**  
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**Subject: B.Sc. Zoology**

**COURSE NO: 5 AQUARIUM MANAGEMENT**

|                     |                          |                                   |           |
|---------------------|--------------------------|-----------------------------------|-----------|
| <b>Course Level</b> | U.G                      | <b>Teaching Hours</b>             | 60        |
| <b>Programme</b>    | B.Sc. Zoology            | <b>Internal Marks</b>             | 25        |
| <b>Semester</b>     | II                       | <b>External Marks</b>             |           |
| <b>Course Type</b>  | Skill Enhancement Course | <b>Practical Marks (External)</b> | 25        |
| <b>Course title</b> | Aquarium Management      | <b>Total</b>                      | 50        |
| <b>Credit</b>       | 02                       | <b>Exam Duration</b>              | 1:00 Hrs. |
| <b>Course Code</b>  | SEC-101                  | <b>Practical Exam Duration</b>    | 3:00 Hrs. |

**Course Objectives:**

1. Student will be able to know the fundamentals of aquarium fish industry.
2. Student will understand the biological features of aquarium fishes.
3. Student will get to know the food and feeding habits of aquarium fishes.
4. Student will get aware about transportation of fishes

**Course Learning Outcomes:** After completing the course, the student should be able to:

1. Construct an aquarium.
2. Manage the fish diseases.
3. Prepare the proper dosage of different kinds of natural and synthetic fish feed.
4. Properly handle and maintain the aquarium fish.

| <b>COURSE CONTENT</b> |             |                                                                                                                                                                                |
|-----------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UNIT-1                | Practical 1 | Introduction to Aquarium Fish Keeping                                                                                                                                          |
|                       | Practical 2 | The potential scope of Aquarium Fish Industry                                                                                                                                  |
|                       | Practical 3 | Exotic and Endemic species of Aquarium Fishes                                                                                                                                  |
| UNIT-2                | Practical 4 | Biology of Aquarium Fishes: Common Fresh water and Marine Aquarium fishes such as Guppy, Molly, Sword tail, Gold fish, Angel fish, Blue morph, Anemone fish and Butterfly fish |
|                       | Practical 5 | Food and feeding of Aquarium fishes: Use of live fish feed organisms. Preparation and composition of formulated fish feeds                                                     |
|                       | Practical 6 | Fish Transportation: Live fish transport - Fish handling, packing and forwarding techniques.                                                                                   |
| UNIT-3                | Practical 7 | General Aquarium maintenance                                                                                                                                                   |

### Reference books for Zoology Skill Enhancement Course SEC-201

1. Freshwater Aquariums: Basic Aquarium Setup and Maintenance..... D. Alderton
2. Ornamental Fish Culture and Aquarium Management..... A D Dholakia
3. Home Aquarium and Ornamental Fish Culture..... C. S. Tharadevi, K. V. Jayashree
4. Aquarium Management.....A. Saxena

### **Theory Examination Paper Style NEP 2020** **SEMESTER – II**

**Time: 1 Hours**

**Total Marks: 25**

**Instructions:**

1. Illustrate your answer with neat and labelled diagrams.
2. Figure to the right side indicates full marks of questions.

| Que. No. | Particulars                 | Marks    |
|----------|-----------------------------|----------|
| Que-1    | From Unit : 1<br>(1)<br>(2) | 05<br>05 |
|          | OR                          |          |
|          | From Unit : 1<br>(1)<br>(2) | 05<br>05 |
|          |                             |          |
| Que-2    | From Unit : 2<br>(1)<br>(2) | 05<br>05 |
|          | OR                          |          |
|          | From Unit : 2<br>(1)<br>(2) | 05<br>05 |
|          |                             |          |
| Que-3    | From Unit : 3<br>(1)<br>(2) | 05<br>05 |

**PRACTICAL EXAMINATION SEMESTER – II**

Time: 3 Hours

Total Marks: 25

| <b>Que. No.</b> | <b>Particulars</b>                                             | <b>Marks</b> |
|-----------------|----------------------------------------------------------------|--------------|
| <b>Que-1</b>    | Do as per instruction and show it to examiner (Practical-1/2). | <b>02</b>    |
| <b>Que-2</b>    | Do as per instruction and show it to examiner. (Practical-3)   | <b>02</b>    |
| <b>Que-3</b>    | Do as per instruction and show it to examiner. (Practical-4)   | <b>03</b>    |
| <b>Que-4</b>    | Do as per instruction and show it to examiner. (Practical-5)   | <b>03</b>    |
| <b>Que-5</b>    | Do as per instruction and show it to examiner. (Practical-6)   | <b>02</b>    |
| <b>Que-6</b>    | Do as per instruction and show it to examiner. (Practical-7)   | <b>02</b>    |
| <b>Que-7</b>    | Certified Journal.                                             | <b>01</b>    |
| <b>Que-8</b>    | Viva-voice.                                                    | <b>10</b>    |

**Bhakta Kavi Narsinh Mehta University**  
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**COURSE No.-6: MICROBIAL QUALITY CONTROL IN FOOD & PHARMACEUTICAL INDUSTRIES**

|                     |                                                               |                                |           |
|---------------------|---------------------------------------------------------------|--------------------------------|-----------|
| <b>Course Level</b> | U.G                                                           | <b>Teaching Hours</b>          | 15+30 =45 |
| <b>Programme</b>    | B.Sc. Microbiology                                            | <b>Internal Marks</b>          | 25        |
| <b>Semester</b>     | II                                                            | <b>External Marks</b>          | 25        |
| <b>Course Type</b>  | Skill Enhancement Course                                      | <b>Practical Marks (Int)</b>   | -         |
| <b>Course title</b> | Microbial Quality Control in Food & Pharmaceutical Industries | <b>Total</b>                   | 50        |
| <b>Credit</b>       | 02                                                            | <b>Exam Duration ( T )</b>     | 1:00 Hrs. |
| <b>Course Code</b>  | SECMBT201                                                     | <b>Practical Exam Duration</b> | 3:00 Hrs. |

**Course Objectives: (Theory)**

By completing this lesson, students will be able to:

- To study the quality control in range of industrial sector.
- To explore the standard methods and conditions necessary for the food and pharmaceutical industries.
- Courses enrich the skill of the students towards the SOP and standards practice of the industries.

**Course Outcomes: (Theory)**

By the completion of this course, the students will improve the skill and knowledge as:

- Have developed a very good understanding of practical aspects of microbiological safety, various detection methodologies and use of different microbiological media in food industries.
- Have developed a very good understanding of practical aspects of microbiological safety, various detection methodologies and toxicological testing of products in the pharmaceutical industries.
- Understanding and acquiring the knowledge of the food and drinking water standard.

| COURSE CONTENTS |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Units           | Title of the Unit and the Topics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No. of Lectures |
| Unit 1.         | <b>MICROBIOLOGY LABORATORY AND PRACTICE</b> <ul style="list-style-type: none"> <li>Microbiological Laboratory and Safe Practices:</li> <li>Good laboratory practices- Good laboratory practices, Good microbiological practices.</li> <li>Biosafety cabinets: Working of biosafety cabinets, using protective clothing, specification for BSL- 1, BSL-2, BSL-3. Discarding biohazardous waste.</li> </ul>                                                                                                                               | 8               |
| Unit 2.         | <b>STANDARD MICROBIAL METHODS-I</b> <ul style="list-style-type: none"> <li>Determining Microbes in Food / Pharmaceutical Samples:</li> <li>Culture and microscopic methods - Standard plate count, Most probable numbers, Direct microscopic counts.</li> <li>Biochemical methods: Limulus lysate test for endotoxin, sterility testing for pharmaceutical products.</li> <li>Enrichment culture technique, Detection of specific microorganisms - on Salmonella Shigella Agar, Mannitol salt agar, EMB agar, McConkey Agar.</li> </ul> | 8               |
| Unit 3.         | <b>STANDARD MICROBIAL METHODS-II</b> <ul style="list-style-type: none"> <li>Ascertaining microbial quality of milk by MBRT, Rapid detection</li> <li>methods of microbiological quality of milk at milk collection centers</li> <li>(COB, 10 min Resazurin assay).</li> </ul>                                                                                                                                                                                                                                                           | 7               |
| Unit -4.        | <b>FOOD SAFETY AND MICROBIAL STANDARDS</b> <ul style="list-style-type: none"> <li>Hazard analysis of critical control point (HACCP) - Principles, flow diagrams, limitations.</li> <li>Microbial Standards for Different Foods and Water – BIS standards for common foods and drinking water.</li> </ul>                                                                                                                                                                                                                                | 7               |

#### Reference Books

1. Quality Control in the Food Industry V1, S Herschdoerfer, ISBN: 9780323152068, Academic Press, 1967
2. Prescott L.M., Microbiology 7th Edition, The McGraw–Hill Companies
3. Principles of Sensory Evaluation of Food- 1965 MA Amerine, RM , Pangborn and EB Roessler, Elsevier.
4. Patel. R.J., Patel. K.R., Experimental Microbiology, Vol-I, Aditya Publications, Ahmedabad, India.
5. Patel. R.J., Patel. K.R., Experimental Microbiology, Vol-II, Aditya Publications, Ahmedabad, India.

| <b>INTERNAL EVALUATION SCHEME</b> |                     |                  |
|-----------------------------------|---------------------|------------------|
| <b>INTERNAL ASSESSMENT</b>        |                     |                  |
| <b>No.</b>                        | <b>Particulars</b>  | <b>Weightage</b> |
| 1                                 | Internal Components | 15               |
| 2                                 | Viva                | 10               |
|                                   | <b>Total</b>        | 25               |

**Paper Style:**

**Time: 1 Hours**

**Total Marks: 25**

**Instructions:**

1. Illustrate your answer with neat and labelled diagrams.
2. Figure to the right side indicates full marks of questions.

| <b>Que. No.</b>  | <b>Particulars</b>                       | <b>Marks</b> |
|------------------|------------------------------------------|--------------|
| <b>Que-1 (A)</b> | From Unit : 1<br>(1)                     | <b>05</b>    |
|                  | <b>OR</b>                                |              |
|                  | (1)                                      | <b>05</b>    |
| <b>Que-1 (B)</b> | From Unit : 2<br>(1)                     | <b>05</b>    |
|                  | <b>OR</b>                                |              |
|                  | (1)                                      | <b>05</b>    |
| <b>Que-2 (A)</b> | From Unit : 3<br>(1)                     | <b>05</b>    |
|                  | <b>OR</b>                                |              |
|                  | (1)                                      | <b>05</b>    |
| <b>Que-2 (B)</b> | From Unit : 4<br>(1)                     | <b>05</b>    |
|                  | <b>OR</b>                                |              |
|                  | (1)                                      | <b>05</b>    |
| <b>Que-3</b>     | Five short questions from all four units | <b>05</b>    |
|                  | 1                                        |              |
|                  | 2                                        |              |
|                  | 3                                        |              |
|                  | 4                                        |              |
|                  | 5                                        |              |

**Course Outcomes: (Practical)**

By the completion of this course, the students will improve the skill and knowledge as:

- Have developed a very good understanding of practical aspects of microbiological safety, various detection methodologies and use of different microbiological media in food industries.
- Have developed a very good understanding of practical aspects of microbiological safety, various detection methodologies and toxicological testing of products in the pharmaceutical industries.
- Understanding and acquiring the knowledge of the food and drinking water standard.

| <b>COURSE CONTENTS (Practical)</b> |                                               |                        |
|------------------------------------|-----------------------------------------------|------------------------|
| <b>Practical</b>                   | <b>Title of the Unit and the Topics</b>       | <b>No. of Lectures</b> |
| 1                                  | Introduction to the good laboratory practices | <b>30</b>              |
| 2                                  | Standard plate count                          |                        |
| 3                                  | Microscopic examination of organisms          |                        |
| 4                                  | Sterility testing of pharmaceutical products  |                        |
| 5                                  | Selective media preparation and cultivation   |                        |
| 6                                  | MBRT test                                     |                        |
| 7                                  | Resazurin test                                |                        |
| 8                                  | BIS guideline for food and water standard     |                        |

| <b>INTERNAL EVALUATION SCHEME</b> |                       |                  |
|-----------------------------------|-----------------------|------------------|
| <b>INTERNAL ASSESSMENT</b>        |                       |                  |
| <b>No.</b>                        | <b>Particulars</b>    | <b>Weightage</b> |
| 1                                 | Practical Performance | 15               |
| 2                                 | Viva                  | 10               |
|                                   | <b>Total</b>          | <b>25</b>        |

**Paper Style: External**

| <b>ASSESSMENT BY UNIVERSITY</b>    |                                                                                                  |              |
|------------------------------------|--------------------------------------------------------------------------------------------------|--------------|
| <b>Que. No.</b>                    | <b>Particulars</b>                                                                               | <b>Marks</b> |
| <b>SECTION-1 EXAMINER EXTERNAL</b> |                                                                                                  |              |
| 1                                  | Perform any two from the given list of exercises as per the instruction of the examiner exercise | <b>15</b>    |
| 2                                  | Viva-voce                                                                                        | <b>10</b>    |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Bachelor of Science (B.Sc.) as per NEP**  
**Effective from June 2023**  
**Subject: B.Sc. PHYSICS**

**COURSE NO: 7: LABORATORY SKILLS IN PHYSICS**

|                     |                              |                                   |    |
|---------------------|------------------------------|-----------------------------------|----|
| <b>Course Level</b> | U.G                          | <b>Teaching Hours</b>             | 60 |
| <b>Programme</b>    | B.Sc. Microbiology           | <b>Internal Marks</b>             | 25 |
| <b>Semester</b>     | II                           | <b>External Marks (Practical)</b> | 25 |
| <b>Course Type</b>  | Skill Enhancement Course     | <b>Practical Marks</b>            |    |
| <b>Course title</b> | Laboratory skills in physics | <b>Total</b>                      | 50 |
| <b>Credit</b>       | 02                           | <b>Exam Duration</b>              | -  |
| <b>Course Code</b>  | SECPHY211(P)                 | <b>Practical Exam Duration</b>    | -  |

**Course Objectives**

The course will provide its learners a primary practical exposure to the physics laboratory skills in terms of handling of electronic and optical instruments, various types of hazards and its safety measures including first aid and disaster management.

- To Understand the basic principles, construction, working of various measuring instruments and their applications.
- To acquire the knowledge about the basic concepts Vernier calipers, Micrometer screw, Spherometer, Wheatstone Bridge etc.
- To understand working function of Wheatstone Bridge

**Learning outcome**

At the end of course students will be able to

- Understands the basic knowledge about working of various instruments and their application.
- Learn and understand construction and use of various measuring instruments.



|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Unit-1</b> | <p><b>RESISTOR:</b> Generals information, Resistor type, Wire wound resistor, Carbon composition resistor, Carbon film resistor, Cermete film resistor, Metal film resistor, Power resistor, Value tolerance, Variable resistor, Potentiometer and Rheostats, Fusibal resistor., Resistor color, resistor, Colour band, Resistor under ten ohm , Resistor. Troubles, Checking resistor with ohmmeter.</p> <p><b>TRANSFORMER:</b> Introduction, Type of Transformer, Construction of Transformer, Transformer working, Transformer impedance, Can a Transformer Operate on DC ?, RF Shielding, Auto Transformer.</p>                                   |
| <b>Unit-2</b> | <p><b>INDUCTOR:</b> Inductor, Comparison of different coils, Inductance of an inductance, Another definition of inductance, Mutual inductance, Coefficient of coupling, Variables inductors, Inductor in series and parallel without M, Series combination with m, Stray inductance, Energy storage magnetic field, DC Resistance of coils</p> <p><b>CAPACITOR:</b> Capacitors, Capacitor connect to battery, Capacitance, Factors controlling capacitance, Type of Capacitors, Fixed Capacitor, Variable capacitors, Voltage rating of capacitors, Stray circuit cap. Lickage resistance, Troubles Capacitor, Checking capacitor with ohm meter.</p> |

### Practical Examination Style

| Particulars                                                                                                                                         | Marks |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Perform practical and calculate parameter for given practical.                                                                                      | 25    |
| Viva/Demonstration of practical skills related to identification and handling of equipment and Explanation of practical assignment work undertaken. | 15    |
| Continuous internal assessment may also include active participation in activities and demonstration of skill achievement                           | 10    |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Bachelor of Science (B.Sc.) as per NEP**  
**Effective from June 2023**  
**Subject: B.Sc. Mathematics**

## Course Name-8: Introduction to GeoGebra (FOSS)

|                     |                                                                                 |                                |    |
|---------------------|---------------------------------------------------------------------------------|--------------------------------|----|
| <b>Course Level</b> | U.G                                                                             | <b>Teaching Hours</b>          | 30 |
| <b>Programme</b>    | B.Sc. Mathematics                                                               | <b>Internal Marks (P)</b>      | 25 |
| <b>Semester</b>     | II                                                                              | <b>External Marks</b>          | 00 |
| <b>Course Type</b>  | Skill Enhancement Course                                                        | <b>Practical Marks</b>         | 25 |
| <b>Course title</b> | Introduction to GeoGebra (FOSS)<br><b>Note: Practical based learning course</b> | <b>Total</b>                   | 50 |
| <b>Credit</b>       | 02                                                                              | <b>Exam Duration</b>           | -  |
| <b>Course Code</b>  | SEC-201                                                                         | <b>Practical Exam Duration</b> |    |

### Course Learning Outcome

- Student will learn to draw various geometric shapes using a variety of tools available in GeoGebra.
- Student will learn to use function inspector tool to analyze the given function.
- Student will be able to use slider functionality of GeoGebra.
- Student will also be able to plot various types of conics and calculate the area of the bounded region.
- Student will be equipped to find optimum solution of given LPP.

| <b>Practical No.</b> | <b>Title</b>                                                                                                                                                                                                                                                            |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.                   | Introduction to the interface of GeoGebra.                                                                                                                                                                                                                              |
| 2.                   | Use of tools bar to draw various geometric shapes including line, line segment, triangle, polygon, circle and conics.                                                                                                                                                   |
| 3.                   | Drawing of graph of any function of one variable for cartesian equation using menu bar and to analyze the function using function inspector tool from tools menu and find its properties like maximum and minimum values.                                               |
| 4.                   | Drawing of graph of curve using menu bar, when equation of the curve is given.                                                                                                                                                                                          |
| 5.                   | Drawing of various types of triangles including equilateral triangle, isosceles triangle, scalene triangle, right angled triangle, acute angled triangle, obtuse angled triangle, and locating concurrent points like centroid, incenter, circumcenter and orthocenter. |

|            |                                                                                                                                                                 |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>6.</b>  | Introduction to various circle and compass tools and practicing construction of various geometric shapes including triangles, polygons, squares, rectangle etc. |
| <b>7.</b>  | Verification of some important theorems of geometry, algebra and calculus using GeoGebra.                                                                       |
| <b>8.</b>  | Drawing and measuring various geometric shapes using angle, distance, area and slope tools from tools bar.                                                      |
| <b>9.</b>  | Use of vector tools for creating reflection, rotation and translation.                                                                                          |
| <b>10.</b> | Use of slider and animation.                                                                                                                                    |

**Format of Question Paper for External Theory Examination**

**(Semester End Evaluation(SEE)-Summative-50 Marks)**

**Evaluation of 50 Marks (2 Credit Paper)**

| Continuous and Comprehensive Evaluation (CCE)-Formative- 25 Marks |                 | Semester End Evaluation (SEE)- Summative-25 Marks |                 |
|-------------------------------------------------------------------|-----------------|---------------------------------------------------|-----------------|
| <b><u>Practical's (25 Marks)</u></b>                              |                 | <b><u>Practical's (25 Marks)</u></b>              |                 |
| 1. Performance                                                    | 15 Marks        | 1. Performance                                    | 15 Marks        |
| 2. Viva-voce                                                      | 10 Marks        | 2. Viva-voce                                      | 05 Marks        |
|                                                                   |                 | 3. Journal                                        | 05 Marks        |
| <b>Total</b>                                                      | <b>25 Marks</b> | <b>Total</b>                                      | <b>25 Marks</b> |

**Bhakta Kavi Narsinh Mehta University**  
**Syllabus of Bachelor of Science (B.Sc.) as per NEP**  
**Effective from June 2023**  
**Subject: B.Sc. (IT)/BCA**

## Course No - 9: Basic concepts of Networking and Internet

|                     |                                           |                                |         |
|---------------------|-------------------------------------------|--------------------------------|---------|
| <b>Course Level</b> | U.G                                       | <b>Teaching Hours</b>          | 30      |
| <b>Programme</b>    | B.Sc. (IT) and BCA                        | <b>Internal Marks</b>          | 25      |
| <b>Semester</b>     | II                                        | <b>External Marks</b>          | 25      |
| <b>Course Type</b>  | Skill Enhancement Course                  | <b>Practical Marks</b>         | 00      |
| <b>Course title</b> | Basic concepts of Networking and Internet | <b>Total</b>                   | 50      |
| <b>Credit</b>       | 02                                        | <b>Exam Duration</b>           | 1:00 Hr |
| <b>Course Code</b>  | SEC-2                                     | <b>Practical Exam Duration</b> | -       |

### Course Objectives:

- To understand basic terms of computer networks and Internet
- To gain insight into the usage of internet technology

### Course Outcomes:

- Gaining understanding on how computer network works and how it is implemented
- Gaining understanding on how internet works and how it is useful in today's scenario

| Units         | Title of the Unit and the Topics                                                                                                                                                                                                                                                                                                                                                                                             | No. of Lectures |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>Unit 1</b> | <b>Introduction to Computer Network</b> <ul style="list-style-type: none"> <li>• Basics of Computers</li> <li>• Computer Network</li> <li>• Type of Computer Network</li> <li>• Network Topology</li> <li>• OSI Reference Model (Introduction)</li> <li>• TCP/IP</li> <li>• Internet Terminology</li> <li>• ISP (Internet Service Provider)</li> <li>• Intranet</li> <li>• VSAT (very small aperture terminal)URL</li> </ul> | 10              |
| <b>Unit 2</b> | <b>Basics of Internet</b> <ul style="list-style-type: none"> <li>• Evolution of World Wide Web (WWW)</li> <li>• Types and uses of various Search Engines</li> <li>• Remote Communication <ul style="list-style-type: none"> <li>o Login</li> <li>o Applications</li> <li>o advantages</li> <li>o disadvantages</li> </ul> </li> <li>• Electronic Mail (Email)</li> </ul>                                                     | 10              |

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |    |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
|               | <ul style="list-style-type: none"> <li>• Concept and use of : <ul style="list-style-type: none"> <li>o E-Commerce</li> <li>o E-Business</li> <li>o E-Governance</li> <li>o Mobile Commerce</li> </ul> </li> <li>• <b>Website Basics</b><br/>WebPages, Hyper Text Transfer, URL , Domain Names, Domain name server, Internet Protocol, File Transfer Protocol, Protocol Address, Website(Static, Dynamic, Responsive), Web browser, Web Servers, Web Hosting, web portal</li> </ul> |    |
| <b>Unit 3</b> | <ul style="list-style-type: none"> <li>• <b>Network Security Concepts:</b> <ul style="list-style-type: none"> <li>o Cyber Law</li> <li>o Firewall</li> <li>o Cookies</li> <li>o Hackers and Crackers</li> </ul> </li> <li>• <b>Types of Payment System:</b> <ul style="list-style-type: none"> <li>o Digital Cash</li> <li>o Electronic Cheque</li> <li>o Smart Card</li> <li>o Debit/Credit Card</li> <li>o Net banking</li> <li>o UPI</li> </ul> </li> </ul>                     | 10 |

#### References:

1. Internet the complete reference by Young.
2. Internet for every one by Leon.

#### Web site References:

- <https://www.geeksforgeeks.org/basics-computer-networking/>
- [https://www.tutorialspoint.com/basics\\_of\\_computer\\_science/basics\\_of\\_computer\\_science\\_internet.html](https://www.tutorialspoint.com/basics_of_computer_science/basics_of_computer_science_internet.html)

| INTERNAL ASSESSMENT |                                                    |       |
|---------------------|----------------------------------------------------|-------|
| Que. No.            | Particulars                                        | Marks |
| 1                   | Mid term Examination.                              | 13    |
| 2                   | Any 4 Components each of 3 Marks as per Annexure-3 | 12    |

#### Paper Style

| ASSESSMENT BY UNIVERSITY |                                                        |       |
|--------------------------|--------------------------------------------------------|-------|
| Que. No.                 | Particulars                                            | Marks |
| 1                        | Questions from Unit-1 (Any Two Out Of Four) (Marks 10) | 10    |
| 2                        | Questions from Unit-2 (Any Two Out Of Four) (Marks 10) | 10    |
| 3                        | Questions from Unit-3 (Any one Out Of Two) (Marks 05)  | 05    |

| Annexure-3                                                                                                      |                            |       |
|-----------------------------------------------------------------------------------------------------------------|----------------------------|-------|
| Scheme for Internal Assessment (As per SOP by the Government)<br>For 2 (Two) Credit and 50-marks Course         |                            |       |
| Internal Evaluation Schemes                                                                                     |                            |       |
| Particular                                                                                                      |                            | Marks |
| Mid-Semester Examination                                                                                        |                            | 12    |
| Any Four Components from the following List                                                                     |                            |       |
| 1.                                                                                                              | Class Test                 | 3     |
| 2.                                                                                                              | Open book exam/test        | 3     |
| 3.                                                                                                              | Open note exam/test        | 3     |
| 4.                                                                                                              | Self-test/ Online test     | 3     |
| 5.                                                                                                              | Essay/Article writing      | 3     |
| 6.                                                                                                              | Quizzes/Objective test     | 3     |
| 7.                                                                                                              | Class assignment           | 3     |
| 8.                                                                                                              | Home assignment            | 3     |
| 9.                                                                                                              | Reports Writing            | 3     |
| 10.                                                                                                             | Research/Dissertation      | 3     |
| 11.                                                                                                             | Case Studies               | 3     |
| 12.                                                                                                             | Viva/Oral exam             | 3     |
| 13.                                                                                                             | Group Discussion           | 3     |
| 14.                                                                                                             | Role Play                  | 3     |
| 15.                                                                                                             | Paper presentation/Seminar | 3     |
| 16.                                                                                                             | Language Lab work          | 3     |
| 17.                                                                                                             | Interview                  | 3     |
| 18.                                                                                                             | Craft work                 | 3     |
| 19.                                                                                                             | Co-curricular work         | 3     |
| 20.                                                                                                             | Field Assignment           | 3     |
| 21.                                                                                                             | Poster Presentation        | 3     |
| 22.                                                                                                             | Attendance                 | 3     |
| Total                                                                                                           |                            | 50    |
| Note: The student has to obtain 09 marks (36% marks out of total 25 marks) for passing the Internal Examination |                            |       |

**Bhakta Kavi Narsinh Mehta University**  
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**Subject: Home Science**

**COURSE NAME-10: BASIC OF COMPUTER APPLICATION**

|                     |                               |                                |          |
|---------------------|-------------------------------|--------------------------------|----------|
| <b>Course Level</b> | U.G                           | <b>Teaching Hours</b>          | 60       |
| <b>Programme</b>    | B.Sc. Home Science            | <b>Internal Marks</b>          | 25       |
| <b>Semester</b>     | II                            | <b>External Marks</b>          | 00       |
| <b>Course Type</b>  | Skill Enhancement Course      | <b>Practical Marks</b>         | 25       |
| <b>Course title</b> | BASIC OF COMPUTER APPLICATION | <b>Total</b>                   | 50       |
| <b>Credit</b>       | 02                            | <b>Exam Duration</b>           | -        |
| <b>Course Code</b>  | HS0FN1SEC05                   | <b>Practical Exam Duration</b> | 4:00 Hrs |

**OBJECTIVES:** To enable the students to

1. Know the basics of computers;
2. be able to use computers for education, information and research.

**SESSION 1: LAB GUIDE Working with Windows OS**

- 1.1 Working with Desktop
- 1.2 Creating Folder
- 1.3 Creating Text Files
- 1.4 Renaming and Deleting the File And Folder
- 1.5 Working with Recycle Bin
- 1.6 Shutting Down

**SESSION 2: LAB GUIDE MS-Word 2007**

- 2.1 How to Start MS-Office
- 2.2 Office Button - New, Open, Save, Save As, Print, Print Preview, Close
- 2.3 Home Menu - Clipboard, Font, Paragraph, Style, Editing
- 2.4 Insert Menu - Pages, Tables, Illustrations, Header & Footer
- 2.5 Page Layout - Themes, Page Setup, Page Background, Paragraph

**SESSION 3: LAB GUIDE MS-Power Point 2007**

- 3.1 How to Start Power Point
- 3.2 Office Button - New, Open, Save, Save As, Print, Send, Close

3.3 Home Menu - Clipboard, Font, Paragraph, Drawing, Editing 3.4 Insert Menu - Tables, Illustration, Header & Footer

3.5 Design Menu - Page Setup, Themes, Background,

3.6 Animations Menu - Preview, Animations, Transition

3.7 Slide Show Menu - Start Slide Show, Set Up

#### **SESSION 4: LAB GUIDE Internet**

4.1 Email- Create your E-Mail Account

4.2 Log into E-Mail Account

4.3 Read an E-Mail, Send an E-Mail

4.4 Sending Soft Copy as Attachments

4.5 Download Attachments.

4.6 Open Following Websites.

1. Your College Website
2. BKNMU Website
3. Http [www.irctc.com.in](http://www.irctc.com.in)
4. Http [www.yatra.com](http://www.yatra.com)

#### **PRACTICAL-**

- 1) Prepare an application for the post of a lecturer in College in MS- Word.
- 2) Prepare a resume in MS-Word.
- 3) Prepare your semester-2 time table in MS-Word.
- 4) Enlist your semester-1 and semester-2 subjects in MS-Word.
- 5) Prepare a bar chart of your college H.Sc. semester-6 results of last 5 years in MSWord.
- 6) Prepare a pie chart of your class semester-1 result in MS-Word. (Number of girls and got grade or class.)
- 7) Prepare a visiting card for hobby classes/tuition class/ beauty parlour in MS-Word.
- 8) Prepare an invitation card for inauguration of your shop in MS-Word.
- 9) Prepare a power point presentation to give information about home science. 10) Prepare a power point presentation for your hobby classes/ beauty parlour/ boutique.



## RECOMMENDED READINGS-

- 1) Microsoft office 2007 2nd edition by computer world.
- 2) Bano computer expert 5th edition by computer world.
- 3) Beginner's guide 2001 by Aptech Limited 4) Computer application & I.-1 by C. Jamnadas & company.

| INTERNAL MARKS BIFURCATION |             |       |
|----------------------------|-------------|-------|
| No                         | Particulars | Marks |
| 1                          | COMPONENT   |       |
|                            | TOTAL       | 25    |

| PRACTICALS EXAM STYLE OF SEMESTER EXAM |                                                                      |       |
|----------------------------------------|----------------------------------------------------------------------|-------|
| Question Number                        | Particulars                                                          | Marks |
| Q.1                                    | Answer the Following Question<br>OR<br>Answer the Following Question | 10    |
| Q.2                                    | Answer the Following Question<br>OR<br>Answer the Following Question | 10    |
| Q.3                                    | VIVA                                                                 | 05    |
|                                        | TOTAL                                                                | 25    |



પરિપત્ર:

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટીની આર્ટસ, કોમર્સ અને સાયન્સ વિદ્યાશાખાઓનાં અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજોનાં આચાર્યશ્રીઓને સવિનય જણાવવાનું કે આર્ટસ, કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ હેઠળનો NEP-૨૦૨૦ અંતર્ગતનો વેલ્યુ એડેડ કોર્સ કેટેગરીમાં ઇન્ડિયન નોલેજ સીસ્ટમ (ભારતીય જ્ઞાન પરંપરા) વિષયનો સેમેસ્ટર-૧ નો અભ્યાસક્રમ આ સાથે સામેલ છે. ઉપરોક્ત ત્રણેય વિદ્યાશાખાઓનાં બધાજ પ્રોગ્રામ્સ માટે આ અભ્યાસક્રમ સમાન રહેશે.

માનનીય કુલપતિશ્રીની મંજૂરી અનુસાર સદર અભ્યાસક્રમ શૈક્ષણિક વર્ષ જુન, ૨૦૨૩થી અમલવારી કરવાની રહે છે. આર્ટસ, કોમર્સ અને સાયન્સ વિદ્યાશાખાઓનાં અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજો ધ્વારા તેની અમલવારી કરવા જણાવવામાં આવે છે.



કા.કુલસચિવશ્રી

ક્રમાંક/બીકેએનએમયુ/એકેડેમિક/૧૪૬૮/૨૦૨૩-૨૦૨૪

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી,  
સરકારી પોલીટેકનિક કેમ્પસ,  
ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી રોડ,  
ખડીયા, જૂનાગઢ-૩૬૨૨૬૩  
તા.૨૦/૦૭/૨૦૨૩

પ્રતિ,

- ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી સંલગ્ન આર્ટસ, કોમર્સ અને સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમો ચલાવતી તમામ કોલેજોના આચાર્યશ્રીઓ તરફ....

નકલ સાદર રવાના:-

- (૧) માન.કુલપતિશ્રી/કુલસચિવશ્રીનાં અંગત સચિવશ્રી.
- (૨) પરીક્ષા નિયામકશ્રી, ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ

નકલ રવાના જાણ તથા યોગ્ય કાર્યવાહી અર્થે:

- (૧) સીસ્ટમ મેનેજરશ્રી, આઈ.ટી.સેલ વિભાગ (વેબસાઇટ ઉપર પ્રસિદ્ધ થવા અર્થે.)

# BHAKTA KAVI NARSINH MEHTA UNIVERSITY



**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**COMMON SYLLABUS OF**  
**VAC (VALUE ADDED COURSE)**  
**INDIAN KNOWLEDGE SYSTEM (IKS) COURSE**  
**FOR ARTS, COMMERCE AND SCIENCE FACULTIES**  
**SEMESTER - 01**  
**EFFECTIVE FROM JUNE – 2023**

**ભક્ત કવિ નરસિંહ મેહતા યુનીવર્સિટી, જૂનાગઢ**  
**સેમેસ્ટર – ૧ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)**  
**રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત**  
**ભારતીય જ્ઞાન પરંપરાનો અભ્યાસક્રમ**  
**જૂન ૨૦૨૩થી અમલમાં**  
**કોર્સ નંબર ૧: ભારતીય જ્ઞાન પરંપરા**

|                       |                           |  |                           |           |
|-----------------------|---------------------------|--|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                       |  | <b>Course Code</b>        |           |
| <b>Programme</b>      | Arts/Commerce/Science     |  | <b>Internal Marks</b>     | 15        |
| <b>Semester</b>       | 1                         |  | <b>External Marks</b>     | 35        |
| <b>Course Type</b>    | Value Added Course        |  | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | Indian Knowledge System-1 |  | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                        |  | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                    |  | <b>Exam Duration</b>      | 1:30 Hrs. |

**હેતુઓ:**

- o વિદ્યાર્થીઓ ભારતીય સંસ્કૃતિ, ફિલસૂફી અને આધ્યાત્મિકતાના મજબૂત પાયાને સમજવામાં સક્ષમ બનશે.
- o રાષ્ટ્રવાદ પ્રત્યે વિદ્યાર્થીઓની સભાનતા વધુ પ્રબળ બનશે.
- o વિદ્યાર્થીઓ રાષ્ટ્રીય ચેતના અને રાષ્ટ્રીય વિકાસમાં ભારતીય જ્ઞાન પ્રણાલીની ભૂમિકાને સમજશે.
- o વિદ્યાર્થીઓ ભારતીય સમૃદ્ધ જ્ઞાન પ્રણાલીના સમકાલીન મહત્વ અને જરૂરિયાતને સમજી શકશે.

| Unit    | Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Teaching Hours |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Unit: 1 | <p><b>ભારતીય જ્ઞાન પરંપરાનો પરિચય</b></p> <ul style="list-style-type: none"> <li>• <b>ભારતીય જ્ઞાન પરંપરા</b> <ul style="list-style-type: none"> <li>o પ્રસ્તાવના : ભારતીય જ્ઞાન પરંપરા (IKS) અને તેનું મહત્વ</li> <li>o ભારતીય જ્ઞાન પ્રણાલીઓ અને જીવનના વિવિધ ક્ષેત્રોમાં ભારતીય જ્ઞાન પ્રણાલીઓ (IKS) નું યોગદાન</li> </ul> </li> <li>• <b>શાસ્ત્રો : ભારતવર્ષનું મૂળભૂત સાહિત્ય</b> <ul style="list-style-type: none"> <li>o શાસ્ત્ર શું છે?</li> <li>o શાસ્ત્રોનું મહત્વ</li> <li>o શાસ્ત્રનું વર્ગીકરણ – વૈદિક અને અવૈદિક (ઉદાહરણો સાથે)</li> </ul> </li> <li>• <b>IKS ના પ્રસારના આધારો</b> <ul style="list-style-type: none"> <li>o ભારતીય શિક્ષણ પ્રણાલી અને તેનું ચિંતન</li> <li>o ભારતીય શિક્ષણ પ્રણાલીનો ઇતિહાસ પ્રાચીન થી અર્વાચીન</li> <li>o શિક્ષણના ક્ષેત્રો : ગુરુકુળ, પાઠશાળા, વિદ્યાલય, વિશ્વવિદ્યાલય</li> </ul> </li> </ul> | 15             |
| Unit: 2 | <p><b>ભારતીય જ્ઞાન પરંપરાનું વૈશ્વિક યોગદાન</b></p> <ul style="list-style-type: none"> <li>• <b>ગણિત અને ખગોળશાસ્ત્ર</b> <ul style="list-style-type: none"> <li>o નંબર સીસ્ટમ</li> <li>o બીજ ગણિત અને અંક ગણિત</li> <li>o ભૂમિતિ</li> <li>o ત્રિકોણમિતિ</li> <li>o પ્લેનેટરી સિસ્ટમ</li> <li>o પ્રકાશની ગતિ</li> <li>o ગ્રહણ</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 15             |

|  |                                                                                                                                                                                                                                                                                                                                                         |  |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | <ul style="list-style-type: none"> <li>• વિજ્ઞાન <ul style="list-style-type: none"> <li>o ભૌતિકશાસ્ત્ર</li> <li>o રસાયણશાસ્ત્ર</li> <li>o વનસ્પતિશાસ્ત્ર</li> </ul> </li> <li>• મેટલ ટેકનોલોજી <ul style="list-style-type: none"> <li>o ખાણકામ તકનીકો</li> <li>o ધાતુઓના પ્રકાર</li> <li>o મેટલ સ્મેલ્ટિંગ માટે સાધનો અને તકનીકો</li> </ul> </li> </ul> |  |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

આંતરિક મૂલ્યાંકન પદ્ધતિ:

| INTERNAL EVALUATION SCHEME |                   |           |
|----------------------------|-------------------|-----------|
| NO                         | Particulars       | Marks     |
| 1                          | Mid Semester Exam | 05        |
| 2                          | MCQ Test          | 05        |
| 3                          | Assignments       | 05        |
|                            | <b>Total</b>      | <b>15</b> |

| Ques. No. | Particulars                                                                                                                                                                    | Marks |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Q.1       | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values | (14)  |
| Q.2       | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values | (14)  |
| Q.3       | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values | (07)  |
|           | Marks                                                                                                                                                                          | 35    |

## અભ્યાસક્રમનું પરિણામ

શીખનારાઓ સક્ષમ બનશે:

- પ્રાચીન ભારતીય પરંપરાઓની પ્રક્રિયા વિશે જાણશે
- વિવિધ ક્ષેત્રોમાં ભારતીય માનસના યોગદાનને સમજશે
- વર્તમાન સંદર્ભમાં પ્રાચીન જ્ઞાન પરંપરાને જોડી શકશે
- વિવિધ વિષયોમાં અગ્રણી ભારતીય શોધકો અને વિચારકો વિશે જાણશે
- ભારતીય પરંપરાઓ અને પ્રથાઓ પ્રત્યે સકારાત્મક વલણ કેળવ કેળવશે
- વિષય જાગૃતિ અને આત્મસન્માનમાં વધારો થશે
- તમામ જ્ઞાન આખરે કેવી રીતે ગૂંથાયેલું છે તેની વ્યાપક સમજ વિકસશે.

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**BHAKTA KAVI NARSINH MEHTA UNIVERSITY, JUNAGADH****Semester: 1 (Faculty of B.A., B.Com., and B.Sc.)****Syllabus based on National Education Policy – 2020****Effective from June 2023****Course Name : Indian Knowledge System**

|                       |                           |  |                           |           |
|-----------------------|---------------------------|--|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                       |  | <b>Course Code</b>        |           |
| <b>Programme</b>      | Arts/Commerce/Science     |  | <b>Internal Marks</b>     | 15        |
| <b>Semester</b>       | 1                         |  | <b>External Marks</b>     | 35        |
| <b>Course Type</b>    | Value Added Course        |  | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | Indian Knowledge System-1 |  | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                        |  | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                    |  | <b>Exam Duration</b>      | 1:30 Hrs. |

**Objectives:**

- 1) Students will enable to understand the strong foundation of Indian culture, philosophy, and spirituality.
- 2) Students' consciousness regarding nationalism will be stronger.
- 3) Students will understand the role of the Indian Knowledge system in national consciousness and national development.
- 4) Students will be able to understand the contemporary importance and need of an Indian rich Knowledge System.

| <b>Unit:</b> | <b>Content</b>                                                                                                                                                                                                                                                                                                                                                                          | <b>Teaching Hours</b> |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Unit : 1     | <b>Introduction to IKS</b> <ul style="list-style-type: none"><li>• <b>Introduction to IKS &amp; Its importance</b><ul style="list-style-type: none"><li>o Introduction &amp; importance of IKS</li><li>o Various IKS Systems</li></ul></li><li>• <b>Shashtra – Foundational Literature of Bharatvarsha</b><ul style="list-style-type: none"><li>o What is Shashtra?</li></ul></li></ul> | 15                    |



|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |    |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
|        | <ul style="list-style-type: none"> <li>o Importance of Shashtra</li> <li>o Classification of Shashtra – Vaidic &amp; Avidic<br/>(With examples of imp. Literature)</li> <li>• <b>Base of IKS proliferation</b> <ul style="list-style-type: none"> <li>o Bharatiya Education System and its philosophy</li> <li>o History of BSE From Ancient to modern</li> <li>o Domains of Educations : Gurukul, Pathshala, Vidhyalay, Vishvavidhyalay</li> </ul> </li> </ul>                                                                                                                                                                                     |    |
| Unit-2 | <p><b>Contribution of IKS to the world</b></p> <p><b>Mathematics &amp; Astronomy</b></p> <ul style="list-style-type: none"> <li>o Number System</li> <li>o Algebra &amp; Arithmetic</li> <li>o Geometry</li> <li>o Trigonometry</li> <li>o Planetary System</li> <li>o Speed of Light</li> <li>o Eclipse</li> <li>• <b>Life Sciences</b> <ul style="list-style-type: none"> <li>o Physics</li> <li>o Chemistry</li> <li>o Botany</li> </ul> </li> <li>• <b>Metal Technology</b> <ul style="list-style-type: none"> <li>o Mining Techniques</li> <li>o Types of Metals</li> <li>o Equipments and techniques of Metal Smelting</li> </ul> </li> </ul> | 15 |

**Evaluation Method:**

| <b>INTERNAL EVALUATION SCHEME</b> |                    |              |
|-----------------------------------|--------------------|--------------|
| <b>NO</b>                         | <b>Particulars</b> | <b>Marks</b> |
| 1                                 | Mid Semester Exam  | 05           |
| 2                                 | MCQ Test           | 05           |
| 3                                 | Assignments        | 05           |
|                                   | <b>Total</b>       | 15           |

| <b>Ques. No.</b> | <b>Particulars</b>                                                                                                                                                             | <b>Marks</b> |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Q.1</b>       | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values | <b>(14)</b>  |
| <b>Q.2</b>       | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values | <b>(14)</b>  |
| <b>Q.3</b>       | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values | <b>(07)</b>  |
|                  | Marks                                                                                                                                                                          | <b>35</b>    |

**Course Outcomes:**

Learners 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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પરિપત્ર:

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટીની આર્ટસ, કોમર્સ અને સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજોનાં આચાર્યશ્રીઓને સવિનય જણાવવાનું કે આર્ટસ, કોમર્સ અને સાયન્સ વિદ્યાશાખા હેઠળનો NEP-૨૦૨૦ અંતર્ગતનો વેલ્યુ એડેડ કોર્સનો સેમેસ્ટર-૨ નો અભ્યાસક્રમ આ સાથે સામેલ છે. આ બાસ્કેટમાં આર્ટસ, કોમર્સ અને સાયન્સનાં વિષયો આપવામાં આવેલ છે.

માનનીય કુલપતિશ્રીની મંજૂરી અનુસાર સદર અભ્યાસક્રમ શૈક્ષણિક વર્ષ જુન, ૨૦૨૩થી અમલવારી કરવાની રહે છે. આર્ટસ, કોમર્સ અને સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજો ધ્વારા તેની અમલવારી કરવા જણાવવામાં આવે છે.

નોંધ: રેફરન્સ.નં: ક્રમાંક/ બીકેએનએમયુ/ એકેડેમિક/ ૨૮૬/ ૨૦૨૪ તા: ૦૭/૦૨/૨૦૨૪ થી પ્રસિધ્ધ કરવામાં આવેલ VAC નો અભ્યાસક્રમ તેજ પ્રમાણે છે ફક્ત ક્રમ નં ૧૦ પર IPDC ઉમેરેલ છે.



*[Handwritten signature]*  
૨૭/૦૨/૨૦૨૪

ખાસ ફરજ પરના અધિકારી  
(એકેડેમિક)

ક્રમાંક/બીકેએનએમયુ/એકેડેમિક/૩૮૦/૨૦૨૪

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી,

સરકારી પોલીટેકનિક કેમ્પસ,

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી રોડ,

ખડીયા, જૂનાગઢ-૩૬૨૨૬૩

તા.૨૮/૦૨/૨૦૨૪

પ્રતિ,

- ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી સંલગ્ન આર્ટસ, કોમર્સ અને સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમો ચલાવતી તમામ કોલેજોના આચાર્યશ્રીઓ તરફ....

નકલ સાદર રવાના:-

- માન.કુલપતિશ્રી/કુલસચિવશ્રીનાં અંગત સચિવશ્રી.
- પરીક્ષા નિયામકશ્રી, ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ

નકલ રવાના જાણ તથા યોગ્ય કાર્યવાહી અર્થે:

- સીસ્ટમ મેનેજરશ્રી, આઈ.ટી.સેલ વિભાગ (વેબસાઇટ ઉપર પ્રસિદ્ધ થવા અર્થે.)



# Bhakta Kavi Narsinh Mehta University Junagadh



**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**SYLLABUS OF**  
**VAC (VALUE ADDED COURSE) BASKET**  
**FOR**  
**ARTS, COMMERCE AND SCIENCE FACULTIES**  
**SEMESTER - 02**  
**EFFECTIVE FROM DECEMBER – 2023**

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત  
વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)  
ડીસેમ્બર, ૨૦૨૩થી અમલમાં

## COURSE CONTENTS

| Course No. | Course Name                                      | Pg. No. |
|------------|--------------------------------------------------|---------|
| 1          | Clean India (Swachchha Bharat)                   | 01      |
| 2          | The Art of Being Happy                           | 10      |
| 3          | Environmental Studies                            | 14      |
| 4          | Principles of Gandhian Thoughts                  | 25      |
| 5          | Environmental Science                            | 28      |
| 6          | Health & Wellness                                | 32      |
| 7          | Chitrakut Khandkavya                             | 35      |
| 8          | Sports and Fitness                               | 38      |
| 9          | Indian Ethos and Values in Business              | 41      |
| 10         | Integrated Personality Development Course (IPDC) | 45      |

**ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ**  
**સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)**  
**રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત**  
**વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)**  
**ડીસેમ્બર, ૨૦૨૩થી અમલમાં**

**Course No.:1: Clean India (Swachchha Bharat)**

|                       |                                |                           |           |
|-----------------------|--------------------------------|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                            | <b>Course Code</b>        |           |
| <b>Programme</b>      | Arts/Commerce/Science          | <b>Internal Marks</b>     | 25        |
| <b>Semester</b>       | 2                              | <b>External Marks</b>     | 25        |
| <b>Course Type</b>    | Value Added Course             | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | Clean India (Swachchha Bharat) | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                             | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                         | <b>Exam Duration</b>      | 1:00 Hrs. |

**હેતુઓ:**

- સેનીટેશન, ઇન્ફ્રાસ્ટ્રક્ચર અને અમલીકરણનાં સંદર્ભે વિકાસાત્મક ચેલેન્જીસ સમજવા.
- વિવિધ સામાજિક-આર્થિક સંદર્ભોમાં સ્વચ્છતા, આરોગ્ય અને કચરા વ્યવસ્થાપનના મૂલ્યો બનાવવા.
- સામાજિક નીતિ અને કાર્યક્રમોનું આયોજન સમજવું.
- સમુદાય સ્તરે કચરા વ્યવસ્થાપન તકનિકોનો ઉપયોગ કરવો.
- સમાજ અને રાષ્ટ્ર પ્રતિ સેવાનો ભાવ ઉત્પન્ન કરવો.

| <b>Unit</b> | <b>Subject</b>                                                                                                                                                                                                                                                                                                                                                                                       | <b>Teaching Hours</b> |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Unit: 1     | <b>સ્વચ્છ ભારત અભિયાનનો પરિચય</b> <ul style="list-style-type: none"> <li>• સ્વચ્છતાની ગાંધીવાદી ફિલસૂફી</li> <li>• સ્વચ્છ ભારત અભિયાન {એસબીએ}</li> <li>• આરોગ્ય, સેનીટેશન (સૌંદર્યશાસ્ત્ર) અને સસ્ટેનબલ વેસ્ટ મેનેજમેન્ટ (બિન જરૂરી કચરાનું વ્યવસ્થાપન)</li> <li>• એસબીએ માટે એજન્સીઓ અને નોડલ મંત્રાલયો</li> <li>• એસબીએના વિવિધ ચરણો અને તેનો મૂલ્યાંકન</li> <li>• નાગરિકોનું જવાબદારીઓ</li> </ul> | 15                    |
| Unit: 2     | <b>સ્વચ્છ ભારત: ગ્રામીણ અને શહેરી પરિપ્રેક્ષ્યો</b> <ul style="list-style-type: none"> <li>• સ્વચ્છ ભારત માટેના નિર્દેશકો</li> <li>• ગ્રામીણ: <ul style="list-style-type: none"> <li>• ઘરોના વચ્ચે સેનીટેશન કવરેજ (2014 vs. 2022)</li> <li>• ખુલ્લા હજુમ મુક્ત (ODF) ગામો: માપદંડો</li> <li>• ODF પ્લસ મોડલ: મુખ્ય સૂચકો</li> </ul> </li> </ul>                                                      | 15                    |

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
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ડીસેમ્બર, ૨૦૨૩થી અમલમાં

- શહેરી:
  - સસ્ટેનેબલ સેનીટેશન
  - બિનજરૂરી કચરા / પાણી વ્યવસ્થાપન
  - કચરાસંચિત શહેરી

આંતરિક મૂલ્યાંકન પદ્ધતિ:

| INTERNAL EVALUATION SCHEME |                            |       |
|----------------------------|----------------------------|-------|
| NO                         | Particulars                | Marks |
| 1                          | Mid Semester Exam          | 13    |
| 2                          | Class Test                 | 03    |
| 3                          | Open book exam/test        | 03    |
| 4                          | Open note exam/test        | 03    |
| 5                          | Self-test/ Online test     | 03    |
| 6                          | Essay/Article writing      | 03    |
| 7                          | Quizzes/Objective test     | 03    |
| 8                          | Class assignment           | 03    |
| 9                          | Home assignment            | 03    |
| 10                         | Reports Writing            | 03    |
| 11                         | Research/Dissertation      | 03    |
| 12                         | Case Studies               | 03    |
| 13                         | Viva/Oral exam             | 03    |
| 14                         | Group Discussion           | 03    |
| 15                         | Role Play                  | 03    |
| 16                         | Paper presentation/Seminar | 03    |
| 17                         | Language Lab work          | 03    |
| 18                         | Interview                  | 03    |
| 19                         | Craft work                 | 03    |
| 20                         | Co-curricular work         | 03    |
| 21                         | Field Assignment           | 03    |
| 22                         | Poster Presentation        | 03    |
| 23                         | Attendance                 | 03    |
| 24                         | Project Work               | 03    |
|                            | Total                      | 25    |

Note: Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 24. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.



**ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ**  
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**ડીસેમ્બર, ૨૦૨૩થી અમલમાં**

**Evaluation Method: External**

| <b>Ques. No.</b> | <b>Particulars</b>                                                                                                                                                              | <b>Marks</b> |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Q.1</b>       | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>10</b>    |
| <b>Q.2</b>       | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>10</b>    |
| <b>Q.3</b>       | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>05</b>    |
|                  | Marks                                                                                                                                                                           | <b>25</b>    |

**Note: Proper weightage should be given to each unit.**

**અભ્યાસક્રમનું શીખવવાના પરિણામો:**

- સ્વચ્છ ભારત અભિયાનના મહત્વને સમજશે.
- વિદ્યાર્થીઓમાં ભારતના સેનીટેશન ચેલેન્જસનું વિશ્લેષણ કરવાની અને ભવિષ્યમાં તેના વિષે આગાહી કરવાની ક્ષમતા વિકસશે
- સેનીટેશન અને વિકાસની સંબંધને ખાતરી લેવી.
- વાસ્તવિક સમય પ્રોજેક્ટ્સ/ક્ષેત્રકાર્ય દ્વારા સ્વચ્છ ભારત અભિયાનમાં યોગદાન આપવો.

**સૂચિત પ્રવૃત્તિઓની યાદી.**

- સંસ્થામાં અને તેની આસપાસમાં પ્લાસ્ટિક અને ઈ-વેસ્ટને ઓળખો અને તેના બગાડને ઘટાડવા માટેની નાવીન્યસભર તકનીકો સૂચવો.
- તેવી ઘટનાઓ/તહેવારોને ઓળખો જે વધુ કચરો પેદા કરે છે અને તેને ઘટકવાના રસ્તાઓ સૂચવો.

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
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ડીસેમ્બર, ૨૦૨૩થી અમલમાં

- કેન્ટીન/દુકાનોની મુલાકાત લો અને સંસ્થા અને તેની આસપાસના રસ્તાઓમાં વેટ/ડ્રાય કચરાનો જીવનચક્ર ટ્રેક કરો અને તેના પરિણામોને પ્રોજેક્ટ વર્ક તરીકે ડોક્યુમેન્ટેશન કરો.
- જાગૃતિના સ્તરને સમજવા માટે હિતધારકોના ઇન્ટરવ્યુ લો.
- સંસ્થાનું સ્વચ્છતા અંગેનો ઓડિટ કરો અને કાર્યવાહી માટે વિસ્તારો ઓળખો.
- શુદ્ધતા ડ્રાઈવનું આયોજન કરવું.
- સ્વચ્છતા પખવાડાની સભાઓ, રેલીઓ, અને સામુદાયિક શિબિરોનું આયોજન કરો
- છાત્રો પોતાના અનુભવો પ્રોજેક્ટ રિપોર્ટ રૂપમાં તૈયાર કરી આંતરિક મૂલ્યાંકનનાં ઘટક રૂપે રજૂ કરે.

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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

## Course No.1: Swachhha Bharat

|                       |                       |  |                           |           |
|-----------------------|-----------------------|--|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                   |  | <b>Course Code</b>        |           |
| <b>Programme</b>      | Arts/Commerce/Science |  | <b>Internal Marks</b>     | 25        |
| <b>Semester</b>       | 2                     |  | <b>External Marks</b>     | 25        |
| <b>Course Type</b>    | Value Added Course    |  | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | Swachhha Bharat       |  | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                    |  | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                |  | <b>Exam Duration</b>      | 1:00 Hrs. |

### The Learning Objectives of the Course are:

- 1) To understand the developmental challenges with reference to sanitation infrastructure and practices.
- 2) To build values of cleanliness, hygiene and waste management in diverse socioeconomic contexts.
- 3) To understand planning of social policy and programmes.
- 4) To use waste management techniques at community level.
- 5) To instill a sense of service towards society and the Nation.

| Unit:    | Content                                                                                                                                                                                                                                                                                                                                                                                       | Teaching Hours |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Unit : 1 | <b>Introduction to Swachh Bharat Abhiyan</b> <ul style="list-style-type: none"> <li>o Gandhian philosophy of Cleanliness</li> <li>o Swachh Bharat Abhiyan {SBA}</li> <li>o Hygiene, Sanitation &amp; Sustainable Waste Management</li> <li>o Agencies and nodal Ministries for SBA</li> <li>o Different phases of the SBA and its evaluation</li> <li>o Citizens' Responsibilities</li> </ul> | 15             |

**ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ**  
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**Unit-2 Swachh Bharat: Rural and Urban Facets**

- o Indicators for Swachh Bharat
- o Rural
  - i. Sanitation coverage across households (2014 vs. 2022)
  - ii. Open Defecation Free (ODF} Villages: Parameters
  - iii. ODF plus model: Key indicators
- Urban
  - i. Sustainable sanitation
  - ii. Waste/water management
  - iii. Garbage Free Cities

15

**Suggested Activities:**

List of activities to be undertaken:

- Identify plastic and e-waste in and around the institution and suggest innovative technologies to minimize wastage.
- Identify events/fests that generate maximum waste and ways to minimize it
- Visit canteen/shops and track the lifecycle of wet/dry waste in and around the institution and document the findings in the form of a Project Report.
- Conduct interviews of stakeholders to understand the level of awareness.
- Conduct a Clean Audit of the Institution and identify areas for action.
- Conduct cleanliness drives.
- Organise Swachhata Pakhwada meetings, rallies, and mobilization camps within the identified communities.
- Students can share their experiences in the form of a Project Report as internal evaluation component.

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| INTERNAL EVALUATION SCHEME |                            |           |
|----------------------------|----------------------------|-----------|
| NO                         | Particulars                | Marks     |
| 1                          | Mid Semester Exam          | 13        |
| 2                          | Class Test                 | 03        |
| 3                          | Open book exam/test        | 03        |
| 4                          | Open note exam/test        | 03        |
| 5                          | Self-test/ Online test     | 03        |
| 6                          | Essay/Article writing      | 03        |
| 7                          | Quizzes/Objective test     | 03        |
| 8                          | Class assignment           | 03        |
| 9                          | Home assignment            | 03        |
| 10                         | Reports Writing            | 03        |
| 11                         | Research/Dissertation      | 03        |
| 12                         | Case Studies               | 03        |
| 13                         | Viva/Oral exam             | 03        |
| 14                         | Group Discussion           | 03        |
| 15                         | Role Play                  | 03        |
| 16                         | Paper presentation/Seminar | 03        |
| 17                         | Language Lab work          | 03        |
| 18                         | Interview                  | 03        |
| 19                         | Craft work                 | 03        |
| 20                         | Co-curricular work         | 03        |
| 21                         | Field Assignment           | 03        |
| 22                         | Poster Presentation        | 03        |
| 23                         | Attendance                 | 03        |
| 24                         | Project Work               | 03        |
|                            | <b>Total</b>               | <b>25</b> |

**Note: Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 24. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.**

**ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ**  
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**વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)**  
**ડીસેમ્બર, ૨૦૨૩થી અમલમાં**

**Evaluation Method: External**

| <b>Ques. No.</b> | <b>Particulars</b>                                                                                                                                                               | <b>Marks</b> |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Q.1</b>       | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test student's comprehension of values. | <b>10</b>    |
| <b>Q.2</b>       | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test student's comprehension of values. | <b>10</b>    |
| <b>Q.3</b>       | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test student's comprehension of values. | <b>05</b>    |
|                  | Marks                                                                                                                                                                            | <b>25</b>    |

**Note: Proper weightage should be given to each unit.**

**Course Learning Outcomes:**

- 1) Understanding the significance of the Swachh Bharat Abhiyan.
- 2) Ability to analyse and predict the sanitation challenges of India
- 3) Determine the link between sanitation and development.
- 4) Contribute to the Swachh Bharat Abhiyan through real time projects/fieldwork.

**Suggested Reading:**

- MoHUA (2017). Guidelines for Swachh Bharat Mission - Urban (PDF). Ministry of Housing and Urban Affairs, Government of India.
- "Swachh Bharat Mission - Gramin, Department of Drinking Water and Sanitation, Ministry of Jal Shakti"
- India 2021, Ministry of Information & Broadcasting
- <http://swachhbharatmission.gov.in/SBMCMS/swachhta-pakhwada.htm>
- <https://swachhbharatmission.gov.in/SBMCMS/about-us.htm>

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સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
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ડીસેમ્બર, ૨૦૨૩થી અમલમાં

- [https://www.communityledtotal sanitation.org/sites/communityledtotal sanitation.org/files/ODF\\_verification\\_checklist.pdf](https://www.communityledtotal sanitation.org/sites/communityledtotal sanitation.org/files/ODF_verification_checklist.pdf)
- <https://sbm.gov.in/phase2dashboard/PhaseII/NationDashboard.aspx>
- <https://www.niti.gov.in/sites/default/files/2019-08/Report%20of%20SubGroup%20of%20Chief%20Ministers%20on%20Swachh%20Bharat%20Anhiyaan.pdf>

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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

## કોર્સ નંબર-૨: ખુશ રહેવાની કળા (THE ART OF BEING HAPPY)

|                       |                        |  |                           |           |
|-----------------------|------------------------|--|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                    |  | <b>Course Code</b>        |           |
| <b>Programme</b>      | Arts/Commerce/Science  |  | <b>Internal Marks</b>     | 25        |
| <b>Semester</b>       | 2                      |  | <b>External Marks</b>     | 25        |
| <b>Course Type</b>    | Value Added Course     |  | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | The Art of Being Happy |  | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                     |  | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                 |  | <b>Exam Duration</b>      | 1:00 Hrs. |

### Learning Objectives

- To synthesize the insights developed by Human Development experts, Psychologists, Anthropologists on one hand, and the intellectual traditions of Vedantic Philosophy and Indology on the other towards the experience of happiness.
- To illustrate various factors that determine the subjective experience of happiness in a cross-cultural context.

### Learning outcomes

- The students shall be able to evaluate the factors contributing to the phenomenon of happiness in the personal, familial and community life of an individual in different cultures in the Indian context.
- They will be able to develop healthy interpersonal relationships and wellbeing cherishing the values of Indian culture and philosophy,
- They will be able to relate to the global phenomenon of sustainable development and become sensitive to the needs of the planet.
- They will be able to apply the experience of *Aanondo* at a personal level.

## SYLLABUS OF THE ART OF BEING HAPPY

### UNIT-1: Human Ecology and Happiness Lectures

- 1) Definitions/Factors of Happiness: Environmental and Social
- 2) Physical, emotional and psychological well-being for happiness
- 3) Physiological and hormonal basis of happiness
- 4) Coping with Stress: A life saving skill



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**ડીસેમ્બર, ૨૦૨૩થી અમલમાં**

## **Unit-2: Local and Global Perspective of Happiness**

- 1) Panch Kosh Theory & Idea of Well-Being
- 2) Measuring happiness: Key indicators.
- 3) Happiness Index
- 4) India in Global Happiness Indices.

### **Suggested Activities:**

- Community surveys on the facilities promoting positive mental health practices such as Yoga and Meditation Centres, Recreation clubs, and Parks for youth and senior citizens shall be carried out by the students.
- Extending help and social service by visiting old age homes/ hospitals/slum areas or any other disadvantaged groups. Intern with NGOs working in the area of happiness and well-being.
- Students can undertake a field work/project work independently
- Critical appreciation of a documentary/ film based on Happiness and Well- being can be undertaken by the students.
- Events like Music, Drawing, Dramas can be arranged to develop creative potential of the students.
- Hands-on Happiness: Gardening, Cleaning, Washing, Cooking, etc. can be arranged.

### **Suggestive readings**

- Banavathy, Vinayachandra & Choudry, Anuradha. (2013). Understanding Happiness: A Vedantic Perspective. Psychological Studies. 59. 141-152. 10.1007/s12646-013-0230-x
- Leontiev, Dmitry. (2012). Anthropology of Happiness: the state of Well-Being and the way of Joy, In SocialScience, s Vol43. No 2 P93-104.
- Snyder.C.R. S.J. Lopez & J.T. Pedrotti. (2015). Positive Psychology (The Scientific and Practical Explorations of Human Strengths): Sage Publication. (Chapter 5: Subjective Well-being: The Science of Happiness and Life Satisfaction, Page 63 to 73)
- World Development Indicators 2016. (2016). United States: World Bank Publications.
- Zelenski, John. (2019) Positive Psychology: The Science of Well-Being, Carleton University, Ottawa, Canada, Sage Publications Chapter 3: Happiness; page (77 to 110)
- Baumgardner, 5&Crothers, M. (2014). Positive Psychology. New Delhi: Pearson. Education, India.
- Goleman, D. (2007). Social Intelligence: The new science of human relationships, RHUK
- Mathews, Gordon and Carolina Izquierdo (eds). (2010). Pursuits of Happiness:

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 સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
 રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત  
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- Well being in Anthropological Perspective. Berghan Books Seligman, M. (2002). Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfilment. NewYork: Free Press.
- Sri Aurobindo, The Synthesis of Yoga, Part Three: The Yoga of Divine Love, Chapter 7, The Ananda Brahman, pp. 569-570

| INTERNAL EVALUATION SCHEME |                            |           |
|----------------------------|----------------------------|-----------|
| NO                         | Particulars                | Marks     |
| 1                          | <b>Mid Semester Exam</b>   | <b>13</b> |
| 2                          | Class Test                 | 03        |
| 3                          | Open book exam/test        | 03        |
| 4                          | Open note exam/test        | 03        |
| 5                          | Self-test/ Online test     | 03        |
| 6                          | Essay/Article writing      | 03        |
| 7                          | Quizzes/Objective test     | 03        |
| 8                          | Class assignment           | 03        |
| 9                          | Home assignment            | 03        |
| 10                         | Reports Writing            | 03        |
| 11                         | Research/Dissertation      | 03        |
| 12                         | Case Studies               | 03        |
| 13                         | Viva/Oral exam             | 03        |
| 14                         | Group Discussion           | 03        |
| 15                         | Role Play                  | 03        |
| 16                         | Paper presentation/Seminar | 03        |
| 17                         | Language Lab work          | 03        |
| 18                         | Interview                  | 03        |
| 19                         | Craft work                 | 03        |
| 20                         | Co-curricular work         | 03        |
| 21                         | Field Assignment           | 03        |
| 22                         | Poster Presentation        | 03        |
| 23                         | Attendance                 | 03        |
| 24                         | Project Work               | 03        |
|                            | <b>Total</b>               | <b>25</b> |

**Note: Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 24. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.**

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સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
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વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)  
ડીસેમ્બર, ૨૦૨૩થી અમલમાં

**Evaluation Method: External**

| <b>Ques.<br/>No.</b> | <b>Particulars</b>                                                                                                                                                              | <b>Marks</b> |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Q.1</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>10</b>    |
| <b>Q.2</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>10</b>    |
| <b>Q.3</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>05</b>    |
|                      | Marks                                                                                                                                                                           | <b>25</b>    |

**Note: Proper weightage should be given to each unit.**

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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

## COURSE NO-3: ENVIRONMENTAL STUDIES

|                       |                       |  |                           |           |
|-----------------------|-----------------------|--|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                   |  | <b>Course Code</b>        |           |
| <b>Programme</b>      | Arts/Commerce/Science |  | <b>Internal Marks</b>     | 25        |
| <b>Semester</b>       | 2                     |  | <b>External Marks</b>     | 25        |
| <b>Course Type</b>    | Value Added Course    |  | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | Environmental Studies |  | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                    |  | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                |  | <b>Exam Duration</b>      | 1:00 Hrs. |

### Course Objectives:

#### Learning Objectives:

- The course envisages that all the under graduates coming out of our University system are aware of our natural resources, ecosystems and their linkages to society, livelihood, environment and conservation. This theoretical learning shall be supported by the actual field visits.

### Learning Outcomes

After completing this unit, students will be able to:

- Appreciate the historical context of human interactions with the environment.
- Gain insights into the international efforts to safeguard the Earth's environment and resources.
- Understand the concept of natural resources; identify types of natural resources, their distribution and use with special reference to India.
- Discuss the factors affecting the availability of natural resources, their conservation and management.
- Explain sustainable development, its goals, targets, challenges and global strategies for sustainable development.

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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

- develop a critical understanding of the environmental issues of concern understand the concepts of spatial and temporal scales and their importance understand the sectoral effects on the local, regional, and global environmental issues
- Understand the concepts of ecosystems, biodiversity and conservation.
- Describe the main types of ecosystems and their distribution in India and the world.
- Discuss the factors impacting biodiversity loss and ecosystem degradation in India and the world.
- Explain major conservation strategies taken in India.

| Unit No. | Contents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Teaching Hours |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 1        | <p><b><u>(A) Humans and the Environment</u></b></p> <ul style="list-style-type: none"> <li>• The man-environment interaction: Humans as hunter-gatherers; Mastery of fire; Origin of agriculture; Emergence of city-states; Great ancient civilizations and the environment; Middle Ages and Renaissance; Industrial revolution and its impact on the environment; Population growth and natural resource exploitation; Global environmental change.</li> <li>• The emergence of environmentalism: Anthropocentric and eco-centric perspectives (Major thinkers); The Club of Rome- Limits to Growth; UN Conference on Human Environment 1972; World Commission on Environment and Development and the concept of sustainable development; Rio Summit and subsequent international efforts.</li> </ul> <p><b><u>(B) Natural Resources and Sustainable Development</u></b></p> <ul style="list-style-type: none"> <li>• Overview of natural resources: Definition of resource; Classification of natural resources- biotic and abiotic, renewable and non-renewable.</li> </ul> |                |

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|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|   | <ul style="list-style-type: none"> <li>• Biotic resources: Major type of biotic resources- forests, grasslands, wetlands, wildlife and aquatic (fresh water and marine); Microbes as a resource; Status and challenges.</li> <li>• Water resources: Types of water resources- fresh water and marine resources; Availability and use of water resources; Environmental impact of over-exploitation, issues and challenges; Water scarcity and stress; Conflicts over water.</li> <li>• Soil and mineral resources: Important minerals; Mineral exploitation; Environmental problems due to extraction of minerals and use; Soil as a resource and its degradation.</li> <li>• Energy resources: Sources of energy and their classification, renewable and non-renewable sources of energy; 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; Implications of energy use on the environment.</li> <li>• Introduction to sustainable development: Sustainable Development Goals (SDGs)- targets and indicators, challenges and strategies for SDGs</li> </ul> |  |
| 2 | <p><b><u>(A) Environmental Issues: Local, Regional and Global</u></b></p> <ul style="list-style-type: none"> <li>• Environmental issues and scales: Concepts of micro-, meso-, synoptic and planetary scales; Temporal and spatial extents of local, regional, and global phenomena.</li> <li>• Pollution: Impact of sectoral processes on Environment, Types of Pollution- air, noise, water, soil, municipal solid waste, hazardous waste; Transboundary air pollution; Acid rain; Smog.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |

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|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | <ul style="list-style-type: none"> <li>• Land use and Land cover change: land degradation, deforestation, desertification, urbanization.</li> <li>• Biodiversity loss: past and current trends, impact.</li> <li>• Global change: Ozone layer depletion; Climate change.</li> </ul> <p><b>(B) Conservation of Biodiversity and Ecosystems</b></p> <ul style="list-style-type: none"> <li>• Biodiversity and its distribution: Biodiversity as a natural resource; Levels and types of biodiversity; Biodiversity in India and the world; Biodiversity hotspots; Species and ecosystem threat categories.</li> <li>• Ecosystems and ecosystem services: Major ecosystem types in India and their basic characteristics-forests, wetlands, grasslands, agriculture, coastal and marine; Ecosystem services- classification and their significance.</li> <li>• Threats to biodiversity and ecosystems: Land use and land cover change; Commercial exploitation of species; Invasive species; Fire, disasters and climate change.</li> <li>• Major conservation policies: in-situ and ex-situ conservation approaches; Major protected areas; National and International Instruments for biodiversity conservation; the role of traditional knowledge, community-based conservation; Gender and conservation.</li> </ul> |  |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

**Suggested Reading:**

1. Fisher. Michael H. (2018) An Environmental History of India- From Earliest Times to the Twenty-First Century, Cambridge University Press.
2. Headrick, Daniel R. (2020) Humans versus Nature- A Global Environmental History. Oxford University Press.
3. Hughes, J. Donald (2009) An Environmental History of the World- Humankind's Changing Role in the Community of Life, 2 Edition. Routledge.

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**ડીસેમ્બર, ૨૦૨૩થી અમલમાં**

4. Perman, R., Ma, Y., McGilvray, J., and Common, M. (2003) Natural Resource and Environmental Economics. Pearson Education.
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**ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ**  
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**ડીસેમ્બર, ૨૦૨૩થી અમલમાં**

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## **Gujarati Translation**

**ભણવાના પરિણામો:**

**આ એકમ પૂર્ણ થયા બાદ વિદ્યાર્થીઓ સક્ષમ હશે:**

- આ એકમ પૂર્ણ કર્યા પછી, વિદ્યાર્થીઓ આ કરી શકશે:
- પર્યાવરણ સાથે માનવ ક્રિયાપ્રતિક્રિયાના ઐતિહાસિક સંદર્ભની પ્રશંસા કરશે.
- પૃથ્વીના પર્યાવરણ અને સંસાધનોની સુરક્ષા માટેના આંતરરાષ્ટ્રીય પ્રયાસોની આંતરદૃષ્ટિ મેળવશે.
- કુદરતી સંસાધનોની વિભાવનાને સમજવું; ભારતના વિશેષ સંદર્ભ સાથે કુદરતી સંસાધનોના પ્રકારો, તેમનું વિતરણ અને ઉપયોગ જાણશે.
- કુદરતી સંસાધનોની ઉપલબ્ધતા, તેમના સંરક્ષણ અને વ્યવસ્થાપનને અસર કરતા પરિબળોની ચર્ચા કરી શકશે.
- ટકાઉ વિકાસ, તેના લક્ષ્યો, લક્ષ્યો, પડકારો અને ટકાઉ વિકાસ માટેની વૈશ્વિક વ્યૂહરચનાઓ સમજાશે.
- ચિંતાના પર્યાવરણીય મુદ્દાઓની નિર્ણાયક સમજ વિકસશે.
- અવકાશી અને ક્ષણિક પરિણામોની વિભાવનાઓ અને તેમના મહત્વને સમજશે..
- સ્થાનિક, પ્રાદેશિક અને વૈશ્વિક પર્યાવરણીય મુદ્દાઓ પર ક્ષેત્રીય અસરોને સમજશે.
- ઇકોસિસ્ટમ, જૈવવિવિધતા અને સંરક્ષણની વિભાવનાઓને સમજો.
- ઇકોસિસ્ટમના મુખ્ય પ્રકારો અને ભારત અને વિશ્વમાં તેમના વિતરણનું વર્ણન કરી શકશે.
- ભારત અને વિશ્વમાં જૈવવિવિધતાના નુકશાન અને ઇકોસિસ્ટમના અધોગતિને અસર કરતા પરિબળોની ચર્ચા કરી શકશે.
- ભારતમાં મુખ્ય સંરક્ષણ વ્યૂહરચનાઓ સમજશે.

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
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ડીસેમ્બર, ૨૦૨૩થી અમલમાં

| Unit No. | Contents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Teaching Hours |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 1        | <p><b>(A) માનવ અને પર્યાવરણ</b></p> <ul style="list-style-type: none"> <li>માનવ-પર્યાવરણ ક્રિયાપ્રતિક્રિયા: માણસો શિકારી-સંગ્રહકો તરીકે; આગમાં નિપુણતા; ખેતીની ઉત્પત્તિ; શહેર-રાજ્યોનો ઉદભવ; મહાન પ્રાચીન સંસ્કૃતિઓ અને પર્યાવરણ; મધ્ય યુગ અને પુનરુજ્જીવન: ઔદ્યોગિક ક્રાંતિ અને પર્યાવરણ પર તેની અસર: વસ્તી વૃદ્ધિ અને કુદરતી સંસાધનોનું શોષણ: વૈશ્વિક પર્યાવરણીય પરિવર્તન.</li> <li>પર્યાવરણવાદનો ઉદભવ: એન્ટ્રોપોસેન્ટ્રિક અને ઇકો-સેન્ટ્રીક પરિપ્રેક્ષ્ય (મુખ્ય ચિંતકો): ધ ક્લબ ઓફ રોમ- વૃદ્ધિની મર્યાદા: માનવ પર્યાવરણ પર યુએન કોન્ફરન્સ 1972: પર્યાવરણ અને વિકાસ પર વિશ્વ કમિશન અને ટકાઉ વિકાસની વિભાવના: રિયો સમિટ અને અનુગામી આંતરરાષ્ટ્રીય પ્રયત્નો</li> </ul> <p><b>(B) કુદરતી સંસાધનો અને ટકાઉ વિકાસ</b></p> <ul style="list-style-type: none"> <li>કુદરતી સંસાધનોની ઝાંખી: સંસાધનની વ્યાખ્યા; કુદરતી સંસાધનોનું વર્ગીકરણ – જૈવિક અને અજૈવિક, નવીનીકરણીય અને બિન-નવીનીકરણીય.</li> <li>જૈવિક સંસાધનો: મુખ્ય પ્રકારના જૈવિક સંસાધનો – જંગલો, ઘાસના મેદાનો, વેટલેન્ડ્સ, વન્યજીવન અને જળચર (તાજા પાણી અને દરિયાઈ); સંસાધન તરીકે સૂક્ષ્મજીવાણુઓ; સ્થિતિ અને પડકારો.</li> <li>જળ સંસાધનો: જળ સંસાધનોના પ્રકાર – તાજા પાણી અને દરિયાઈ સંસાધનો; જળ સંસાધનોની ઉપલબ્ધતા અને ઉપયોગ; અતિશય – શોષણ, મુદ્દાઓ અને પડકારોની પર્યાવરણીય અસર; પાણીની અછત અને તાણ; પાણી પર તકરાર.</li> </ul> |                |

**ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ**  
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**ડીસેમ્બર, ૨૦૨૩થી અમલમાં**

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|   | <ul style="list-style-type: none"> <li>માટી અને ખનિજ સંસાધનો: મહત્વપૂર્ણ ખનિજો; ખનિજ શોષણ; ખનિજોના નિષ્કર્ષણ અને ઉપયોગને કારણે પર્યાવરણીય સમસ્યાઓ; સંસાધન તરીકે માટી અને તેની અધોગતિ છે.</li> <li>ઊર્જા સંસાધનો: ઊર્જાના સ્ત્રોતો અને તેમનું વર્ગીકરણ, નવીનીકરણીય અને બિન-નવીનીકરણીય ઊર્જાના સ્ત્રોતો; પરંપરાગત ઊર્જા સ્ત્રોતો – કોલસો, તેલ, કુદરતી ગેસ, પરમાણુ ઊર્જા, બિન પરંપરાગત ઊર્જા. સ્ત્રોતો – સૌર, પવન, ભરતી, હાઇડ્રો, તરંગ, મહાસાગર થર્મલ, જીઓથર્મલ, બાયોગેસ, હાઇડ્રોજન અને ઇંધણ કોષો; પર્યાવરણ પર ઊર્જા વપરાશની અસરો.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| 2 | <p><b>(A) પર્યાવરણીય મુદ્દાઓ: સ્થાનિક, પ્રાદેશિક અને વૈશ્વિક</b></p> <ul style="list-style-type: none"> <li>પર્યાવરણીય મુદ્દાઓ અને પરિમાણો: સ્થાનિક, પ્રાદેશિક અને વૈશ્વિક ઘટનાઓની અસ્થાયી અને અવકાશી હદની માઇક્રો, મેસો, સિનોપ્ટિક અને પ્લેનેટરી સ્કેલનો ખ્યાલ.</li> <li>પ્રદૂષણ: પર્યાવરણ પર ક્ષેત્રીય પ્રક્રિયાઓની અસર, પ્રદૂષણના પ્રકારો – હવા, અવાજ, પાણી, માટી, મ્યુનિસિપલ ઘન કચરો, જોખમી કચરો, અતિક્રમણીય વાયુ પ્રદૂષણ, એસિડ વરસાદ, ધુમ્મસ</li> <li>જમીનનો ઉપયોગ અને જમીનના આવરણમાં ફેરફાર: જમીનનો ક્ષય, વનનાબૂદી, રણીકરણ, શહેરીકરણ.</li> <li>જૈવવિવિધતા નુકશાન: ભૂતકાળ અને વર્તમાન પ્રવાહો, અસર.</li> <li>વૈશ્વિક પરિવર્તન: ઓઝોન સ્તર અવક્ષય, આબોહવા પરિવર્તન.</li> </ul> <p><b>(B) જૈવવિવિધતા અને ઇકોસિસ્ટમનું સંરક્ષણ</b></p> <ul style="list-style-type: none"> <li>જૈવવિવિધતા અને તેનું વિતરણ: કુદરતી સંસાધન સ્તરો અને જૈવવિવિધતાના પ્રકારો તરીકે જૈવવિવિધતા, ભારત અને વિશ્વમાં જૈવવિવિધતા, જૈવવિવિધતા હોટસ્પોટ્સ, પ્રજાતિઓ અને ઇકોસિસ્ટમ જોખમી શ્રેણીઓ.</li> </ul> |  |

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
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ડીસેમ્બર, ૨૦૨૩થી અમલમાં

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | <ul style="list-style-type: none"><li>• ઇકોસિસ્ટમ્સ અને ઇકોસિસ્ટમ સેવાઓ: ભારતમાં મુખ્ય ઇકોસિસ્ટમ પ્રકારો અને તેમની મૂળભૂત લાક્ષણિકતાઓ – જંગલો, ભીની જમીન, ઘાસના મેદાનો, કૃષિ, દરિયાકાંઠાનો વિસ્તાર અને દરિયાઇ, ઇકોસિસ્ટમ સેવાઓ – વર્ગીકરણ અને તેમનું મહત્વ.</li><li>• જૈવવિવિધતા અને ઇકોસિસ્ટમ્સ માટેના જોખમો: જમીનનો ઉપયોગ અને જમીનના આવરણમાં ફેરફાર, પ્રજાતિઓનું વ્યાવસાયિક શોષણ, આક્રમક પ્રજાતિઓ, આગ, આપત્તિઓ અને આબોહવા પરિવર્તન.</li><li>• મુખ્ય સંરક્ષણ નીતિઓ: ઇન-સીટુ અને એક્સ-સીટુ સંરક્ષણ અભિગમો, મુખ્ય સંરક્ષિત વિસ્તારો, જૈવવિવિધતા સંરક્ષણ માટેના રાષ્ટ્રીય અને આંતરરાષ્ટ્રીય સાધનો, પરંપરાગત જ્ઞાનની ભૂમિકા, સમુદાય આધારિત સંરક્ષણ, લિંગ અને સંરક્ષણ.</li></ul> |  |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
 સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
 રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત  
 વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)  
 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

| INTERNAL EVALUATION SCHEME |                            |           |
|----------------------------|----------------------------|-----------|
| NO                         | Particulars                | Marks     |
| 1                          | Mid Semester Exam          | 13        |
| 2                          | Class Test                 | 03        |
| 3                          | Open book exam/test        | 03        |
| 4                          | Open note exam/test        | 03        |
| 5                          | Self-test/ Online test     | 03        |
| 6                          | Essay/Article writing      | 03        |
| 7                          | Quizzes/Objective test     | 03        |
| 8                          | Class assignment           | 03        |
| 9                          | Home assignment            | 03        |
| 10                         | Reports Writing            | 03        |
| 11                         | Research/Dissertation      | 03        |
| 12                         | Case Studies               | 03        |
| 13                         | Viva/Oral exam             | 03        |
| 14                         | Group Discussion           | 03        |
| 15                         | Role Play                  | 03        |
| 16                         | Paper presentation/Seminar | 03        |
| 17                         | Language Lab work          | 03        |
| 18                         | Interview                  | 03        |
| 19                         | Craft work                 | 03        |
| 20                         | Co-curricular work         | 03        |
| 21                         | Field Assignment           | 03        |
| 22                         | Poster Presentation        | 03        |
| 23                         | Attendance                 | 03        |
| 24                         | Project Work               | 03        |
|                            | <b>Total</b>               | <b>25</b> |

**Note: Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 24. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.**

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત  
વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)  
ડીસેમ્બર, ૨૦૨૩થી અમલમાં

**Evaluation Method: External**

| <b>Ques.<br/>No.</b> | <b>Particulars</b>                                                                                                                                                               | <b>Marks</b> |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Q.1</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students' comprehension of values. | <b>10</b>    |
| <b>Q.2</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students' comprehension of values. | <b>10</b>    |
| <b>Q.3</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students' comprehension of values. | <b>05</b>    |
|                      | Marks                                                                                                                                                                            | <b>25</b>    |

**Note: Proper weightage should be given to each unit.**

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત  
વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)  
ડીસેમ્બર, ૨૦૨૩થી અમલમાં

**Course No.-4: Principles of Gandhian Thoughts**

|                |                                |                    |           |
|----------------|--------------------------------|--------------------|-----------|
| Course Level   | 4.5                            | Course Code        |           |
| Programme      | Arts/Commerce/Science          | Internal Marks     | 25        |
| Semester       | 2                              | External Marks     | 25        |
| Course Type    | Value Added Course             | Practical Internal | 00        |
| Course Title   | PRINCIPLE OF GANDHIAN THOUGHTS | Practical External | 00        |
| Course Credit  | 02                             | Total              | 50        |
| Teaching Hours | 30 Hrs                         | Exam Duration      | 1:00 Hrs. |

**હેતુઓ:**

- ગાંધીજીનું સમગ્ર જીવન સત્યના પ્રયોગો પર આધારીત છે. તેમના જીવનની સાથે સતત તેમના વિચારો – આદર્શ ધડાતાવિકાસતારહયા છે. ગાંધીજીએ વિશ્વને જે નવી દ્રષ્ટિ આપી છે તેને સમજી જીવનમાં અપનાવે.

**અભ્યાસક્રમ**

**એકમ – ૧ :**

માનવ જીવન માં પ્રતિનું મહત્વ.

- ગાંધીજીનાએકાદશવ્રતનો પરિચય, સત્ય, અહિંસા, સર્વધર્મસમભાવ, અસ્પૃશ્યતા નિવારણ, અભય.

**એકમ – ૨ :**

- ખેડા, બારડોલી, દાંડીક્રુચ, હિન્દછોડોની લડત, ગોળમેજી પરિષદ – સવિસ્તર ઐતિહાસિક તવારીખ.

**સંદર્ભગ્રંથો:**

૧. આત્મકથા –ગાંધીજી
૨. દક્ષીણ આફ્રિકાના સત્યાગ્રહ નો ઇતિહાસ–ગાંધીજી
૩. રચનાત્મક કાર્યક્રમ - દશરથભાઈ શાહ
૪. બહુરૂપી ગાંધી- અનુબેન ઉપાધ્યાય
૫. ગાંધીજીનાપ્રરકો-દશરથભાઈ શાહ
૬. બાપુને દસ અંજલી- અમૃતલાલવેગડ
૭. મંગલપ્રભાત - ગાંધી

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
 સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
 રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત  
 વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)  
 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

| INTERNAL EVALUATION SCHEME |                            |           |
|----------------------------|----------------------------|-----------|
| NO                         | Particulars                | Marks     |
| 1                          | Mid Semester Exam          | 13        |
| 2                          | Class Test                 | 03        |
| 3                          | Open book exam/test        | 03        |
| 4                          | Open note exam/test        | 03        |
| 5                          | Self-test/ Online test     | 03        |
| 6                          | Essay/Article writing      | 03        |
| 7                          | Quizzes/Objective test     | 03        |
| 8                          | Class assignment           | 03        |
| 9                          | Home assignment            | 03        |
| 10                         | Reports Writing            | 03        |
| 11                         | Research/Dissertation      | 03        |
| 12                         | Case Studies               | 03        |
| 13                         | Viva/Oral exam             | 03        |
| 14                         | Group Discussion           | 03        |
| 15                         | Role Play                  | 03        |
| 16                         | Paper presentation/Seminar | 03        |
| 17                         | Language Lab work          | 03        |
| 18                         | Interview                  | 03        |
| 19                         | Craft work                 | 03        |
| 20                         | Co-curricular work         | 03        |
| 21                         | Field Assignment           | 03        |
| 22                         | Poster Presentation        | 03        |
| 23                         | Attendance                 | 03        |
| 24                         | Project Work               | 03        |
|                            | <b>Total</b>               | <b>25</b> |

**Note: Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 24. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.**



ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત  
વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)  
ડીસેમ્બર, ૨૦૨૩થી અમલમાં

**Evaluation Method: External**

| <b>Ques.<br/>No.</b> | <b>Particulars</b>                                                                                                                                                              | <b>Marks</b> |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Q.1</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>10</b>    |
| <b>Q.2</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>10</b>    |
| <b>Q.3</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>05</b>    |
|                      | Marks                                                                                                                                                                           | <b>25</b>    |

**Note: Proper weightage should be given to each unit.**

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
 સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
 રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત  
 વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)  
 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

**Course No.-5: ENVIRONMENTAL SCIENCE**

|                       |                       |                           |           |
|-----------------------|-----------------------|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                   | <b>Course Code</b>        |           |
| <b>Programme</b>      | Arts/Commerce/Science | <b>Internal Marks</b>     | 25        |
| <b>Semester</b>       | 2                     | <b>External Marks</b>     | 25        |
| <b>Course Type</b>    | Value Added Course    | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | ENVIRONMENTAL SCIENCE | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                    | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                | <b>Exam Duration</b>      | 1:00 Hrs. |

હેતુઓ :

૧. વિદ્યાર્થીઓ પર્યાવરણ ના જતન માટેની સામાજિક સભાનાતા કેળવે .
૨. અસંખ્ય જટિલ પ્રક્રિયાઓ થી ચાલતી સૃષ્ટિ સંતુલિત રહે છે તે જાણે.
૩. વિદ્યાર્થીઓ પર્યાવરણ વૈશ્વિક પ્રશ્નો થી સભાન બને.

સિદ્ધિઓ /ક્ષમતાઓ :

૧. વિદ્યાર્થીઓ પર્યાવરણ ના જુદા-જુદા વૈશ્વિક પ્રશ્નો સમજવી શકે અને તેની અસરો સમજાવી શકે છે.
૨. વિદ્યાર્થીઓ કુદરતી આફતો જેવી કે ધરતીકંપ , વાવાઝોડા વખતે શું ફરજો બજાવી જોઈએ તે સમજાવી શકે છે .
૩. વિદ્યાર્થીઓ ધરતીકંપ આવે ત્યારે શું કરવું જોઈએ તે સમજાવી શકે છે .

**અભ્યાસક્રમ**

➤ એકમ-૧ : પર્યાવરણના વૈશ્વિક પ્રશ્નો

---- 50%

- તેજાબી વર્ષા (એસીડ રેઈન ) -અસર ,સમીકરણો
- ગ્રીન હાઉસ ઇફેક્ટ,અસરો ,ગ્રીનહાઉસ વાયુઓ ,પ્રકારો
- ઓઝોનના સ્તરમાં ક્ષતિ , અસરો

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
સેમેસ્ટર – ૨ (આર્ટસ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત  
વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)  
ડીસેમ્બર, ૨૦૨૩થી અમલમાં

➤ એકમ-૨ : કુદરતી આફતો અને તેના પ્રકાર ----- 50%  
ભૂકંપ/ધરતીકંપ

- વ્યાખ્યાઓ, ધરતીકંપ, એપીસેન્ટર, હાઈપો સેન્ટર, આફ્ટરશોક
- ધરતીકંપ ના પ્રકારો – ટેકટોનિક / નોનટેકટોનિક
- સિસ્મોગ્રાફ
- ધરતીકંપ દરમિયાન બચાવ/રાહતના સૂચનો
- ધરતીકંપ આવે ત્યારે શું કરવું અને શું ના કરવું.

સંદર્ભ ગ્રંથો :-

૧. પર્યાવરણ શાસ્ત્ર - બીપીનભાઈ જોશી
૨. પર્યાવરણ અને ભૂકંપ ઇજનેરી –ડો. એમ.બી. ગોહિલ, અનિલ કે. પોપટ
૩. પર્યાવરણ સાથે- રમેશ સાવલિયા
૪. પર્યાવરણ -ડોક્ટર એમ. બી. ગોહિલ
૫. પર્યાવરણ શિક્ષણ –પ્રા.પંકજભાઈ પરમાર
૬. Ecology and Environment – P.D. Sharma , Rastogi.

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
 સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
 રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત  
 વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)  
 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

| INTERNAL EVALUATION SCHEME |                            |           |
|----------------------------|----------------------------|-----------|
| NO                         | Particulars                | Marks     |
| 1                          | Mid Semester Exam          | 13        |
| 2                          | Class Test                 | 03        |
| 3                          | Open book exam/test        | 03        |
| 4                          | Open note exam/test        | 03        |
| 5                          | Self-test/ Online test     | 03        |
| 6                          | Essay/Article writing      | 03        |
| 7                          | Quizzes/Objective test     | 03        |
| 8                          | Class assignment           | 03        |
| 9                          | Home assignment            | 03        |
| 10                         | Reports Writing            | 03        |
| 11                         | Research/Dissertation      | 03        |
| 12                         | Case Studies               | 03        |
| 13                         | Viva/Oral exam             | 03        |
| 14                         | Group Discussion           | 03        |
| 15                         | Role Play                  | 03        |
| 16                         | Paper presentation/Seminar | 03        |
| 17                         | Language Lab work          | 03        |
| 18                         | Interview                  | 03        |
| 19                         | Craft work                 | 03        |
| 20                         | Co-curricular work         | 03        |
| 21                         | Field Assignment           | 03        |
| 22                         | Poster Presentation        | 03        |
| 23                         | Attendance                 | 03        |
| 24                         | Project Work               | 03        |
|                            | <b>Total</b>               | <b>25</b> |

**Note: Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 24. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.**

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ડીસેમ્બર, ૨૦૨૩થી અમલમાં

**Evaluation Method: External**

| <b>Ques.<br/>No.</b> | <b>Particulars</b>                                                                                                                                                              | <b>Marks</b> |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Q.1</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>10</b>    |
| <b>Q.2</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>10</b>    |
| <b>Q.3</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>05</b>    |
|                      | Marks                                                                                                                                                                           | <b>25</b>    |

**Note: Proper weightage should be given to each unit.**

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**Course No.-6: HEALTH & WELLNESS**

|                       |                       |                           |           |
|-----------------------|-----------------------|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                   | <b>Course Code</b>        |           |
| <b>Programme</b>      | Arts/Commerce/Science | <b>Internal Marks</b>     | 25        |
| <b>Semester</b>       | 2                     | <b>External Marks</b>     | 25        |
| <b>Course Type</b>    | Value Added Course    | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | HEALTH & WELLNESS     | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                    | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                | <b>Exam Duration</b>      | 1:00 Hrs. |

હેતુઓ અને ક્ષમતા:-

(૧) કુદરતી ઉપચારોની વિશેષતાઓ જાણે અને અપનાવે.

(૨) રોગપ્રતિકારકતા વિશે જ્ઞાન પ્રાપ્ત કરે.

અભ્યાસક્રમ :-

એકમ – ૧. રોગોના ધરગથ્થું ઉપચારો અને પ્રચલિત માન્યતાઓ તેમજ અંધશ્રદ્ધાઓ.

એકમ - ૨. કુદરતી ઉપચાર :-

1. કુદરતી ઉપચારની વ્યાખ્યા.
2. કુદરતી ઉપચારની વિશેષતાઓ.
3. જુદી-જુદી પધ્ધતિઓ જેવી કે પાણી, માટી, સૂર્યસ્નાન અને ઉપવાસ દ્વારા કુદરતી ઉપચાર.

સંદર્ભ ગ્રંથો:-

1. સ્વસ્થવૃત્ત વિજ્ઞાન –પ્રા. દયાલ પરમાર
2. કુદરતી ઉપચાર –ડો.શરણપ્રસાદજી
3. Hand book of Nature care – 1 , 2 –Sukhjbeer Singh
4. આરોગ્યની આસપાસ – ઇન્ડિયન મેડિકલ એસોસિએશન મોરબી બ્રાંચ.

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

| INTERNAL EVALUATION SCHEME |                            |           |
|----------------------------|----------------------------|-----------|
| NO                         | Particulars                | Marks     |
| 1                          | Mid Semester Exam          | 13        |
| 2                          | Class Test                 | 03        |
| 3                          | Open book exam/test        | 03        |
| 4                          | Open note exam/test        | 03        |
| 5                          | Self-test/ Online test     | 03        |
| 6                          | Essay/Article writing      | 03        |
| 7                          | Quizzes/Objective test     | 03        |
| 8                          | Class assignment           | 03        |
| 9                          | Home assignment            | 03        |
| 10                         | Reports Writing            | 03        |
| 11                         | Research/Dissertation      | 03        |
| 12                         | Case Studies               | 03        |
| 13                         | Viva/Oral exam             | 03        |
| 14                         | Group Discussion           | 03        |
| 15                         | Role Play                  | 03        |
| 16                         | Paper presentation/Seminar | 03        |
| 17                         | Language Lab work          | 03        |
| 18                         | Interview                  | 03        |
| 19                         | Craft work                 | 03        |
| 20                         | Co-curricular work         | 03        |
| 21                         | Field Assignment           | 03        |
| 22                         | Poster Presentation        | 03        |
| 23                         | Attendance                 | 03        |
| 24                         | Project Work               | 03        |
|                            | <b>Total</b>               | <b>25</b> |

**Note: Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 24. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.**

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રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત  
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ડીસેમ્બર, ૨૦૨૩થી અમલમાં

**Evaluation Method: External**

| <b>Ques.<br/>No.</b> | <b>Particulars</b>                                                                                                                                                              | <b>Marks</b> |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Q.1</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>10</b>    |
| <b>Q.2</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>10</b>    |
| <b>Q.3</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>05</b>    |
|                      | Marks                                                                                                                                                                           | <b>25</b>    |

**Note: Proper weightage should be given to each unit.**



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**Course No.-7: Chitrakut Khandkavya**

|                       |                       |                           |           |
|-----------------------|-----------------------|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                   | <b>Course Code</b>        |           |
| <b>Programme</b>      | Arts/Commerce/Science | <b>Internal Marks</b>     | 25        |
| <b>Semester</b>       | 2                     | <b>External Marks</b>     | 25        |
| <b>Course Type</b>    | Value Added Course    | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | Chitrakut Khandkavya  | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                    | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                | <b>Exam Duration</b>      | 1:00 Hrs. |

પાઠ્ય વિષય : ચિત્રકૂટ ટંડ કાવ્ય - કવિ રામેશ્વર દયાલ દુબે

**હેતુ :**

- ૧.પારિવારિક ગરિમા ,ગાંધીવાદી વિચાર , મૂલ્ય ઔર આદર્શ કો જાને સમજો
૨. બડે બુજુર્ગ ઔર ગુરુઓં કે પ્રતિ માન સમ્માન કર્તવ્ય કો સમજો

**મૂલ્ય :**

- ૧ શ્રમ સ્વચ્છતા ,આત્મનિર્ભરતા-ત્યાગ કી ભાવનાવિકસિત હો
- ૨.ગાંધીવાદી દૃષ્ટિકોણ ,કાવ્ય સ્વરૂપ આસ્વાદન ભાષાજ્ઞાન મૂલ્યાંકન કરના સીખે

**ઇકાઈ- ૧ :**

કવિ સાહિત્યકાર કા જીવન કવન  
 કથાવસ્તુ , લક્ષણ ઔર સસન્દર્ભ

**ઇકાઈ- ૨ :**

પત્રોં કે ચારિત્ર કી વિશેષતા ,શીર્ષક , ઉદ્દેશ્ય

**સંદર્ભ ગ્રંથ :**

- ૧.પ્રકાશક શીલા દેવી દુબે ચિત્રકૂટ
૨. રાષ્ટ્રીય ચેતના કે કવિ મૈથિલી શરણ ગુપ્ત ,ડૉં અર્જુન સતપતિ, પરગ પ્રકાશન-દિલ્લી
- ૩.રામાયણ સાહિત્ય સંગમ સૂરત
- ૪.ગાંધી સાહિત્ય બાપૂ કી બાતે

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

| INTERNAL EVALUATION SCHEME |                            |           |
|----------------------------|----------------------------|-----------|
| NO                         | Particulars                | Marks     |
| 1                          | Mid Semester Exam          | 13        |
| 2                          | Class Test                 | 03        |
| 3                          | Open book exam/test        | 03        |
| 4                          | Open note exam/test        | 03        |
| 5                          | Self-test/ Online test     | 03        |
| 6                          | Essay/Article writing      | 03        |
| 7                          | Quizzes/Objective test     | 03        |
| 8                          | Class assignment           | 03        |
| 9                          | Home assignment            | 03        |
| 10                         | Reports Writing            | 03        |
| 11                         | Research/Dissertation      | 03        |
| 12                         | Case Studies               | 03        |
| 13                         | Viva/Oral exam             | 03        |
| 14                         | Group Discussion           | 03        |
| 15                         | Role Play                  | 03        |
| 16                         | Paper presentation/Seminar | 03        |
| 17                         | Language Lab work          | 03        |
| 18                         | Interview                  | 03        |
| 19                         | Craft work                 | 03        |
| 20                         | Co-curricular work         | 03        |
| 21                         | Field Assignment           | 03        |
| 22                         | Poster Presentation        | 03        |
| 23                         | Attendance                 | 03        |
| 24                         | Project Work               | 03        |
|                            | <b>Total</b>               | <b>25</b> |

**Note: Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 24. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.**

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
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ડીસેમ્બર, ૨૦૨૩થી અમલમાં

**Evaluation Method: External**

| <b>Ques.<br/>No.</b> | <b>Particulars</b>                                                                                                                                                              | <b>Marks</b> |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Q.1</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>10</b>    |
| <b>Q.2</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>10</b>    |
| <b>Q.3</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>05</b>    |
|                      | Marks                                                                                                                                                                           | <b>25</b>    |

**Note: Proper weightage should be given to each unit.**

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 રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત  
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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

## Course No.-8: Sports and Fitness

|                       |                       |  |                           |           |
|-----------------------|-----------------------|--|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                   |  | <b>Course Code</b>        |           |
| <b>Programme</b>      | Arts/Commerce/Science |  | <b>Internal Marks</b>     | 25        |
| <b>Semester</b>       | 2                     |  | <b>External Marks</b>     | 25        |
| <b>Course Type</b>    | Value Added Course    |  | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | Sports and Fitness    |  | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                    |  | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                |  | <b>Exam Duration</b>      | 1:00 Hrs. |

### Course objectives:

- To Understand about Sports and Fitness
- To Understand about various sports
- To Understand Need, Importance and Principals about Sports and Fitness

### Learning Outcomes:

- Able to Understand about Sports and Fitness
- Able to Understand about various sports
- Able to Understand Need, Importance and Principals about Sports and Fitness

## Course Contents

### Unit – I: Theory

- Meaning, Definition and Concept of sports and fitness
- Objectives of Fitness and Recreation
- Importance, Purpose, Benefits of sports and fitness

### Unit – II: Practical

- General and Specific Warm up
- Various Physical Activities
- Training for Endurance, Speed, Strength, Agility, Flexibility etc
- Traditional, Folk and Indigenous Games
- Various Indoor Sports

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 વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)  
 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

| INTERNAL EVALUATION SCHEME |                               |           |
|----------------------------|-------------------------------|-----------|
| NO                         | Particulars                   | Marks     |
| 1                          | Mid Semester Exam (Practical) | 13        |
| 2                          | Class Test                    | 03        |
| 3                          | Open book exam/test           | 03        |
| 4                          | Open note exam/test           | 03        |
| 5                          | Self-test/ Online test        | 03        |
| 6                          | Essay/Article writing         | 03        |
| 7                          | Quizzes/Objective test        | 03        |
| 8                          | Class assignment              | 03        |
| 9                          | Home assignment               | 03        |
| 10                         | Reports Writing               | 03        |
| 11                         | Research/Dissertation         | 03        |
| 12                         | Case Studies                  | 03        |
| 13                         | Viva/Oral exam                | 03        |
| 14                         | Group Discussion              | 03        |
| 15                         | Role Play                     | 03        |
| 16                         | Paper presentation/Seminar    | 03        |
| 17                         | Language Lab work             | 03        |
| 18                         | Interview                     | 03        |
| 19                         | Craft work                    | 03        |
| 20                         | Co-curricular work            | 03        |
| 21                         | Field Assignment              | 03        |
| 22                         | Poster Presentation           | 03        |
| 23                         | Attendance                    | 03        |
| 24                         | Project Work                  | 03        |
|                            | <b>Total</b>                  | <b>25</b> |

**Note: Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 24. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.**

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ડીસેમ્બર, ૨૦૨૩થી અમલમાં

**Evaluation Method: External**

| <b>Ques.<br/>No.</b> | <b>Particulars</b>                                                                                                                                                               | <b>Marks</b> |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Q.1</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students' comprehension of values. | <b>10</b>    |
| <b>Q.2</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students' comprehension of values. | <b>10</b>    |
| <b>Q.3</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students' comprehension of values. | <b>05</b>    |
|                      | Marks                                                                                                                                                                            | <b>25</b>    |

**Note: Proper weightage should be given to each unit.**

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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

**Course No.-9: Indian Ethos and Values in Business**

|                       |                                     |  |                           |           |
|-----------------------|-------------------------------------|--|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                                 |  | <b>Course Code</b>        |           |
| <b>Programme</b>      | Arts/Commerce/Science               |  | <b>Internal Marks</b>     | 25        |
| <b>Semester</b>       | 2                                   |  | <b>External Marks</b>     | 25        |
| <b>Course Type</b>    | Value Added Course                  |  | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | Indian Ethos and Values in Business |  | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                                  |  | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                              |  | <b>Exam Duration</b>      | 1:00 Hrs. |

**Course Objectives:**

- To sensitize students about fundamental values and principles about life and try to help them in building strong & ethical character.
- To stimulate moral imagination of students.
- To enhance quality behavior among all stake holders.
- Stimulate student's sense of responsibility.

**Course Outcomes:**

On successful completion of the course, the students will be able to:

- Understand the Foundations of Indian Ethos.
- Apply Ethical Principles to Business Decision-Making.
- Examine the Role of Dharma in Business.
- Create a Personal Code of Ethics.

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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

| Units                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Title of the Unit and the Topics                                                                                                                                                                                                                                                                                                                                                                                                       | No. of Lectures (Hours) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Unit 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Values and Ethics in Business                                                                                                                                                                                                                                                                                                                                                                                                          | 15                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Values:</b> Nature of Values, Types and Formation of Values, Core Virtues and Values and Behaviour, Values for Indian Managers.<br><b>Ethics:</b> Development of Ethics, Causes of Unethicality, Importance of Ethics and Values in Business, Ethos of Vedanta in Management; Brief Overview of Models of Business Ethics: YVK Foundation and IOM Framework.                                                                        |                         |
| Unit 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Knowledge, Wisdom And Dharma                                                                                                                                                                                                                                                                                                                                                                                                           | 15                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Knowledge And Wisdom:</b> Meaning and of Knowledge and Wisdom, Difference Between Knowledge and Wisdom, Knowledge Worker Versus Wisdom Worker, Concept of Knowledge Management and Wisdom Management.<br><b>Concept of Dharma &amp; Karma Yoga:</b> Concepts and Elements of Dharma and Adharma, Concept and Kinds of Karm Yoga, Nishkam Karma and Sakam Karma. Total Quality Management, Quality of Life and Quality of Work Life. |                         |
| <b>SUGGESTED REFERENCES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                        |                         |
| <b>Reference Books:</b> <ol style="list-style-type: none"> <li>1. Kaur, Tripat; Values &amp; Ethics in Management, Galgotia Publishers.</li> <li>2. Chakraborty, S.K.; Human values for Managers.</li> <li>3. Chakraborty, S.K.; Ethics in Management: A Vedantic Perspective, Oxford University Press.</li> <li>4. R. R. Gaur, R Sangal &amp; G P Bagaria, A foundation course in Human Values and Professional Ethics, Excel Books.</li> <li>5. Manuel G. Velasquez, Business Ethics, Pearson.</li> <li>6. S. B. Gogate, Human Values &amp; Professional Ethics Vikas Publishing House Pvt. Ltd.</li> </ol> <b>Website:</b> <ol style="list-style-type: none"> <li>1. <a href="http://www.ethicstrainingguide.com/2009/08/importance-of-values-and-ethics-in.html">http://www.ethicstrainingguide.com/2009/08/importance-of-values-and-ethics-in.html</a></li> <li>2. <a href="http://www.managementstudyguide.com/values-ethics.htm">http://www.managementstudyguide.com/values-ethics.htm</a></li> <li>3. <a href="http://equisitive.com/definition-of-knowledge-and-wisdom/">http://equisitive.com/definition-of-knowledge-and-wisdom/</a></li> <li>4. <a href="http://www.bukisa.com/articles/525610_quality-of-work-life">http://www.bukisa.com/articles/525610_quality-of-work-life</a></li> </ol> |                                                                                                                                                                                                                                                                                                                                                                                                                                        |                         |



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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

5. [http://articles.economictimes.indiatimes.com/2009-01-18/news/28462497\\_1\\_corporategovernance-satyam-books-fraud-by-satyam-founder](http://articles.economictimes.indiatimes.com/2009-01-18/news/28462497_1_corporategovernance-satyam-books-fraud-by-satyam-founder).

**Note:** Wherever the standard books are not available for the topic appropriate print and online resources, journals and books published by different authors may be prescribed.

| For 50-marks Course: With 2 (Two) Credits, and 2 (Two) Units                                                                          |                |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Semester-End External Examination                                                                                                     |                |
| Total m                                                                                                                               | Time: 1.00 Hrs |
| Unit and Question                                                                                                                     | Marks          |
| Unit 1: Question 1 OR Question 1                                                                                                      | 10             |
| Unit 2: Question 2 OR Question 2                                                                                                      | 10             |
| Unit 1 & 2: Question 3 from Unit 1 OR Question 3 form Unit 2                                                                          | 5              |
| <b>Total</b>                                                                                                                          | <b>25</b>      |
| <b>Passing Marks for External Examination: 9 Marks (36% of 25 Marks)</b>                                                              |                |
| Internal Assessment                                                                                                                   |                |
| Particulars                                                                                                                           | Marks          |
| Mid-term Examination (Practical: Computer Practical Examination):                                                                     | 13             |
| Any 4 (four) Components, each of 3 Marks:<br>(Note: Select the components from the Schedule 1, attached at the end of this syllabus.) | 12             |
| <b>Total</b>                                                                                                                          | <b>25</b>      |
| <b>Passing Marks for Internal Assessment : 9 marks (36% of 50 marks)</b>                                                              |                |

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

| INTERNAL EVALUATION SCHEME |                               |           |
|----------------------------|-------------------------------|-----------|
| NO                         | Particulars                   | Marks     |
| 1                          | Mid Semester Exam (Practical) | 13        |
| 2                          | Class Test                    | 03        |
| 3                          | Open book exam/test           | 03        |
| 4                          | Open note exam/test           | 03        |
| 5                          | Self-test/ Online test        | 03        |
| 6                          | Essay/Article writing         | 03        |
| 7                          | Quizzes/Objective test        | 03        |
| 8                          | Class assignment              | 03        |
| 9                          | Home assignment               | 03        |
| 10                         | Reports Writing               | 03        |
| 11                         | Research/Dissertation         | 03        |
| 12                         | Case Studies                  | 03        |
| 13                         | Viva/Oral exam                | 03        |
| 14                         | Group Discussion              | 03        |
| 15                         | Role Play                     | 03        |
| 16                         | Paper presentation/Seminar    | 03        |
| 17                         | Language Lab work             | 03        |
| 18                         | Interview                     | 03        |
| 19                         | Craft work                    | 03        |
| 20                         | Co-curricular work            | 03        |
| 21                         | Field Assignment              | 03        |
| 22                         | Poster Presentation           | 03        |
| 23                         | Attendance                    | 03        |
| 24                         | Project Work                  | 03        |
|                            | <b>Total</b>                  | <b>25</b> |

**Note: Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 24. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.**

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**ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ**  
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**ડીસેમ્બર, ૨૦૨૩થી અમલમાં**

**Course No.-10: Personality Development Course (IPDC)**

|                       |                       |                           |           |
|-----------------------|-----------------------|---------------------------|-----------|
| <b>Course Level</b>   | 4.5                   | <b>Course Code</b>        |           |
| <b>Programme</b>      | Arts/Commerce/Science | <b>Internal Marks</b>     | 25        |
| <b>Semester</b>       | 2                     | <b>External Marks</b>     | 25        |
| <b>Course Type</b>    | Value Added Course    | <b>Practical Internal</b> | 00        |
| <b>Course Title</b>   | IPDC                  | <b>Practical External</b> | 00        |
| <b>Course Credit</b>  | 02                    | <b>Total</b>              | 50        |
| <b>Teaching Hours</b> | 30 Hrs                | <b>Exam Duration</b>      | 1:00 Hrs. |

**ઇન્ટિગ્રેટેડ પર્સનાલિટી ડેવલપમેન્ટ કોર્સ - સંક્ષિપ્ત પરિચય**

BAPS સ્વામિનારાયણ સંસ્થા દ્વારા સંકલિત વ્યક્તિત્વ વિકાસ અભ્યાસક્રમની રચના કોલેજના વિદ્યાર્થીઓને તેમના સર્વાંગી વિકાસમાં મદદ કરવા માટે કરવામાં આવી છે. આ કોર્સ નવી એજ્યુકેશન પોલિસી (NEP) ની જરૂરિયાતોને સમર્થન આપે છે. NEPની માંગ છે કે, ‘...ચારિત્ર્યનું નિર્માણ કરે, વિદ્યાર્થીઓને નૈતિક, તર્કસંગત, કડુણાસભર અને કાળજી રાખવા સક્ષમ બનાવે, સાથે તેમને લાભદાયક, પરિપૂર્ણ રોજગાર માટે તૈયાર કરે (તેવો અભ્યાસક્રમ પૂરો પાડવો)...’ IPDC વિદ્યાર્થીઓના યુનિવર્સિટી અભ્યાસક્રમમાં સરળતાથી સંકલિત થઈ તેમને અસરકારક રીતે આવશ્યક મૂલ્યો શીખવે છે. તેમના આંતરિક વ્યક્તિત્વનો વિકાસ કરી નૈતિકતાને મજબૂત કરે છે. તેમજ રચનાત્મક અને સર્જનાત્મક વિચારસરણીને પોષે છે. આ કોર્સ દ્વારા, વિદ્યાર્થીઓ જીવનના અમૂલ્ય પાઠનો આનંદ માણી શકે છે; સમજી શકે છે અને તેનો અભ્યાસ કરી શકે છે. જે તેમના ઉજ્જવળ ભવિષ્ય માટે આધાર પૂરો પાડે છે.

**ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ**  
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**ડીસેમ્બર, ૨૦૨૩થી અમલમાં**

**અભ્યાસક્રમના ઉદ્દેશો:**

- વિદ્યાર્થીઓને સર્વગ્રાહી મૂલ્ય-આધારિત શિક્ષણ પ્રદાન કરવું જે તેમને તેમના શૈક્ષણિક, વ્યવસાયિક અને સામાજિક જીવનમાં સફળ થવા સક્ષમ બનાવે.
- વિદ્યાર્થીઓને અસરકારક સુટેવો વિકસાવવા, વ્યક્તિગત વિકાસને પ્રોત્સાહન આપવા અને તેમની સુખાકારી, સ્થિરતા અને કાર્ય ક્ષમતામાં સુધારો કરવા માટે સામગ્રી પ્રદાન કરવી.
- વિદ્યાર્થીઓને તર્કસંગત વિચારસરણી દ્વારા એકતા, ક્ષમા, સહાનુભૂતિ અને અસરકારક વાણીવ્યવહાર જેવા ગુણોના વિકાસ દ્વારા તેમના પરિવાર સાથે વધુ મજબૂત જોડાણ સ્થાપિત કરવાની પ્રેરણા આપવી.
- વિદ્યાર્થીઓને તેમના વ્યાવસાયિક કૌશલ્યોને પૂરક બને તેવા કૌશલ્યો ( સોફ્ટ સ્કિલ) પ્રદાન કરવા, જ્યારે તેઓને આગળ ઉપર નોકરી કે વ્યવસાયલક્ષી કારકીર્દીમાં પણ સહાયરૂપ થાય.
- ભારતના અજોડ વારસાનું ગૌરવ અને વૈશ્વિક મૂલ્યોની જાગૃતિ વધારવા અને એવા નાગરિકો તૈયાર કરવા જે તેમના પરિવાર, કોલેજ, વ્યાવસાયિકક્ષેત્ર અને રાષ્ટ્રની પ્રગતિ માટે પ્રયત્નશીલ રહે.
- આદર્શ, શિસ્તબદ્ધ અને મૂલ્ય-આધારિત જીવન જીવ્યા હોય તેવા રોલ મોડેલ પાસેથી પ્રેરણા પ્રાપ્ત કરી, ઉચ્ચ ચારિત્ર્ય ઘડતર માટે પ્રયત્ન કરવા વિદ્યાર્થીઓને પ્રેરણા આપવી.

| Lecture No.                | Module & Subject                                                        | Subject Description                                                                                                                                                                                                           | Hours |
|----------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| <b>IPDC-1 (પ્રથમ સત્ર)</b> |                                                                         |                                                                                                                                                                                                                               |       |
| Intro-duction              | <b>The Need for Values</b>                                              | વિદ્યાર્થીઓ તેમના સર્વાંગી વિકાસના ભાગરૂપે મૂલ્યોની જરૂરિયાત વિશે શીખશે. તેમની ઘણી ભૂમિકાઓ જેવી કે મહત્વાકાંક્ષી વિદ્યાર્થીઓ, ભરોસાપાત્ર કર્મચારીઓ, કુટુંબના પરિપક્વ સભ્યો અને વિચારશીલ નાગરિકો તરીકે સફળ થવા માટે.           | 2     |
| 1                          | <b>Module:</b> સ્વયંનું નવનિર્માણ<br><b>Lecture:</b> ચાલો, સ્વયંને ઘડીએ | વિદ્યાર્થીઓ શીખશે કે પોતાની જાતમાં લાવેલો સુધારો કેવી રીતે ઉજ્જવળ ભવિષ્યના પાયને મજબૂત કરે છે. આ સાથે તેમના બૌદ્ધિક, શારીરિક, ભાવનાત્મક અને આધ્યાત્મિક આંક વધારવામાં ઉપયોગી એવી અસરકારક વૈચારિક પ્રક્રિયાઓ વિશે પણ તેઓ જાણશે. | 2     |
| 2                          | <b>Module:</b> સ્વયંનું નવનિર્માણ<br><b>Lecture:</b> આદતનો પ્રભાવ       | આદતો કેવી રીતે કાર્ય કરે છે, સફળ વ્યક્તિની આદતો કેવી હોય છે તથા જીવનમાં સારી આદતો પાડવા માટે ઉપયોગી એવી કાર્યપદ્ધતિનો અભ્યાસ વિદ્યાર્થીઓ કરશે.                                                                                | 2     |

**ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ**  
**સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)**  
**રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત**  
**વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)**  
**ડીસેમ્બર, ૨૦૨૩થી અમલમાં**

|    |                                                                                    |                                                                                                                                                                                                                                                                              |   |
|----|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 3  | <b>Module:</b> મહાન વ્યક્તિઓના પગલે-પગલે<br><b>Lecture:</b> તેડુલકર અને ટાટા       | ભારતના માનવ રત્નો સચિન તેડુલકર તથા રતન ટાટાના મહાન જીવનમાંથી વિદ્યાર્થીઓ પ્રેરણા મેળવશે અને તેમના જીવન સાથે મળતી આવતી પરિસ્થિતિ દ્વારા તેમાંથી શીખેલા જીવન મૂલ્યોને પોતાના જીવનમાં ઉતારવા પ્રયત્ન કરશે.                                                                      | 2 |
| 4  | <b>Module:</b> મકાન નહીં, ઘર બનાવીએ<br><b>Lecture:</b> સંભાળો છો કે સમજો છો?       | ધ્યાનપૂર્વક સાંભળવું તે શૈક્ષણિક વિકાસ તથા કોમ્યુનિકેશન માટેનું એક જરૂરી અંગ છે. વિદ્યાર્થીઓ સાંભળવા માટે કાન, મન અને હૃદયનો ઉપયોગ કરતાં શીખશે.                                                                                                                              | 2 |
| 5  | <b>Module:</b> નિષ્ફળતા-એક પાઠશાળા<br><b>Lecture:</b> પડકારને આવકાર                | આ લેક્ચર દ્વારા વિદ્યાર્થીઓ જાણશે કે જીવનમાં પડકારનો સામનો કરવાનો આવે ત્યારે તેઓ કેવો અભિગમ દાખવે છે. ડિઝની, લિંકન તથા બચ્ચન જેવી સફળ વ્યક્તિઓના જીવન પરથી તેઓ વિપરીત સંજોગોમાં પણ હકારાત્મક અભિગમ રાખી મુશ્કેલીઓનો સામનો કરવાનું શીખશે.                                     | 2 |
| 6  | <b>Module:</b> નિષ્ફળતા-એક પાઠશાળા<br><b>Lecture:</b> સંઘર્ષ - જીવનનું અમૃત        | નિષ્ફળતા એ વિદ્યાર્થીના જીવનમાં ડર, નકારાત્મકતા તથા હતાશા ફેલાવવા માટેનું મુખ્ય પરિબલ છે. નિષ્ફળતામાંથી પણ કંઈક શીખીને તેનો રચનાત્મક ઉપયોગ કરી શકાય છે તેવી સમજણ કેળવવાનું શીખશે.                                                                                            | 2 |
| 7  | <b>Module:</b> મેરા ભારત મહાન<br><b>Lecture:</b> ભવ્ય ભૂતકાળ-૧                     | ભારતના ઋષિમુનિઓ તથા વિદ્વાનોનું વિશ્વમાં અતિ મહત્ત્વનું યોગદાન રહેલું છે. જેમણે હજારો વર્ષ પહેલાં એક આધુનિક અને સુસંસ્કૃત સભ્યતાનો વિકાસ કર્યો. વિદ્યાર્થીઓ ભારતના અતિ સમૃદ્ધ ભૂતકાળ અને વારસા વિશે જાણશે. જેથી તેમને પોતાના દેશની અસ્મિતા માટે અહોભાવ અને આદરની લાગણી જાગે. | 2 |
| 8  | <b>Module:</b> મેરા ભારત મહાન<br><b>Lecture:</b> ભવ્ય ભૂતકાળ-૨                     | આપણા પૌરાણિક સિદ્ધાંતો અને સંકલ્પનાઓમાંથી આપણે ક્રાંતિકારી વિચારો તેમજ પ્રેરણા બંને મેળવી શકીએ છીએ. ભારતના અમૂલ્ય અને અજોડ ભૂતકાળ વિશે વાંચીને, સંશોધન કરીને, લખીને કે કોઈની સાથે શેર કરીને એમ વિવિધ રીતે વિદ્યાર્થીઓમાં ભારતના સોનેરી ભૂતકાળ વિશે ઊંડો રસ ઉત્પન્ન થઈ શકે.   | 2 |
| 9  | <b>Module:</b> મહાન વ્યક્તિઓના પગલે-પગલે<br><b>Lecture:</b> એ. પી. જે. અબ્દુલ કલામ | ડૉક્ટર અબ્દુલ કલામના જીવનમાં અનેક ઉચ્ચ કોટિના જીવનમૂલ્યો જોવા મળતા હતાં. જેવા કે સ્વપ્ન જોવાની હિંમત, સખત મહેનત, યોગ્ય માર્ગદર્શન, નમ્રતા, તમારી આવડતનો બીજાના ભલા માટે ઉપયોગ. આ મૂલ્યો વિદ્યાર્થીઓ માટે એક ઉત્તમ પ્રેરણાસ્ત્રોત છે.                                         | 2 |
| 10 | <b>Module:</b> કૌશલ્ય-નિર્માણ<br><b>Lecture:</b> સંબંધો અને નેતૃત્વ                | વ્યવસાયિક વર્તુળ (પ્રોફેશનલ નેટવર્ક) તથા આગેવાની લેવા માટે જરૂરી અભિગમ (લીડરશીપ એટીટ્યુડ) કેળવવા અંગેની રીતો વિદ્યાર્થીઓને શીખવવામાં આવે છે.                                                                                                                                 | 2 |
| 11 | <b>Module:</b> કૌશલ્ય-નિર્માણ<br><b>Lecture:</b> પ્રકલ્પનું પ્રબંધન                | અક્ષરધામ કેસ સ્ટડી દ્વારા વિદ્યાર્થીઓ સફળ પ્રોજેક્ટ મેનેજમેન્ટના પાઠ ભણશે અને ત્યારપછી વિદ્યાર્થી રોજિંદા જીવનને અનુરૂપ કોઈ પ્રવૃત્તિ સાથે સાંકળી તેનો અભ્યાસ કરશે.                                                                                                          | 2 |

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|----|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 12 | <b>Module:</b> સ્વયંનું નવનિર્માણ<br><b>Lecture:</b> સોશિયલ મીડિયામાં સંતુલન   | વિદ્યાર્થીઓને સમજશે કે સોશિયલ મિડિયા કેવી રીતે એક વળગણ બની જાય છે. કેટલીક સરળ રીતો અપનાવી પોતાની જાત પર કાબૂ મેળવતા શીખશે.                                                                              | 2 |
| 13 | <b>Module:</b> નિષ્ફળતા-એક પાઠશાળા<br><b>Lecture:</b> શ્રદ્ધાની શક્તિ          | વિદ્યાર્થીઓ તેમના રોજિંદા જીવનમાં શ્રદ્ધાની શક્તિ તથા તેની જરૂરિયાતનું મહત્ત્વ સમજશે.                                                                                                                   | 2 |
| 14 | <b>Module:</b> મકાન નહીં, ઘર બનાવીએ<br><b>Lecture:</b> પરિવારને પ્રેમથી બાંધીએ | વિદ્યાર્થીઓ મજબૂત પારિવારિક સંબંધોનું મહત્ત્વ સમજશે. બે પેઢી વચ્ચેનું અંતર કેવી રીતે દૂર કરવું તથા કુટુંબના સભ્યો સાથે કેવી રીતે જોડાયેલા રહેવું તે શીખશે.                                              | 2 |
| 15 | <b>Module:</b> પરોપકારનું પ્રશિક્ષણ<br><b>Lecture:</b> સેવા                    | વિદ્યાર્થીઓ જીવનમાં નિઃસ્વાર્થ સેવાનું મહત્ત્વ સમજશે. તેઓને ખ્યાલ આવશે કે વ્યક્તિની શારીરિક અને માનસિક સુખાકારી માટે સેવા કેવી રીતે ઉપયોગી થાય છે. સેવા દ્વારા અન્યને પણ લાભ થાય છે અને પ્રેરણા મળે છે. | 2 |

## IPDC સંદર્ભો -

આ IPDC લેકચરો માટે સંદર્ભ સામગ્રી છે. વિદ્યાર્થીઓ માટે આ ફરજિયાત વાંચન નથી કારણ કે આવશ્યક માહિતી વર્કબુકમાં સમાયેલ છે.

| No. | Module                | References                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Facing Failures       | <ol style="list-style-type: none"> <li>1. Thomas Edison's factory burns down, New York Times Archives, Page 1, 10/12/1914</li> <li>2. <u>Lincoln Financial Foundation</u>, Abraham Lincoln's "Failures": Critiques, Forgotten Books, 2017</li> <li>3. J.K. Rowling Harvard Commencement Speech   Harvard University Commencement, 2008</li> <li>4. Born Again on the Mountain: A Story of Losing Everything and Finding It Back, <u>Arunima Sinha</u>, Penguin, 2014</li> <li>5. Failing Forward: Turning Mistakes Into Stepping Stones for Success, <u>John C. Maxwell</u>, Thomas Nelson, 2007</li> <li>6. Steve Jobs: The Exclusive Biography Paperback, <u>Walter Isaacson</u>, Abacus, 2015</li> <li>7. Failing Forward: Turning Mistakes Into Stepping Stones for Success, <u>John C. Maxwell</u>, Thomas Nelson, 2007</li> </ol> |
| 2   | Learning from Legends | <ol style="list-style-type: none"> <li>1. Chase Your Dreams: My Autobiography, Sachin Tendulkar, Hachette India, 2017</li> <li>2. Playing It My Way: My Autobiography, Sachin Tendulkar, Hodder &amp; Stoughton, 2014</li> <li>3. The Wit and Wisdom of Ratan Tata, Ratan Tata, Hay House, 2018</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

**ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ**  
**સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)**  
**રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત**  
**વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)**  
**ડીસેમ્બર, ૨૦૨૩થી અમલમાં**

|   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                    | <ol style="list-style-type: none"> <li>The Tata Group: From Torchbearers to Trailblazers, Shashank Shah, Penguin Portfolio, 2018</li> <li>The Leader Who Had No Title, Robin Sharma, Jaico Publishing House, 2010</li> <li>In the Joy of Others: A Life-Sketch of Pramukh Swami Maharaj, Mohanlal Patel and BAPS Sadhus, Swaminarayan Aksharpith, 2013</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3 | My India My Pride  | <ol style="list-style-type: none"> <li>Rishis, Mystics, and Heroes of India, Sadhu Mukundcharandas, Swaminarayan Aksharpith, 2011</li> <li>Physics in Ancient India, <u>Narayan Dongre</u>, <u>Shankar Nene</u>, National Book Trust, 2016</li> <li><u>The Rise of Civilization in India and Pakistan</u>, Raymond Allchin, Bridget Allchin, <u>Cambridge University Press</u>, 1982</li> <li><u>The Āryabhaṭīya of Āryabhaṭa: An Ancient Indian Work on Mathematics and Astronomy</u> (1930), <u>Walter Eugene Clark</u>, University of Chicago Press, reprint, Kessinger Publishing, 2006</li> </ol>                                                                                                                                                                                                                                             |
| 4 | Remaking Yourself  | <ol style="list-style-type: none"> <li>Power of Habit, Charles Duhigg, Random House Trade Paperbacks, 2014</li> <li>Change Your Habit, Change Your Life, Tom Corley, North Loop Books, 2016</li> <li>The Seven Habits of Highly Effective People, Stephen Covey, Simon &amp; Schuster, 2013</li> <li>Seven Habits of Highly Effective Teens, Sean Covey, Simon &amp; Schuster, 2012</li> <li>Atomic Habits, James Clear, Random House, 2018</li> <li>How a handful of tech companies control billions of minds every day, Tristan Harris, TED Talk, 2017</li> </ol>                                                                                                                                                                                                                                                                                |
| 5 | From House to Home | <ol style="list-style-type: none"> <li>“What Makes a Good Life? Lessons from the Longest Study on Happiness”, R. Walinger, Ted Talks, 2015</li> <li>Long Walk To Freedom, <u>Nelson Mandela</u>, Back Bay Books, 1995</li> <li>Outliers, Malcolm Gladwell, Back Bay Books, 2011</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 6 | Soft Skills        | <ol style="list-style-type: none"> <li>The 17 Indisputable Laws of Teamwork, John Maxwell, HarperCollins, 2013</li> <li>Team of Teams: New Rules of Engagement for a Complex World, Stanley McChrystal, Portfolio, 2015</li> <li>Predictably Irrational, Revised and Expanded Edition: The Hidden Forces That Shape Our Decisions, <u>Dan Ariely</u>, Harper Perennial, 2010</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 7 | Selfless Service   | <ol style="list-style-type: none"> <li>Open: An Autobiography, Andre Agassi, Vintage, 10 August 2010</li> <li>The Physiological Power of Altruism [online], James Hamblin, The Atlantic, December 30, 2015, <a href="https://www.theatlantic.com/health/archive/2015/12/altruism-for-a-better-body/422280/">https://www.theatlantic.com/health/archive/2015/12/altruism-for-a-better-body/422280/</a> [last accessed June 10, 2020]</li> <li>TBI Blogs: From Entrepreneurs to Doorkeepers, Everybody Serves with Love &amp; Warmth at This Ahmedabad Café [online], <u>The People Place Project</u>, The Better India, May 29, 2017, <a href="https://www.thebetterindia.com/102551/small-way-serve-ahmedabad-seva-cafe/">https://www.thebetterindia.com/102551/small-way-serve-ahmedabad-seva-cafe/</a>, [last accessed June 10, 2020]</li> </ol> |

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
રાષ્ટ્રીય શિક્ષણ નિતી – ૨૦૨૦ આધારિત  
વેલ્યુ એડેડ કોર્સ નાં અભ્યાસક્રમો (Basket for VAC)  
ડીસેમ્બર, ૨૦૨૩થી અમલમાં

પરિચયાત્મક સામગ્રી:

| <b>IPDC Intro</b><br><a href="#">IPDC-YouTube</a>                                 | <b>Lecturer Glimpse</b><br><a href="#">IPDC - YouTube</a>                         | <b>IPDC Impact - 1</b><br><a href="#">IPDC - YouTube</a>                            |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |

**The Integrated Personality Development Course – An Introduction**

The Integrated Personality Development Course (IPDC) has been designed, by the BAPS Swaminarayan Sanstha, to enhance student awareness of India’s glory and global values and create citizens who contribute to their families, college, workforce, community, and nation. This course supports the requirements of the National Education Policy (NEP), to “build character, enable learners to be ethical, rational, compassionate, and caring, while at the same time prepare them for gainful, fulfilling employment”.

Easily integrated into the university syllabus, IPDC effectively teaches essential Indian values, develops character, strengthens morality, and nourishes constructive and creative thinking. Through this course, students can enjoy, understand, and practice priceless lessons, giving them the tools to prepare for a brighter future towards nation-building.

**Course Outcomes / Objectives:**

- To enhance awareness of India’s glory and global values, and to create considerate citizens who strive for the betterment of their family, college, workforce, communication, and nation.
- To provide students with a holistic value-based education that will enable them to succeed academically, professionally, and socially.



ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
 સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

- To give the students the tools to develop effective habits, promote personal growth, and improve their well-being, stability, and productivity.
- To allow students to establish a stronger connection with their family through critical thinking and the development of qualities such as unity, forgiveness, empathy, and effective communication.
- To provide students with soft skills that complement their hard skills, making them more marketable when entering the workforce.
- To inspire students to strive for a higher sense of character by learning from Indian role models who have lived principled, disciplined, and value-based lives.

| Lecture No.   | Module & Subject                                                           | Subject Description                                                                                                                                                                                                        | Hours |
|---------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| <b>IPDC-1</b> |                                                                            |                                                                                                                                                                                                                            |       |
| Intro         | The Need for Values                                                        | Students will learn about the need for values as part of their holistic development to become successful in their many roles - as ambitious students, reliable employees, caring family members, and considerate citizens. | 2     |
| 1             | <b>Module:</b> Remaking Yourself<br><b>Subject:</b> Restructuring Yourself | Students learn how self-improvement enables them to secure a bright future for themselves. They will learn 6 powerful thought processes that can develop their intellectual, physical, emotional, and spiritual quotients. | 2     |
| 2             | <b>Module:</b> Remaking Yourself<br><b>Subject:</b> Power of Habit         | Students will undergo a study of how habits work, the habits of successful professionals, and the practical techniques that can be used to develop good habits in their life.                                              | 2     |
| 3             | <b>Module:</b> Learning from Legends<br><b>Subject:</b> Tendulkar & Tata   | Students will learn from the inspirational lives of India's two legends, Sachin Tendulkar and Ratan Tata. They will implement these lessons through relatable case studies.                                                | 2     |

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
 સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

|    |                                                                                |                                                                                                                                                                                                                                                                                                                                                        |   |
|----|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 4  | <b>Module:</b> From House to Home<br><b>Subject:</b> Listening & Understanding | Active listening is an essential part of academic progress and communication. Students will learn to listen with their eyes, ears, mind, and heart.                                                                                                                                                                                                    | 2 |
| 5  | <b>Module:</b> Facing Failures<br><b>Subject:</b> Welcoming Challenges         | This lecture enables students to revisit the way in which they approach challenges. Through the study of successful figures such as Disney, Lincoln and Bachchan, students will learn to face difficulties through a positive perspective.                                                                                                             | 2 |
| 6  | <b>Module:</b> Facing Failures<br><b>Subject:</b> Significance of Failures     | Failure is a student's daily source of fear, negativity, and depression. Students will be given the constructive skills to understand failure as a formative learning experience.                                                                                                                                                                      | 2 |
| 7  | <b>Module:</b> My India My Pride<br><b>Subject:</b> Glorious Past - Part 1     | India's ancient Rishis, scholars, and intellectuals have made tremendous contributions to the world, they developed an advanced, sophisticated culture and civilization which began thousands of years ago. Students will learn the importance of studying India's glorious past so that they could develop a strong passion and pride for our nation. |   |
| 8  | <b>Module:</b> My India My Pride<br><b>Subject:</b> Glorious Past - Part 2     | Our ancient concepts can be used to seek revolutionary ideas and generate inspiration. Students will develop a deeper interest in India's Glorious Past – by appreciating the need to read about it, research it, write about it, and share it.                                                                                                        |   |
| 9  | <b>Module:</b> Learning from Legends<br><b>Subject:</b> A.P.J. Abdul Kalam     | Dr Kalam's inspirational life displayed legendary qualities which apply to students (1) Dare to Dream (2) Work Hard (3) Get Good Guidance (4) Humility (5) Use Your Talents for the Benefit of Others                                                                                                                                                  |   |
| 10 | <b>Module:</b> Soft Skills<br><b>Subject:</b> Networking & Leadership          | Students are taught the means of building a professional network and developing a leadership attitude.                                                                                                                                                                                                                                                 |   |
| 11 | <b>Module:</b> Soft Skills<br><b>Subject:</b> Project Management               | Students will learn the secrets of project management through the Akshardham case study. They will then practise these skills through an activity relevant to student life.                                                                                                                                                                            |   |

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
 સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

|    |                                                                           |                                                                                                                                                                |  |
|----|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 12 | <b>Module:</b> Remaking Yourself<br><b>Subject:</b> Handling Social Media | Students will learn how social media can become addictive and they will imbibe simple methods to take back control.                                            |  |
| 13 | <b>Module:</b> Facing Failures<br><b>Subject:</b> Power of Faith          | Students will learn about the power and necessity of faith in our daily lives.                                                                                 |  |
| 14 | <b>Module:</b> From House to Home<br><b>Subject:</b> Bonding the Family   | Students will understand the importance of strong family relationships. They will learn how to overcome the generation gap and connect with their family more. |  |
| 15 | <b>Module:</b> Selfless Service<br><b>Subject:</b> Seva                   | Students will learn that performing seva is beneficial to one's health, well-being, and happiness. It also benefits and inspires others.                       |  |

**Introductory Resources:**

|                                                                                     |                                                                                     |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <u>IPDC Intro</u><br><a href="#">IPDC-YouTube</a>                                   | <u>Lecturer Glimpse</u><br><a href="#">IPDC - YouTube</a>                           | <u>IPDC Impact - 1</u><br><a href="#">IPDC - YouTube</a>                              |
|  |  |  |

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
 સેમેસ્ટર – ૨ (આર્ટ્સ,કોમર્સ અને સાયન્સ વિદ્યાશાખાઓ)  
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 ડીસેમ્બર, ૨૦૨૩થી અમલમાં

| INTERNAL EVALUATION SCHEME |                            |           |
|----------------------------|----------------------------|-----------|
| NO                         | Particulars                | Marks     |
| 1                          | Mid Semester Exam          | 13        |
| 2                          | Class Test                 | 03        |
| 3                          | Open book exam/test        | 03        |
| 4                          | Open note exam/test        | 03        |
| 5                          | Self-test/ Online test     | 03        |
| 6                          | Essay/Article writing      | 03        |
| 7                          | Quizzes/Objective test     | 03        |
| 8                          | Class assignment           | 03        |
| 9                          | Home assignment            | 03        |
| 10                         | Reports Writing            | 03        |
| 11                         | Research/Dissertation      | 03        |
| 12                         | Case Studies               | 03        |
| 13                         | Viva/Oral exam             | 03        |
| 14                         | Group Discussion           | 03        |
| 15                         | Role Play                  | 03        |
| 16                         | Paper presentation/Seminar | 03        |
| 17                         | Language Lab work          | 03        |
| 18                         | Interview                  | 03        |
| 19                         | Craft work                 | 03        |
| 20                         | Co-curricular work         | 03        |
| 21                         | Field Assignment           | 03        |
| 22                         | Poster Presentation        | 03        |
| 23                         | Attendance                 | 03        |
| 24                         | Project Work               | 03        |
|                            | <b>Total</b>               | <b>25</b> |

**Note: Sr.No.1 is mandatory. Select any Four from Sr.No.2 to 24. Each Contains three marks. Student should secure 09 Marks for passing in internal Exam.**

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ  
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ડીસેમ્બર, ૨૦૨૩થી અમલમાં

**Evaluation Method: External**

| <b>Ques.<br/>No.</b> | <b>Particulars</b>                                                                                                                                                               | <b>Marks</b> |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Q.1</b>           | Paper setter is free to ask Short Questions, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values. | <b>10</b>    |
| <b>Q.2</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values.  | <b>10</b>    |
| <b>Q.3</b>           | Paper setter is free to ask Short Question, One Liner Answer type questions, MCQs, Blanks, Match A with B or any type of questions which test students comprehension of values.  | <b>05</b>    |
|                      | Marks                                                                                                                                                                            | <b>25</b>    |

**Note: Proper weightage should be given to each unit.**