



**Dr. Bhimrao Ambedkar University, Agra**

A State University of Uttar Pradesh (Paliwal Park, Agra -282004)

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A Documentary Support  
for  
*Matric No. – 1.1.2*  
**employability/ entrepreneurship/ skill development**

*under the*  
**Criteria - I**  
**(Curriculum Design and Development)**

*Key Indicator - 1.1*

*in*  
*Matric No. – 1.1.2*

**BACHELOR OF SCIENCE (PHYSICS,  
CHEMISTRY, MATHEMATICS, COMPUTER  
SCIENCE, STATISTICS)**

2022

**Mapping of course to:**

 Employability  Entrepreneurship  Skills Development

  
Registrar  
Dr. B.R.A. University, Agra



**DR. BHIMRAO AMBEDKAR UNIVERSITY,  
AGRA**  
(Formerly Agra University, Agra)



***Criteria - I***  
**(Curriculum Design and Development)**

*Key Indicator - 1.1, 1.2*

*Matric No. - 1.3.1 & 1.2.1*

  
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## Department of Higher Education

### U.P. Government, Lucknow

National Education Policy-2020

#### Common Minimum Syllabus for all U.P. State Universities Semester-wise Titles of the Papers in **B.Sc. (Statistics)**

| Year | Sem. | Course Code | Paper Title  | Theory/Practical | Credits |
|------|------|-------------|--|------------------|---------|
| I    | I    | B060101T    | Descriptive Statistics (Univariate) and Theory of Probability    | Theory           | 04      |
|      |      | B060102P    | Descriptive Data Analysis Lab (Univariate)                       | Practical        | 02      |
|      | II   | B060201T    | Descriptive Statistics (Bivariate) and Probability Distributions | Theory           | 04      |
|      |      | B060202P    | Descriptive Data Analysis Lab (Bivariate)                        | Practical        | 02      |
| II   | III  | B060301T    | Theory of Estimation and Sampling Survey                         | Theory           | 04      |
|      |      | B060302P    | Sampling Survey Lab  | Practical        | 02      |
|      | IV   | B060401T    | Testing of Hypothesis and Applied Statistics                     | Theory           | 04      |
|      |      | B060402P    | Test of Significance and Applied Statistics Lab                  | Practical        | 02      |
| III  | V    | B060501T    | Multivariate Analysis and Nonparametric Methods                  | Theory           | 04      |
|      |      | B060502T    | Analysis of Variance and Design of Experiment                    | Theory           | 04      |
|      |      | B060503P    | Non-parametric Methods and DOE Lab                               | Practical        | 02      |
|      | VI   | B060601T    | Statistical Computing and Introduction to Statistical Software   | Theory           | 04      |
|      |      | B060602T    | Operations Research  | Theory           | 04      |

|  |                 |   |           |    |
|--|-----------------|---|-----------|----|
|  | <b>B060603P</b> | Operations Research and Statistical Computing Lab | Practical | 02 |
|--|-----------------|---|-----------|----|

## UG PHYSICS

| SEMESTER-WISE TITLES OF THE PAPERS IN UG PHYSICS COURSE          |            |             |  |                    |        |
|--|------------|-------------|--|--------------------|--------|
| YEAR   | SEME-STER  | COURSE CODE | PAPER TITLE  | THEORY / PRACTICAL | CREDIT |
| <b>CERTIFICATE -IN BASIC PHYSICS &amp; SEMICONDUCTOR DEVICES</b> |            |             |  |                    |        |
| <b>FIRST YEAR</b>  | <b>I</b>   | B010101T    | Mathematical Physics & Newtonian Mechanics         | Theory             | 4      |
|  |            | B010102P    | Mechanical Properties of Matter                    | Practical          | 2      |
|  | <b>II</b>  | B010201T    | Thermal Physics & Semiconductor Devices            | Theory             | 4      |
|  |            | B010202P    | Thermal Properties of Matter & Electronic Circuits | Practical          | 2      |
| <b>DIPLOMA - IN APPLIED PHYSICS WITH ELECTRONICS</b>             |            |             |  |                    |        |
| <b>SECOND YEAR</b>   | <b>III</b> | B010301T    | Electromagnetic Theory & Modern Optics             | Theory             | 4      |
|  |            | B010302P    | Demonstrative Aspects of Electricity & Magnetism   | Practical          | 2      |
|  | <b>IV</b>  | B010401T    | Perspectives of Modern Physics & Basic Electronics | Theory             | 4      |
|  |            | B010402P    | Basic Electronics Instrumentation                  | Practical          | 2      |
| <b>DEGREE -IN BACHELOR OF SCIENCE</b>                            |            |             |  |                    |        |
| <b>THIRD YEAR</b>  | <b>V</b>   | B010501T    | Classical & Statistical Mechanics                  | Theory             | 4      |
|  |            | B010502T    | Quantum Mechanics & Spectroscopy                   | Theory             | 4      |
|  |            | B010503P    | Demonstrative Aspects of Optics & Lasers           | Practical          | 2      |
|  | <b>VI</b>  | B010601T    | Solid State & Nuclear Physics                      | Theory             | 4      |
|  |            | B010602T    | Analog & Digital Principles & Applications         | Theory             | 4      |
|  |            | B010603P    | Analog & Digital Circuits                          | Practical          | 2      |

## **BSc(MATHEMATICS)**

| SEMESTER WISE TITLES OF THE PAPER IN UG MATHEMATICS COURSE |              |             |   |                   |         |
|--|--------------|-------------|---|-------------------|---------|
| YEAR   | SE M ES TE R | COURSE CODE | PAPER TITLE                               | THEORY/P RACTICAL | CREDI T |
| <b>CERTIFICATE COURSE IN APPLIED MATHEMATICS</b>           |              |             |   |                   |         |
| <b>FIRST YEAR</b>  | <b>I</b>     | B030101T    | Differential Calculus & Integral Calculus | THEORY            | 4       |
|  |              | B030102P    | PRACTICAL                                 | PRACTICAL         | 2       |

|                               |            |          |  |           |          |
|-------------------------------|------------|----------|--|-----------|----------|
|                               | <b>II</b>  | B030201T | Matrices and Differential Equations & Geometry   | THEORY    | <b>6</b> |
| <b>DIPLOMA IN MATHEMATICS</b> |            |          |  |           |          |
| <b>SECOND YEAR</b>            | <b>III</b> | B030301T | Algebra & Mathematical Methods   | THEORY    | <b>6</b> |
|                               | <b>IV</b>  | B030401T | Differential Equation & Mechanic   | THEORY    | <b>6</b> |
| <b>DEGREE IN MATHEMATICS</b>  |            |          |  |           |          |
| <b>THIRD YEAR</b>             | <b>V</b>   | B030501T | Group and Ring Theory & Linear Algebra   | THEORY    | <b>5</b> |
|                               |            | B030502T | Any One of The Following<br>(i) Number Theory & Game Theory<br>(ii) Graph Theory & Discrete Mathematics<br>(iii) Differential Geometry & Tensor Analysis | THEORY    | <b>5</b> |
|                               | <b>VI</b>  | B030601T | Metric Space & Complex Analysis  | THEORY    | <b>4</b> |
|                               |            | B030602T | Numerical Analysis & Operations Research   | THEORY    | <b>4</b> |
|                               |            | B030603P | PRACTICAL  | PRACTICAL | <b>2</b> |

### **B.Sc. Microbiology**

#### **Semester wise titles of the papers for B.Sc. (Microbiology)**

| <b>Year</b> | <b>Semester</b> | <b>Course Code</b> | <b>Paper Title</b>   | <b>Theory /Practical</b> | <b>Credits</b> |
|-------------|-----------------|--------------------|--|--------------------------|----------------|
| <b>1</b>    | <b>I</b>        | <b>B080101T</b>    | General Microbiology                                       | Theory                   | 04             |
|             |                 | <b>B080102P</b>    | Experiments in Basic Microbiology                          | Practical                | 02             |
|             | <b>II</b>       | <b>B080201T</b>    | Agriculture and Environmental Microbiology                 | Theory                   | 04             |
|             |                 | <b>B080202P</b>    | Experiments in Agriculture and Environmental Microbiology  | Practical                | 02             |
| <b>2</b>    | <b>III</b>      | <b>B080301T</b>    | Basic Biochemistry and Microbial Physiology                | Theory                   | 04             |
|             |                 | <b>B080302P</b>    | Experiments in Basic Biochemistry and Microbial Physiology | Practical                | 02             |
|             | <b>IV</b>       | <b>B080401T</b>    | Molecular Biology and Microbial Genetics                   | Theory                   | 04             |
|             |                 | <b>B080402P</b>    | Experiments in Molecular Biology and Microbial Genetics    | Practical                | 02             |
| <b>3</b>    | <b>V</b>        | <b>B080501T</b>    | Medical Microbiology                                       | Theory                   | 04             |
|             |                 | <b>B080502T</b>    | Immunology   | Theory                   | 04             |

|  |    |                 |  |           |    |
|--|----|-----------------|--|-----------|----|
|  |    | <b>B080503P</b> | Experiments in Medical Microbiology & Immunology | Practical | 02 |
|  | VI | <b>B080601T</b> | Food Microbiology                                | Theory    | 04 |
|  |    | <b>B080602T</b> | Industrial Microbiology                          | Theory    | 04 |
|  |    | <b>B080603P</b> | Experiments in Food & Industrial Microbiology    | Practical | 02 |

### BA (History)

#### Semester-wise Titles of the Papers in BA (History)

| Year | Sem. | Course Code          | Paper Title   | Theory / Practical | Credits |
|------|------|----------------------|---|--------------------|---------|
| 1    | I    | A050101T             | Ancient and Early Medieval India (Till 1206 A.D.)                           | Theory             | 6       |
| 1    | II   | A050201T             | History of Medieval India (1206 A.D.-1757 A.D.)                             | Theory             | 6       |
| 2    | III  | A050301T             | History of Modern India (1757 A.D. – 1950 A.D.)                             | Theory             | 6       |
| 2    | IV   | A050401T             | History of Modern World (1453A.D. – 1950 A.D.)                              | Theory             | 6       |
| 3    | V    | A050501T             | Nationalism in India.   | Theory             | 5       |
| 3    | V    | A050502T<br>Optional | History of Modern World (1453 A.D. – 1815A.D.)                              | Theory             | 5       |
|      |      | A050503T<br>Optional | Socio-Cultural and Economic History of Medieval India (1200A.D.- 1700 A.D.) | Theory             | 5       |
|      |      | A050504T<br>Optional | Ethics in History   | Theory             | 5       |
| 3    | V    | A050501R             | Project 1   | Project            | 3       |
| 3    | VI   | A050601T             | Era of Gandhi and Mass Movement.  | Theory             | 5       |
| 3    | VI   | A050602T<br>Optional | History of Modern World (1815A.D.- 1945A.D.)                                | Theory             | 5       |
|      |      | A050603T<br>Optional | Socio-Cultural and Economic History of Modern India (1700A.D.- 1900 A.D.)   | Theory             | 5       |

|   |    |                      |                                      |         |   |
|---|----|----------------------|--------------------------------------|---------|---|
|   |    | A050604T<br>Optional | History and its Professional Utility | Theory  | 5 |
| 3 | VI | A050601R             | Project 2                            | Project | 3 |

### **BA HINDI SYLLABUS**

| PROGRAM<br>ME                        | YEA<br>R | SEMESTER                       | THE<br>ORY/<br>PRA<br>CTIC<br>AL | COMPUL<br>SORY/<br>ELECTIV<br>E | COURSE TITLE                                   | CRE<br>DITS | TEAC<br>HING<br>HOUR<br>S | ELECTIVE<br>(FOR<br>OTHER<br>FACULTY/D<br>EPARTMEN<br>TS |
|--------------------------------------|----------|--------------------------------|----------------------------------|---------------------------------|--|-------------|---------------------------|--|
| <b>CERTIFICA<br/>TE IN<br/>HINDI</b> | I        | FIRST SEMESTER                 | THE<br>ORY                       | COMPUL<br>SORY                  | हिन्दी काव्य                                   | 6           | 90                        | ALL<br>FACULTIES   |
|                                      |          | SECOND<br>SEMESTER             | THE<br>ORY                       | COMPUL<br>SORY                  | कार्यालयी हिन्दी और कम्प्यूटर                  | 6           | 90                        | ALL<br>FACULTIES   |
| <b>DIPLOMA<br/>IN HINDI</b>          | II       | THIRD<br>SEMESTER              | THE<br>ORY                       | COMPUL<br>SORY                  | हिन्दी गद्य                                    | 6           | 90                        | ALL<br>FACULTIES   |
|                                      |          | FOURTH<br>SEMESTER             | THE<br>ORY                       | COMPUL<br>SORY                  | हिन्दी अनुवाद                                  | 6           | 90                        | ALL<br>FACULTIES   |
| <b>DEGREE<br/>IN HINDI</b>           | III      | FIFTH SEMESTER<br>FIRST PAPER  | THE<br>ORY                       | COMPUL<br>SORY                  | साहित्यशास्त्र और हिन्दी<br>आलोचना             | 5           | 75                        | ALL<br>FACULTIES   |
|                                      |          | FIFTH SEMESTER<br>SECOND PAPER | THE<br>ORY                       | COMPUL<br>SORY                  | हिन्दी का राष्ट्रीय काव्य                      | 5           | 75                        | ALL<br>FACULTIES   |
|                                      |          | SIXTH SEMESTER<br>FIRST PAPER  | THE<br>ORY                       | COMPUL<br>SORY                  | भाषा विज्ञान, हिन्दी भाषा तथा<br>देवनागरी लिपि | 5           | 75                        | ALL<br>FACULTIES   |
|                                      |          | SIXTH SEMESTER<br>SECOND PAPER | THE<br>ORY                       | COMPUL<br>SORY                  | लोक साहित्य एवं लोक संस्कृति                   | 5           | 75                        | ALL<br>FACULTIES   |

### **BA (Geography)**

#### **Semester-wise Titles of the Papers in BA (Geography)**

| Year | Se<br>m. | Course<br>Code | Paper Title                       | Theory/Practic<br>al | Credits |
|------|----------|----------------|-----------------------------------|----------------------|---------|
| 1    | I        | A110101T       | Physical Geography                | Theory               | 4       |
| 1    | I        | A110102P       | Elements of Map and<br>Surveying  | Practical            | 2       |
| 1    | II       | A110201T       | Human Geography                   | Theory               | 4       |
| 1    | II       | A110202P       | Thematic Mapping and<br>Surveying | Practical            | 2       |

|   |     |          |   |           |   |
|---|-----|----------|---|-----------|---|
| 2 | III | A110301T | Environment, Disaster Management and Climate Change | Theory    | 4 |
| 2 | III | A110302P | Statistical Techniques and Surveying                | Practical | 2 |
| 2 | IV  | A110401T | Economic Geography                                  | Theory    | 4 |
| 2 | IV  | A110402P | Weather Maps, Geological Maps and Surveying         | Practical | 2 |
| 3 | V   | A110501T | Regional Geography                                  | Theory    | 4 |
| 3 | V   | A110502T | Basics of Remote Sensing and GIS                    | Theory    | 4 |
| 3 | V   | A110503R | Tour and Tour report                                | Practical | 2 |
| 3 | V   | A110504R | Project Report-1                                    | Practical | 3 |
| 3 | VI  | A110601T | Geography of India                                  | Theory    | 4 |
| 3 | VI  | A110602T | Evolution of Geographical Thoughts                  | Theory    | 4 |
| 3 | VI  | A110603P | Remote Sensing and GIS                              | Practical | 2 |
| 3 | VI  | A110604R | Project Report-2                                    | Practical | 3 |

## **BA (Fine Art)**

### **Semester-wise Titles of the Papers in BA (Fine Art)**

| Year | Sem. | Course Code | Paper Title                            | Theory/ Practical | Credits |
|------|------|-------------|--|-------------------|---------|
| 1    | I    | A140101T    | History of Indian Art- 1               | Theory            | 4       |
| 1    | I    | A140102P    | Drawing and color studies              | Practical         | 2       |
| 1    | II   | A140201T    | Fundamentals of Art                    | Theory            | 4       |
| 1    | II   | A140202P    | Drawing and Sketching                  | Practical         | 2       |
| 2    | III  | A140301T    | History of Indian Sculpture Art        | Theory            | 4       |
| 2    | III  | A140302P    | Still Life with Colour                 | Practical         | 2       |
| 2    | IV   | A140401T    | Aesthetics                             | Theory            | 4       |
| 2    | IV   | A140402P    | Photography                            | Practical         | 2       |
| 3    | V    | A140501T    | History of Indian Architecture         | Theory            | 4       |
| 3    | V    | A140502T    | History of Indian art- 2               | Theory            | 4       |
| 3    | V    | A140503P    | Head Study with pencil and colour both | Practical         | 2       |
| 3    | V    | A140504R    | Copy & Study from old Masters          | Practical         | 3       |



|   |    |          |                                  |           |   |
|---|----|----------|----------------------------------|-----------|---|
| 3 | VI | A140601T | Renaissance period in Indian art | Theory    | 4 |
| 3 | VI | A140602T | Modern Indian Art and artist     | Theory    | 4 |
| 3 | VI | A140603P | Composition                      | Practical | 2 |
| 3 | VI | A140604P | Land Scape                       | Practical | 3 |

**BA (English)**

  
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## Department of Higher Education U.P. Government, Lucknow

National Education Policy-2020  
Common Minimum Syllabus for all U.P. State Universities

### Semester-wise Titles of the Papers in BA (English)

| Year   | Sem. | Course Code | Paper Title   | Theory/<br>Practical | Credits |
|--------|------|-------------|---|----------------------|---------|
| B.A. 1 | I    | A040101T    | English Prose and Writing Skills<br><i>By higher level NEP suggested to be changed to English Prose and other prose writings and writing skills</i> | Theory               | 06      |
| B.A. 1 | II   | A040201T    | English Poetry  | Theory               | 06      |
| B.A. 2 | III  | A040301T    | British and American Drama  | Theory               | 06      |
| B.A. 2 | IV   | A040401T    | Indian Literature in Translation  | Theory               | 06      |
| B.A. 3 | V    | A040501T    | Classical Literature & History of English Literature  | Theory               | 05      |
| B.A. 3 | V    | A040502T    | Fiction   | Theory               | 05      |
| B.A. 3 | VI   | A040601T    | Indian & New Literatures in English   | Theory               | 05      |
| B.A. 3 | VI   | A040602T    | Any one of the following:<br>• Literature in Films & Media Studies<br>• Media and Journalistic Writing  | Theory               | 05      |
|        |      | A040603T    |   | Theory               |         |

### Syllabus Developed by:

| S. No. | Name                   | Designation         | Department | College/ University   |
|--------|------------------------|---------------------|------------|---|
| 1      | Dr. Anita Rani Rathore | Principal           | English    | Manyawar Kanshiram Govt. Degree College Gabhana, Aligarh          |
| 2      | Dr. Sarita Singh       | Assistant Professor | English    | Maharaja Bijli Pasi Govt. PG College Aashiyana, Lucknow           |
| 3      | Dr. Shweta Mishra      | Assistant Professor | English    | Maharaja Bijli Pasi Govt. PG College Aashiyana, Lucknow           |
| 4      | Dr. Vijeta Gautam      | Assistant Professor | English    | Km. Mayawati Govt. Girls PG College Badalpur, Gautam Buddha Nagar |

## **BA (Education)**

### **Semester-wise Titles of the Papers in BA (Education)**

| Year | Sem. | Course Code | Paper Title  | Theory/Practical | Credits |
|------|------|-------------|--|------------------|---------|
| 1    | I    | E01010 1T   | Conceptual Framework of Education  | Theory           | 4       |
| 1    | I    | E01010 2P   | Practical: Read the Preamble of Indian Constitution, understand and analyse its basic ideas of Justice, Equality, Liberty and Fraternity. Prepare a report and present what you have conceptualized. | Practical        | 2       |
| 1    | II   | E01020 1T   | Development and challenges of Indian Education System  | Theory           | 4       |
| 1    | II   | E01020 2P   | Prepare a profile of any School (Class 6 <sup>th</sup> - 12 <sup>th</sup> ) - Government / aided / Private.  | Practical        | 2       |
| 2    | III  | E01030 1T   | Philosophical- Sociological- Political-Economic Perspectives of Education  | Theory           | 4       |
| 2    | III  | E01030 2P   | Practical: Review a book written by prominent educational thinkers included in the course II.  | Practical        | 2       |
| 2    | IV   | E01040 1T   | Psychological Perspectives of Education  | Theory           | 4       |
| 2    | IV   | E01040 2P   | Course Title: Practical: Case study of a Special Child   | Practical        | 2       |
| 3    | V    | E01050 1T   | Course Title: Educational Assessment   | Theory           | 4       |
| 3    | V    | E01050 2T   | Course Title: Educational Statistics   | Theory           | 4       |
| 3    | V    | E01050 3P   | Administration and Interpretation of Score of a psychological test-<br><br>Achievement/Intelligence/Personality/Aptitude   | Practical        | 2       |
| 3    | V    | E010501R    | Collection of Data related to Education, application of suitable statistical methods, analysis and interpretation of result.<br><br>OR   | Project          | 3       |

  
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|   |    |           |  |           |   |
|---|----|-----------|--|-----------|---|
|   |    |           | Visit to any type of University:<br>A.It's profile preparation.<br>B.Report on its administrative structure.   |           |   |
| 3 | VI | E01060 1T | Educational Administration and Management  | Theory    | 4 |
| 3 | VI | E01060 2T | Milestones and New Dimensions of Indian Education  | Theory    | 4 |
| 3 | VI | E01060 3P | I. Visit to an Anganwadi Centre and report preparation.<br>II. Write and submit an article on any trending Socio-Cultural Environmental Issue.   | Practical | 2 |
| 3 | VI | E010601R  | Visit any Distance Education center. Interview its administrator and five students. Compare the Distance Education and Regular Education and prepare report.<br>OR<br>For Understanding Social disadvantages, Interview an working child/ a child who has experienced natural calamity or war or Terrorist Attack/ Orphan/ Urban or rural poor child/ a child who does not go to school/ or a person who got married as a child. | Project   | 3 |

### **BA(Economics)**

| Year | Sem. | Course Code           | Paper Title   | Theory/Practical | Credits |
|------|------|-----------------------|---|------------------|---------|
| 1    | I    | A080101T              | Principle of Micro Economics  | Theory           | 6       |
| 1    | II   | A080201T              | Principles of Macro Economics   | Theory           | 6       |
| 2    | III  | A080301T              | History of Economic Thought   | Theory           | 6       |
| 2    | IV   | A080401T              | Money, Banking and Public Finance   | Theory           | 6       |
| 3    | V    | A080501T              | Economic Growth and Development   | Theory           | 5       |
| 3    | V    | A080502T/<br>A080503T | <b>Optional Paper(Any 1)</b><br>Environmental Economics Or<br>International Economics | Theory           | 5       |
| 3    | V    | A080504R              | Elementary Statistics based Project   | Practical        | 3       |
| 3    | VI   | A080601T              | Indian Economy & Economy of Uttar Pradesh   | Theory           | 5       |

|   |    |                       |   |         |   |
|---|----|-----------------------|---|---------|---|
| 3 | VI | A080602T/<br>A080603T | <b>Optional Paper(Any 1)</b><br>Agriculture Economics<br>Or<br>Elementary Mathematics                           | Theory  | 5 |
| 3 | VI | A080604R              | Dissertation/Project<br>On the Local Issues with Economic Focus<br>plus Presentation on Ppt of the Dissertation | Project | 3 |

### **B.Sc. (Computer Science)**

#### **Year wise Structure of B.Sc. (Computer Science)**

| Year | Sem. | Course Code | Paper Title                                    | Theory/Practical | Credits |
|------|------|-------------|--|------------------|---------|
| 1    | I    | B070101T    | Problem Solving using Computer                 | Theory           | 4       |
| 1    | I    | B070102P    | Software Lab using Python                      | Practical        | 2       |
| 1    | II   | B070201T    | Database Management Systems                    | Theory           | 4       |
| 1    | II   | B070202P    | Database Management Systems Lab                | Practical        | 2       |
| 2    | III  | B070301T    | Operating Systems                              | Theory           | 4       |
| 2    | III  | B070302P    | Operating Systems Lab                          | Practical        | 2       |
| 2    | IV   | B070401T    | Computer System Architecture                   | Theory           | 4       |
| 2    | IV   | B070402P    | Computer System Architecture Lab               | Practical        | 2       |
| 3    | V    | B070501T    | Analysis of Algorithms and Data Structures     | Theory           | 4       |
| 3    | V    | B070502T    | <b>Soft Computing</b>                          | Theory           | 4       |
| 3    | V    | B070503P    | Lab on Algorithms and Data Structures with C++ | Practical        | 2       |
| 3    | V    | B070504R    | Research Project-I                             | Project          | 3       |
| 3    | VI   | B070601T    | Data Communication and Computer Networks       | Theory           | 4       |
| 3    | VI   | B070602T    | Cyber Security & Cyber Laws                    | Theory           | 4       |
| 3    | VI   | B070603P    | Lab on Computer Networks                       | Practical        | 2       |
| 3    | VI   | B070604R    | Research Project-II                            | Project          | 3       |

### **B.Sc. Chemistry**

#### **Semester-wise Titles of the Papers in B.Sc. Chemistry**

| Year  | Sem. | Course Code | Paper Title                                 | Theory/Practical | Credits |
|---|------|-------------|---|------------------|---------|
| <b>Certificate in Bioorganic and Medicinal Chemistry</b>      |      |             |   |                  |         |
| 1   | I    | B020101T    | Fundamentals of Chemistry                   | Theory           | 4       |
|   |      | B020102P    | Quantitative Analysis                       | Practical        | 2       |
|   | II   | B020201T    | Bioorganic and Medicinal Chemistry          | Theory           | 4       |
|   |      | B020202P    | Biochemical Analysis                        | Practical        | 2       |
| <b>Diploma in Chemical Dynamics and Analytical Techniques</b> |      |             |   |                  |         |
| 2   | III  | B020301T    | Chemical Dynamics & Coordination Chemistry  | Theory           | 4       |
|   |      | B020302P    | Physical Analysis                           | Practical        | 2       |
|   | IV   | B020401T    | Quantum Mechanics and Analytical Techniques | Theory           | 4       |
|   |      | B020402P    | Instrumental Analysis                       | Practical        | 2       |

## Degree in Bachelor of Science

|   |    |          |  |           |   |
|---|----|----------|--|-----------|---|
| 3 | V  | B020501T | Organic Synthesis-A                            | Theory    | 4 |
|   |    | B020502T | Rearrangements and Chemistry of Group Elements | Theory    | 4 |
|   |    | B020503P | Qualitative Analysis                           | Practical | 2 |
|   |    | B020504R | Research Project                               | Project   | 3 |
|   | VI | B020601T | Organic Synthesis-B                            | Theory    | 4 |
|   |    | B020602T | Chemical Energetics and Radiochemistry         | Theory    | 4 |
|   |    | B020603P | Analytical Methods                             | Practical | 2 |
|   |    | B020604R | Research Project                               | Project   | 3 |

## SUBJECT: BIOCHEMISTRY SYLLABUS Under NEP-2020

### SEMESTER WISE PAPER TITLES WITH DETAILS

| Sem.  | Course Code | Papertitle  | CIE | End Semester Examination | Total | Credits | Teachinghours |
|---|-------------|---|-----|--------------------------|-------|---------|---------------|
| <b>B. SC. 1<sup>ST</sup> YEAR OR CERTIFICATE COURSE IN CLINICAL BIOCHEMISTRY</b>                |             |   |     |                          |       |         |               |
| I   | BCB101T     | Fundamentals of Biochemistry  | 25  | 75                       | 100   | 4       | 60            |
|   | BCB102P     | Biosafety Measures, Preparation of Solutions and Qualitative Analysis of Biomolecules | 25  | 75                       | 100   | 2       | 60            |
| II  | BCB201T     | Human Physiology and Clinical Biochemistry  | 25  | 75                       | 100   | 4       | 60            |
|   | BCB202P     | Clinical Biochemistry Lab   | 25  | 75                       | 100   | 2       | 60            |
| <b>B. SC. 2<sup>ND</sup> YEAR OR DIPLOMA IN TOOLS AND TECHNIQUES IN BIOCHEMISTRY</b>            |             |   |     |                          |       |         |               |
| III   | BCB301T     | Tools and Techniques in Biochemistry  | 25  | 75                       | 100   | 4       | 60            |
|   | BCB302P     | Biochemical Tools and Techniques Lab.   | 25  | 75                       | 100   | 2       | 60            |
| IV  | BCB401T     | Enzymology and Immunology   | 25  | 75                       | 100   | 4       | 60            |
|   | BCB402P     | Enzymes and Immunological Techniques Lab  | 25  | 75                       | 100   | 2       | 60            |
| <b>B. SC. 3<sup>RD</sup> YEAR OR Degree in Bachelor of Science (in Faculty of Life Science)</b> |             |   |     |                          |       |         |               |
|   | BCB501T     | Bioenergetics and Metabolism  | 25  | 75                       | 100   | 4       | 60            |

|    |         |  |    |    |     |   |    |
|----|---------|--|----|----|-----|---|----|
| V  | BCB502T | Fundamentals of Microbiology   | 25 | 75 | 100 | 4 | 60 |
|    | BCB503P | Microbial Techniques and Metabolism Lab                                | 25 | 75 | 100 | 2 | 60 |
| VI | BCB601T | Cell, Molecular Biology and Genetic Engineering                        | 25 | 75 | 100 | 4 | 60 |
|    | BCB602T | Biostatistics, Bioinformatics and computer application in Biochemistry | 25 | 75 | 100 | 4 | 60 |
|    | BCB603P | Genetic Engineering and Bioinformatics Lab                             | 25 | 75 | 100 | 2 | 60 |

1

**DEPARTMENT OF BOTANY**  
**B.Sc. (in Faculty of Life Science)**  
**(Based on Choice Based Credit System)**  
**SUBJECT: BOTANY**  
**SYLLABUS**  
**Under NEP-2020**

**SEMESTER WISE PAPER TITLES WITH DETAILS**

| Sem.  | Course Code      | Paper title   | CIE | End Semester Examination | Total | Credits | Teaching hours |
|---|------------------|---|-----|--------------------------|-------|---------|----------------|
| <b>B. SC. 1<sup>ST</sup> YEAR OR Certificate Course In Microbial Technology &amp; Applied Botany</b>  |                  |   |     |                          |       |         |                |
| I   | <b>BOTB101T</b>  | Microbiology & Plant Pathology                              | 25  | 75                       | 100   | 4       | 60             |
|   | <b>BOTB102P</b>  | Techniques in Microbiology & Plant Pathology                | 25  | 75                       | 100   | 2       | 60             |
| II  | <b>BOTB201T</b>  | Archegoniates & Plant Architecture                          | 25  | 75                       | 100   | 4       | 60             |
|   | <b>BOTB202P</b>  | Land Plants Architecture                                    | 25  | 75                       | 100   | 2       | 60             |
| <b>B. SC. 2<sup>ND</sup> YEAR OR Diploma in Plant Identification, Utilization &amp; Ethnomedicine</b> |                  |   |     |                          |       |         |                |
| III   | <b>BOTB301T</b>  | Flowering Plants Identification & Aesthetic Characteristics | 25  | 75                       | 100   | 4       | 60             |
|   | <b>BOTB302 P</b> | Plant Identification technology                             | 25  | 75                       | 100   | 2       | 60             |
| IV  | <b>BOTB401T</b>  | Economic Botany, Ethnomedicine & Phytochemistry             | 25  | 75                       | 100   | 4       | 60             |
|   | <b>BOTB402 P</b> | Commercial Botany & Phytochemical Analysis                  | 25  | 75                       | 100   | 2       | 60             |
| <b>B. SC. 3<sup>RD</sup> YEAR OR Degree in Bachelor of Science (in Faculty of Life Science)</b>       |                  |   |     |                          |       |         |                |

|    |                  |   |    |    |     |   |    |
|----|------------------|---|----|----|-----|---|----|
| V  | <b>BOTB501 T</b> | Plant Physiology, Metabolism & Biochemistry                 | 25 | 75 | 100 | 4 | 60 |
|    | <b>BOTB502T</b>  | Molecular Biology & Bioinformatics                          | 25 | 75 | 100 | 4 | 60 |
|    | <b>BOTB503P</b>  | Experiments in physiology, Biochemistry & molecular biology | 25 | 75 | 100 | 2 | 60 |
| VI | <b>BOTB601T</b>  | Cytogenetics, Plant Breeding & Nanotechnology               | 25 | 75 | 100 | 4 | 60 |
|    | <b>BOTB602T</b>  | Ecology & Environment                                       | 25 | 75 | 100 | 4 | 60 |
|    | <b>BOTB603P</b>  | Cytogenetics, Conservation & Environment management         | 25 | 75 | 100 | 2 | 60 |



**BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY****(B.H.M.C.T.)****COURSE STRUCTURE****FIRST YEAR****FIRST SEMESTER**

| Course Code                        | Paper / Subject Name                                  | External /<br>Term Exam<br>Max. Marks | Internal<br>Assessment<br>Max. Marks | Total<br>Max.<br>Marks |
|------------------------------------|---|---------------------------------------|--------------------------------------|------------------------|
| BHM-101                            | Introduction to Hospitality,<br>Hotel and Hoteliering | 70                                    | 30                                   | 100                    |
| BHM-102                            | Growing Dimensions of Travel<br>and Tourism           | 70                                    | 30                                   | 100                    |
| BHM-103                            | Introduction to Computers<br>Application              | 70                                    | 30                                   | 100                    |
| BHM-104                            | Principles of Management                              | 70                                    | 30                                   | 100                    |
| BHM-105                            | Basics of Communication                               | 70                                    | 30                                   | 100                    |
| BHM-106                            | Conceptual Framework of<br>Marketing                  | 70                                    | 30                                   | 100                    |
| BHM-107                            | Contemporary Ecological and<br>Environmental Issues   | 70                                    | 30                                   | 100                    |
| <b>Total Marks of Ist Semester</b> |   |                                       |                                      | <b>700</b>             |

**Industrial Visit:**

After their First Semester Examinations, shall be required to undertake a weeklong orientation trip to hotel / resort properties located at multiple destinations / Tourist Center(s). They will be accompanied by one of the faculty members of the Department.

  
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**BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY****(B.H.M.C.T.)****COURSE STRUCTURE****FIRST YEAR****SECOND SEMESTER**

| Course Code                           | Paper / Subject Name                      | External / Term Exam Max. Marks | Internal Assessment Max. Marks | PRACTICAL |     | Total Max. Marks |
|---------------------------------------|---|---------------------------------|--------------------------------|-----------|-----|------------------|
|                                       |   |                                 |                                | INT       | EXT |                  |
| BHM-201                               | Front Office Operations - I               | 70                              | 30                             | 30        | 70  | 200              |
| BHM-202                               | Food Production Operations – I            | 70                              | 30                             | 30        | 70  | 200              |
| BHM-203                               | Food and Beverage Services Operations – I | 70                              | 30                             | 30        | 70  | 200              |
| BHM-204                               | Housekeeping Operations – I               | 70                              | 30                             | 30        | 70  | 200              |
| BHM-205                               | Hygiene and Sanitation                    | 70                              | 30                             | --        | --  | 100              |
| BHM-206                               | Hotel Accounting - I                      | 70                              | 30                             | --        | --  | 100              |
| <b>Total Marks of SECOND Semester</b> |   |                                 |                                |           |     | <b>1000</b>      |

**BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY****(B.H.M.C.T.)****COURSE STRUCTURE****SECOND YEAR****THIRD SEMESTER**

| Course Code                          | Paper / Subject Name                        | External / Term Exam Max. Marks | Internal Assessment Max. Marks | PRACTICAL |     | Total Max. Marks |
|--------------------------------------|---|---------------------------------|--------------------------------|-----------|-----|------------------|
|                                      |   |                                 |                                | INT       | EXT |                  |
| BHM-301                              | Front Office Operations – II                | 70                              | 30                             | 30        | 70  | 200              |
| BHM-302                              | Food Production Operations – II             | 70                              | 30                             | 30        | 70  | 200              |
| BHM-303                              | Food and Beverages Services Operations – II | 70                              | 30                             | 30        | 70  | 200              |
| BHM-304                              | Housekeeping Operations - II                | 70                              | 30                             | 30        | 70  | 200              |
| BHM-305                              | Nutrition and Food Science                  | 70                              | 30                             | --        | --  | 100              |
| BHM-306                              | Hotel Accounting - II                       | 70                              | 30                             | --        | --  | 100              |
| <b>Total Marks of THIRD Semester</b> |   |                                 |                                |           |     | <b>1000</b>      |

  
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**BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY****(B.H.M.C.T.)****COURSE STRUCTURE****SECOND YEAR****FOURTH SEMESTER**

| Course Code  | Paper / Subject Name                                | External / Term Exam Max. Marks | Internal Assessment Max. Marks | PRACTICAL |     | Total Max. Marks |
|--|---|---------------------------------|--------------------------------|-----------|-----|------------------|
|  |   |                                 |                                | INT       | EXT |                  |
| BHM-401  | Front Office Operations – III                       | 70                              | 30                             | 30        | 70  | 200              |
| BHM-402  | Food Production Operations – III                    | 70                              | 30                             | 30        | 70  | 200              |
| BHM-403  | Food and Beverage Service Operations- III           | 70                              | 30                             | 30        | 70  | 200              |
| BHM-404  | Housekeeping Operations – III                       | 70                              | 30                             | 30        | 70  | 200              |
| BHM-405  | Ethical Legal and Regulatory Aspects of Hoteliering | 70                              | 30                             | --        | --  | 100              |
| BHM-406  | Organizational Behavior                             | 70                              | 30                             | --        | --  | 100              |
| <b>Total Marks of FOURTH Semester</b>  |   |                                 |                                |           |     | <b>1000</b>      |
| <p><b>Ten Weeks' Preliminary Industrial Training:</b></p> <p>As per the course requirement, incumbent students have to go on a preliminary industrial training in a leading hotel/resorts property, duly approved by the Department. Though the Department may help the incumbent students in arranging their training in suitable institutions, the sole responsibility, in this context, will rest on the students. They will have to submit a comprehensive training report along with the logbook, on the formats prescribed by the Department, at least one month before commencement of the fifth semester examinations. The report and logbook shall stand for 50 marks each.</p> |   |                                 |                                |           |     |                  |

**BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY****(B.H.M.C.T.)****COURSE STRUCTURE****THIRD YEAR****FIFTH SEMESTER**

| Course Code                          | Paper / Subject Name                      | External / Term Exam Max. Marks | Internal Assessment Max. Marks | PRACTICAL |     | Total Max. Marks |
|--------------------------------------|---|---------------------------------|--------------------------------|-----------|-----|------------------|
|                                      |   |                                 |                                | INT       | EXT |                  |
| BHM-501                              | Front Office Operations-IV                | 70                              | 30                             | 30        | 70  | 200              |
| BHM-502                              | Food Production Operations-IV             | 70                              | 30                             | 30        | 70  | 200              |
| BHM-503                              | Food and Beverage Services Operations -IV | 70                              | 30                             | 30        | 70  | 200              |
| BHM-504                              | Housekeeping Operations-IV                | 70                              | 30                             | 30        | 70  | 200              |
| BHM-505                              | Material Management                       | 70                              | 30                             | --        | --  | 100              |
| BHM-506                              | Hotel Engineering                         | 70                              | 30                             | --        | --  | 100              |
| BHM-507                              | Training Report + Log Book ( 50 + 50)     | --                              | --                             | --        | --  | 100              |
| <b>Total Marks of FIFTH Semester</b> |   |                                 |                                |           |     | <b>1000</b>      |

  
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**BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY****(B.H.M.C.T.)****COURSE STRUCTURE****THIRD YEAR****SIXTH SEMESTER**

| Course Code                          | Paper / Subject Name                    | External / Term Exam Max. Marks | Internal Assessment Max. Marks | PRACTICAL |     | Total Max. Marks |
|--------------------------------------|---|---------------------------------|--------------------------------|-----------|-----|------------------|
|                                      |   |                                 |                                | INT       | EXT |                  |
| BHM-601                              | Front Office Operations-V               | 70                              | 30                             | 30        | 70  | 200              |
| BHM-602                              | Food production Operations-V            | 70                              | 30                             | 30        | 70  | 200              |
| BHM-603                              | Food and Beverage Services Operations-V | 70                              | 30                             | 30        | 70  | 200              |
| BHM-604                              | Housekeeping Operations-V               | 70                              | 30                             | 30        | 70  | 200              |
| BHM-605                              | Research Methodology                    | 70                              | 30                             | --        | --  | 100              |
| BHM-606                              | Human Resource Management               | 70                              | 30                             | --        | --  | 100              |
| <b>Total Marks of SIXTH Semester</b> |   |                                 |                                |           |     | <b>1000</b>      |

Immediately on the commencement of sixth semester studies, an applied research topic/problem, under the supervision of one of the faculty members of the department shall be assigned to the incumbent students. It is advised and expected that students should take the problem according to their area of interest, *vis a vis* the specialization areas they intend to opt for their studies in the seventh semester. The dissertation shall stand for 200 marks (150 for evaluation of Dissertation and remaining 50 for viva voce examination). The dissertation, as per norms, is to be submitted latest by May 15 (or, next working day if May 15 is a holiday) of the concerning academic year. No dissertation shall be entertained for evaluation without a clear certification from the supervisor that 'the work is original based on actual research findings'.

**BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY****(B.H.M.C.T.)****COURSE STRUCTURE****FOURTH YEAR****SEVENTH SEMESTER**

| Course Code                            | Paper / Subject Name         | External / Term Exam Max. Marks | Internal Assessment Max. Marks | PRACTICAL |     | Total Max. Marks |
|--|------------------------------|---------------------------------|--------------------------------|-----------|-----|------------------|
|  |                              |                                 |                                | INT       | EXT |                  |
| BHM-701                                | Elective – I                 | 70                              | 30                             | 30        | 70  | 200              |
| BHM-702                                | Elective – II                | 70                              | 30                             | 30        | 70  | 200              |
| BHM-703                                | Hotel Marketing              | 70                              | 30                             | --        | --  | 200              |
| BHM-704                                | Entrepreneurship Development | 70                              | 30                             | --        | --  | 200              |
| BHM-705                                | Financial Management         | 70                              | 30                             | --        | --  | 100              |
| BHM-706                                | Event Management             | 70                              | 30                             | --        | --  | 100              |
| BHM-707                                | Business Communication       | 70                              | 30                             | --        | --  | 100              |
| BHM-708                                | Facility Planning            | 70                              | 30                             | --        | --  | 100              |
| <b>Total Marks of SEVENTH Semester</b> |                              |                                 |                                |           |     | <b>1000</b>      |

**Extensive on the job training (Twenty Two Weeks') and Training Report:**

Immediately after the Seventh Semester Examinations, the Students shall be required to undertake a Twenty-Two weeks' extensive on the job training in a leading hotel/resort property, duly approved by the Department. The training reports submitted by the students on the prescribed format, will be evaluated by an external expert, while viva voce examination based on the report shall be conducted jointly by external and internal expert. Maximum marks for on-the job training shall be 200 (150 marks for report evaluation and 50 marks for viva voce examination). Last date for submission of the report shall be May 15 (or, next working day if May 15 is a holiday) of the concerned academic year

**Log Book:**

While on the extensive on the training, the trainees shall have to systematically maintain a Log Book in the format prescribed by the Department. The Logbook, incorporating the day- to- day training inputs shall realistically indicate the training exposure vis a vis the professional aptitude and sincerity of the professional in making. The Log Book, to be submitted along with the training report, will be evaluated by the panel of experts (One internal and one external). Maximum marks for Log Book shall be 200 (150 for evaluation of Logbook and remaining 50 for viva voce examination). Last date for submission for submission of the Log Book shall be May 15 (or, next working day if May 15 is a holiday) of the concerned academic year.

## BSc (Zoology)

### Semester-wise Titles of the Papers in B.Sc (Zoology)

| Year | Sem. | Course Code | Paper Title   | Theory/Practical     | Credits |
|------|------|-------------|---|----------------------|---------|
| 1    | I    | B050101T    | Cytology, Genetics and Infectious Diseases  | Theory               | 04      |
|      |      | B050102P    | Cell Biology and Cytogenetics Lab   | Practical            | 02      |
|      | II   | B050201T    | Biochemistry and Physiology   | Theory               | 04      |
|      |      | B050202P/R  | Physiological, Biochemical & Hematology Lab   | Practical/Field work | 02      |
| 2    | III  | B050301T    | Molecular Biology, Bioinstrumentation & Biotechniques                                       | Theory               | 04      |
|      |      | B050302P    | Bioinstrumentation & Molecular Biology Lab  | Practical            | 02      |
|      | IV   | B050401T    | Gene Technology, Immunology and Computational Biology                                       | Theory               | 04      |
|      |      | B050402P/R  | Genetic Engineering and Counselling Lab   | Practical/Field work | 02      |
| 3    | V    | B050501T    | Diversity of Non-Chordates, Parasitology and Economic Zoology                               | Theory               | 04      |
|      |      | B050502T    | Diversity of Chordates and Comparative Anatomy  | Theory               | 04      |
|      |      | B050503P    | Lab on Virtual Dissection, Anatomy, Economic Zoology and Parasitology                       | Practical            | 02      |
|      | VI   | B050601T    | Evolutionary and Developmental Biology  | Theory               | 04      |
|      |      | B050602T    | Ecology, Ethology, Environmental Science and Wildlife                                       | Theory               | 04      |
|      |      | B050603P    | Lab on Environmental Science, Behavioral Ecology, Developmental Biology, Wildlife, Ethology | Practical            | 02      |



**M.A. (Education)**  
**(Course Curriculum Under CBCS and NEP-2020)**  
**Semester I**

**Core Courses (Compulsory)**

| S.No. | Course No. | Course Title                                   | Credits | L : T : P | External | Internal | Total |
|-------|------------|--|---------|-----------|----------|----------|-------|
| 1.    | ED-101     | Philosophical Foundations of Education         | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 2.    | ED-102     | Psychology of Learning                         | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 3.    | ED-103     | Methods of Educational Research                | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 4.    | ED-104     | Principles, Methods and Techniques of Guidance | 5       | 3 : 2 : 0 | 75       | 25       | 100   |

**Minor from Other Faculty (Any One)**

| S.No. | Course No. | Course Title                                 | Credits | L : T : P | External | Internal | Total |
|-------|------------|--|---------|-----------|----------|----------|-------|
| 5.    | CSR-101    | Fundamentals of CSR                          | 4       | 3 : 1 : 0 | 75       | 25       | 100   |
| 6.    | RD-101     | Rural Development—Concept and Strategies     | 4       | 3 : 1 : 0 | 75       | 25       | 100   |
| 7.    | PA-102     | Introduction to Public Policy and Governance | 4       | 3 : 1 : 0 | 75       | 25       | 100   |
| 8.    | HR-301     | Human Resource Development                   | 4       | 3 : 1 : 0 | 75       | 25       | 100   |
| 8.    | DM-101     | Introduction to Disaster Management          | 4       | 3 : 1 : 0 | 75       | 25       | 100   |

**Practical**

| S.No. | Course No. | Course Title                                 | Credits | L : T : P | External | Internal | Total |
|-------|------------|--|---------|-----------|----------|----------|-------|
| 9.    | ED-105     | Field Visit Reports Preparation/Presentation | 2       | 0 : 0 : 2 | —        | 50       | 50    |


  
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## Semester II

### Core Courses (Compulsory)

| S.No. | Course No. | Course Title                          | Credits | L : T : P | External | Internal | Total |
|-------|------------|---------------------------------------|---------|-----------|----------|----------|-------|
| 1     | ED-201     | Sociological Foundations of Education | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 2     | ED-202     | Inclusive Education                   | 5       | 3 : 2 : 0 | 75       | 25       | 100   |

### Elective (Any Two)

| S.No. | Course No. | Course Title                            | Credits | L : T : P | External | Internal | Total |
|-------|------------|---|---------|-----------|----------|----------|-------|
| 3     | ED-203     | Measurement and Evaluation              | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 4     | ED-204     | Basic Statistics in Education           | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 5     | ED-205     | Non-Formal and Adult Education in India | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 6     | ED-206     | Problems of Secondary Education         | 5       | 3 : 2 : 0 | 75       | 25       | 100   |

### Practical

| S.No. | Course No. | Course Title                                 | Credits | L : T : P | External | Internal | Total |
|-------|------------|--|---------|-----------|----------|----------|-------|
| 7     | ED-207     | Field Visit Reports Preparation/Presentation | 2       | 0 : 0 : 2 | —        | 50       | 50    |
| 8     | ED-208     | Comprehensive Viva-Voce                      | 4       | 0 : 0 : 4 | 100      | —        | 100   |

  
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*MSB*  
*Pradyan*

*Dr. Bhadani* *W* *R* *ASR* *ayr*

### Semester III

#### Core Courses (Compulsory)

| S.No. | Course No. | Course Title   | Credits | L : T : P | External | Internal | Total |
|-------|------------|--|---------|-----------|----------|----------|-------|
| 1     | ED-301     | History of Education in Modern India-I   | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 2     | ED-302     | Educational Psychology : Psychology of Development, Personality and Intelligence | 5       | 3 : 2 : 0 | 75       | 25       | 100   |

#### Elective (Any Two)

| S.No. | Course No. | Course Title                       | Credits | L : T : P | External | Internal | Total |
|-------|------------|------------------------------------|---------|-----------|----------|----------|-------|
| 3     | ED-303     | Foundations of Curriculum Planning | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 4     | ED-304     | Educational Technology             | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 5     | ED-305     | Environmental Education            | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 6     | ED-306     | Teacher Education                  | 5       | 3 : 2 : 0 | 75       | 25       | 100   |

#### Practical

| S.No. | Course No. | Course Title                                 | Credits | L : T : P | External | Internal | Total |
|-------|------------|--|---------|-----------|----------|----------|-------|
| 7     | ED-307     | Field Visit Reports Preparation/Presentation | 2       | 0 : 0 : 2 | —        | 50       | 50    |

  
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## Semester IV

### Core Courses (Compulsory)

| S.No. | Course No. | Course Title  | Credits | L : T : P | External | Internal | Total |
|-------|------------|---|---------|-----------|----------|----------|-------|
| 1.    | ED-401     | History of Education in Modern India-II                                   | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 2.    | ED-402     | Educational Psychology : Psychology of Learning, Motivation and Cognition | 5       | 3 : 2 : 0 | 75       | 25       | 100   |

### Elective (Any Two)

| S.No. | Course No. | Course Title                    | Credits | L : T : P | External | Internal | Total |
|-------|------------|---------------------------------|---------|-----------|----------|----------|-------|
| 3.    | ED-403     | Women Education                 | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 4.    | ED-404     | Higher Education in India       | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 5.    | ED-405     | Secondary School Administration | 5       | 3 : 2 : 0 | 75       | 25       | 100   |
| 6.    | ED-406     | Educational Administration      | 5       | 3 : 2 : 0 | 75       | 25       | 100   |

### Practical

| S.No. | Course No. | Course Title                                 | Credits | L : T : P | External | Internal | Total |
|-------|------------|--|---------|-----------|----------|----------|-------|
| 7.    | ED-407     | Field Visit Reports Preparation/Presentation | 2       | 0 : 0 : 2 | —        | 50       | 50    |
| 8.    | ED-408     | Comprehensive Viva-Voce                      | 4       | 0 : 0 : 4 | 100      | —        | 100   |

  
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## **INSTITUTE OF HOME SCIENCE,**

### **Khandari, Agra**

#### **Running and proposed Courses**

Total Courses in the Institute of Home Science:

- Number of Employability courses – 13
- Number of Value added courses – Nil
- Number of skill development courses – 03
- Number of entrepreneurship courses – 05

| Name of the Courses                            | Course Outcomes  | Value Added Course/<br>Employability Course/<br>Skill Development<br>Course/<br>Entrepreneurship<br>Course |
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| <b>Courses running from Session: July 2022</b> |  |  |
| B.Sc. (H.Sc.)                                  | <ul style="list-style-type: none"><li>• To understand the role of home science in the development of individual, families and communities.</li><li>• To learn about the sciences and technologies which enhance the quality of life of the people.</li></ul> | Employability Course   |

  
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|   | <ul style="list-style-type: none"> <li>To acquire professional and entrepreneurial skills for economic empowerment of students in particular and community in general.</li> <li>To develop and benefit from the symbiotic relationship among the core disciplines of Home Science- Food and nutrition, Textile and Apparel Design, Human development &amp; family studies, extension communication and management, Family resource management.</li> <li>To take science from the laboratory to the people.</li> </ul> |                      |
| <b>M.Sc. (H.Sc.)<br/>General</b>  | <ul style="list-style-type: none"> <li>To develop the capabilities and knowledge of students in the area of – <ul style="list-style-type: none"> <li>✓ Human development and family studies</li> <li>✓ Food and nutrition</li> <li>✓ Extension communication and management</li> <li>✓ Textile and Apparel Design</li> <li>✓ Family resource management</li> </ul> </li> <li>To develop skills and make the students efficient in academics, industry and community service in the field of home science.</li> </ul>  | Employability Course |
| <b>M.Sc. (H.Sc.)<br/>Specialization in<br/>Human<br/>Development<br/>and Family<br/>Studies</b> | <ul style="list-style-type: none"> <li>To describe the growth and development of human from conception to late adulthood, as well as to understand family issues and developmental challenges that occur due to biological and ecological conditions.</li> <li>To understand physiological changes in pregnancy and lactation and competent for health care of the elderly.</li> <li>To understand the inter-relationship between heredity and environment during life cycle.</li> </ul>                              | Employability Course |

  
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|   | <ul style="list-style-type: none"> <li>• To create awareness regarding current trends, issues and research in Human Development and Family Studies.</li> <li>• To describe the distinctive growth and development of individuals from conception to late adulthood, as well as to understand family issues and developmental challenges that occur due to biological and ecological conditions.</li> <li>• To gain the skills to establish Entrepreneurial setups like Early childhood educational centre, Centre for Special Children, Home for aged, Home for Orphans and destitute, Short stay homes for women in difficult circumstances</li> <li>• To develop effective skills to extend guidance and counseling services to needy people, to identify the developmental challenges through scientific measures and to provide a stimulating environment and intervention for needy people for their optimum development.</li> <li>• To facilitate the students to work professionally and efficiently in academics, research, curriculum development, management of institutions and welfare programs, training, extension and community services relate to human development.</li> </ul> |                             |
| <b>M.Sc. (H.Sc.)<br/>Specialization in<br/>Food and<br/>Nutrition</b> | <ul style="list-style-type: none"> <li>• To acquire knowledge in food science, nutrition and dietetics.</li> <li>• To assess the nutritional status of individuals in various life cycle stages and determine nutrition related problems and disease by applying knowledge of metabolism and nutrient functions, food sources</li> </ul>  | <b>Employability Course</b> |

  
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|  | <p>and physiological systems in community, hospitals and in any situation.</p> <ul style="list-style-type: none"> <li>• To understand the concepts of food microbiology and food safety.</li> <li>• To develop the food products applying the principles of food science and nutrition to meet the challenges of nutritional problems.</li> <li>• To conduct the research in different fields of nutrition.</li> <li>• To apply appropriate techniques to develop, process, preserve the different components of food products.</li> <li>• To communicate effectively nutrition information from individual to community.</li> <li>• To acquire skills in writing research report, documentation, case studies, seminars, presentation, group discussions.</li> <li>• To be able to recommend and provide appropriate nutritional care for prevention / and treatment of the various diseases.</li> <li>• To provide practical field level experience in Institutional food administration.</li> <li>• To demonstrate the national and international food laws and regulations and safety standards in application of food additives to ensure safe foods.</li> <li>• To facilitate the students to work professionally and efficiently in academics, research, teaching, diet counselor, food industry, welfare programs, training, extension and community services relate to nutrition.</li> </ul> |  |
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| <p><b>M.Sc. (H.Sc.)<br/>Specialization in<br/>Extension<br/>Communication<br/>and<br/>Management</b></p> | <ul style="list-style-type: none"> <li>• To provide foundation in extension communication and management.</li> <li>• To develop knowledge about recent trends in extension education at regional, national and global levels.</li> <li>• To develop understanding on community development, panchyat raj and rural welfare.</li> <li>• To provide deep understanding about policies and programmes for women, children and youth</li> <li>• To understand the concept of Extension Methods and Materials</li> <li>• To develop understanding regarding the types of communication methods, materials, functions, aids and teaching-learning process.</li> <li>• To provide skills in participatory rural appraisal techniques and understanding of transfer of technology</li> <li>• To develop understanding regarding the role of various mass media in Extension Communication and management.</li> <li>• To conduct fields studies and different projects of local and regional needs,</li> <li>• To develop understanding regarding cyber communication, media and Journalism.</li> <li>• To facilitate the students to work professionally and efficiently in academics, research, teaching, institutions and welfare programs, training, extension and community.</li> </ul> | <p style="background-color: yellow;">Employability Course</p> |
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| <p><b>M.A. (H.Sc.)</b></p>                          | <ul style="list-style-type: none"> <li>• M.A Home Science has been innovatively designed to enable students to acquire knowledge in the field of - <ul style="list-style-type: none"> <li>✓ Human development and family studies</li> <li>✓ Food and nutrition</li> <li>✓ Extension communication and management</li> <li>✓ Textile and Apparel Design</li> <li>✓ Family resource management</li> </ul> </li> <li>• The curriculum has an integrated approach of combining theory, practical and field work.</li> <li>• To develop relevant skills and make students efficient in academics, research, industry and community service in the field of Home Science</li> </ul> | <p><b>Employability Course</b></p>                                  |
| <p><b>PG Diploma in Nutrition and Dietetics</b></p> | <ul style="list-style-type: none"> <li>• To become proficient for specialization in nutrition.</li> <li>• To provide an understanding of composition of various food stuffs.</li> <li>• To know the effect of the various diseases on nutritional status.</li> <li>• To be able to recommend and provide appropriate nutritional care for prevention and treatment of the various diseases.</li> <li>• To understand the nutritional requirements and recommendations through the life cycle.</li> <li>• To facilitate the students to work professionally and efficiently in academics, researches, health care sector, food industries, welfare programs.</li> </ul>        | <p><b>Employability Course,<br/>Entrepreneurship<br/>Course</b></p> |

  
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| <p><b>Certificate Course in Food Processing and Preservation</b></p> | <ul style="list-style-type: none"> <li>• To understand the scientific principles and techniques of food processing and preservation.</li> <li>• To acquire skills to establish food service outlet.</li> <li>• To formulate nutritious food products.</li> <li>• To develop analytical skills to be employed in industries.</li> <li>• To develop skill to analyze food quality.</li> <li>• To gain employment in central and state government sectors.</li> <li>• To competent to take up careers in academics, researches, health care, Processing and preservation industries.</li> </ul>   | <p>Employability Course,<br/> <b>Entrepreneurship Course</b><br/> <i>Skill development</i></p> |
| <p><b>Ph.D. in Home Science</b></p>                                  | <ul style="list-style-type: none"> <li>• The course focuses on: <ul style="list-style-type: none"> <li>✓ Research,</li> <li>✓ Innovation</li> <li>✓ Capacity building.</li> </ul> </li> <li>• Make the students self-reliant with necessary proficiencies for a wide variety of career with entrepreneurial skills.</li> <li>• Practical training/exposure through internship, field visit, project work, expert lectures, demonstration, workshops and seminars gives hands-on experience to students.</li> <li>• Students are sensitized towards challenges and solutions for societal development from grass-root level.</li> <li>• Continuous innovations evolved through scientific researches in post graduate programs empower women and family with solutions to deal with everyday challenges.</li> </ul> | <p>Employability Course</p>  |

| Courses proposed from Session: July 2023 |  |                      |
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| B.A. (H.Sc.)                             | <ul style="list-style-type: none"> <li>• B.A. <b>Home</b> Science has been innovatively designed to enable students to acquire knowledge in the field of –               <ul style="list-style-type: none"> <li>✓ Human development and family studies</li> <li>✓ Food and nutrition</li> <li>✓ Extension communication and management</li> <li>✓ Textile and Apparel Design</li> <li>✓ Family resource management</li> </ul> </li> <li>• To understand the role of <b>home</b> science in the development of individual, families and communities.</li> <li>• To learn about the sciences and technologies which enhance the quality of life of the people.</li> <li>• To acquire professional and entrepreneurial skills for economic empowerment of students in particular and community in general.</li> </ul> | Employability Course |

  
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Employability



Entrepreneurship



Skill Development