STUDY & EVALUATION SCHEME B. SC (H) MICROBIOLOGY I YEAR: I SEMESTER

S. **SUBJECT SUBJECT** L \mathbf{T} P **EVALUATION** TOT **CREDI COUR FACUL** NO. **CODE SCHEME** \mathbf{AL} TS SE TY CIE **ESE TYPE THEORY** 1 **UBS1005** General 0 0 40 60 100 4 4 Major Own Microbiolog faculty 2 **UBS1006** Instrumentat 4 0 0 40 60 100 4 Major Own ion and faculty Microbial Techniques 3 UFT1007 Bioethics 4 0 0 40 60 100 4 Own Major and faculty Biosafety UEG1502SE Functional 4 2 0 0 40 60 100 2 Minor Other English skill faculty First Aid 5 UPC1401 2 0 100 0 100 *2 Minor Other and Health Cofaculty curricu lar **PRACTICAL** 0 **UBS1203 Experiments** 0 80 100 2 6 20 Major Own in Basic faculty Microbiolog 7 UBS1204 Instrumentat 0 0 80 4 20 100 Major Own ion and faculty Microbial Techniques Lab 8 **UBS1208 Bioethics** 0 0 4 80 20 100 2 Major Own and faculty **Biosafety** Lab 9 UEG1501SE English 0 0 2 80 20 100 1 Minor Other Language skill faculty Lab

L - Lecture

TOTAL

CIE - Continuous Internal Evaluation

580

320

900

23

T - Tutorial

ESE-End Semester Exam

14

0

P - Practical

C - Credit

16

STUDY & EVALUATION SCHEME B. SC (H) MICROBIOLOGY LYEAR, H. SEMESTER

I YEAR: II SEMESTER

| S. NO. | SUBJEC T CODE | SUBJECT | L | T | P | 0 | UATI N EME | TOTAL | CREDITS | COURS E TYPE | FACULTY |
|-----------|------------------|---|----|---|----|------|------------------|-------|---------|----------------------------|---------------|
| | | | | | | CIE | ESE | | | | |
| | | | | | | | EORY | | | | |
| 1 | UBS2004 | Agricultural and Environmental Microbiology | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty |
| 2 | UBS2005 | Cell Biology | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty |
| 3 | UBS2006 | Microbial Diversity | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty |
| 4 | | Minor Elective-1 | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Minor | Other faculty |
| 5 | UBS2502 VO | Microbial Diagnosis in Health Clinics | 3 | 0 | 0 | 40 | 60 | 100 | 3 | Minor vocationa 1 | Other faculty |
| 6 | UBS2402 | Food, Nutrition and Hygiene | 2 | 0 | 0 | 100 | 0 | 100 | 2* | Minor Co- curricular | Other faculty |
| | | , , , | | | | PRAC | CTICAL | Ĺ | | | |
| 7 | UBS2204 | Experiments in Agricultural and Environmental Microbiology Lab | 0 | 0 | 4 | 80 | 20 | 100 | 2 | Major | Own faculty |
| 8 | UBS2205 | Cell Biology Lab | 0 | 0 | 4 | 80 | 20 | 100 | 2 | Major | Own faculty |
| 9 | UBS2211 | Microbial Diversity Lab | 0 | 0 | 4 | 80 | 20 | 100 | 2 | Major | Own faculty |
| | TOT | AL | 21 | 0 | 12 | 540 | 360 | 900 | 27 | | |

L - Lecture

T - Tutorial

P - Practical

CIE - Continuous Internal Evaluation

ESE-End Semester Exam

C-Credit

STUDY & EVALUATION SCHEME B. SC (H) MICROBIOLOGY II YEAR: III SEMESTER

| S. NO. | SUBJECT CODE | SUBJECT | L | T | P | | EVALUATION SCHEME | | CREDITS | COURSE TYPE | FACULTY | | | |
|-----------|-----------------|--|---|----|-----|-------|-------------------|-----|---------|-------------------------|----------------|--|--|--|
| | | | | | | CIE | ESE | | | | | | | |
| | THEORY | | | | | | | | | | | | | |
| 1 | UBS3007 | Basic Biochemistry and Microbial Physiology | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty | | | |
| 2 | UBS3008 | Microbial Biotechnology | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty | | | |
| 3 | UBS3009 | Bioprocess Technology | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty | | | |
| 4 | UBS3503VO | Industrial Fermentation | 3 | 0 | 0 | 40 | 60 | 100 | 3 | Minor vocational | Any faculty | | | |
| 5 | UPE3401 | Physical Education and Yoga | 2 | 0 | 0 | 100 | 0 | 100 | 2* | Minor Co- curricular | Any faculty | | | |
| | | | | | | PRACT | | | | | | | | |
| 6 | UBS3205 | Experiments in Basic Biochemistry and Microbial Physiology | 0 | 0 | 4 | 80 | 20 | 100 | 2 | Major | Own faculty | | | |
| 7 | UBS3206 | Microbial Biotechnology Lab | 0 | 0 | 4 | 80 | 20 | 100 | 2 | Major | Own faculty | | | |
| 8 | UBS3601IV | Industrial Visit | 0 | 0 | 2 | 100 | 0 | 100 | 1 | Major | Own faculty | | | |
| 9 | UBS3701SM | Seminar | 0 | 0 | 2 | 100 | 0 | 100 | 1 | Major | Own faculty | | | |
| | TOTA | 17 | 0 | 12 | 620 | 280 | 900 | 23 | | | | | | |

L - Lecture

T - Tutorial

P - Practical

CIE - Continuous Internal Evaluation

ESE-End Semester Exam

STUDY & EVALUATION SCHEME B. SC (H) MICROBIOLOGY II YEAR: IV SEMESTER

| S. NO. | SUBJECT CODE | SUBJECT | L | T | P | | EVALUATION SCHEME | | CREDITS | COURSE TYPE | FACULT Y | | |
|-----------|-----------------|---|----|-----|-----|-------|-------------------|-----|---------|-------------------------|----------------|--|--|
| NO. | CODE | | | | | CIE | ESE | | | TIPE | 1 | | |
| THEORY | | | | | | | | | | | | | |
| 1 | UBS4008 | Molecular Biology and Microbial Genetics | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty | | |
| 2 | UBS4009 | Virology | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty | | |
| 3 | UBS4010 | Basics of Forensic Science | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty | | |
| 4 | | Minor Elective-2 | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Minor /Elective | Other faculty | | |
| 5 | UBS4503V O | Drug Design and Development | 3 | 0 | 0 | 40 | 60 | 100 | 3 | Minor vocational | Other faculty | | |
| 6 | USO4402 | Human Values and Environmental Studies | 2 | 0 | 0 | 100 | 0 | 100 | *2 | Minor Co- curricular | Other faculty | | |
| | | | | | | PRACT | ICAL | | | | | | |
| 7 | UBS4205 | Experiments in Molecular Biology and Microbial Genetics | 0 | 0 | 4 | 80 | 20 | 100 | 2 | Major | Own faculty | | |
| 8 | UBS4206 | Virology and Medical Microbiology Lab | 0 | 0 | 4 | 80 | 20 | 100 | 2 | Major | Own faculty | | |
| 9 | UBS4207 TOTA | Forensic Science Lab | 0 | 0 | 4 | 80 | 20 | 100 | 2 | Major | Own faculty | | |
| | 21 | 0 | 12 | 540 | 360 | 900 | 27 | | | | | | |

L - Lecture

T - Tutorial

P - Practical

CIE - Continuous Internal Evaluation

ESE-End Semester Exam

C-Credit

STUDY & EVALUATION SCHEME B. SC (H) MICROBIOLOGY III YEAR: V SEMESTER

| S.NO | SUBJECT | SUBJECT | L | Т | P | EVALU | ATION | TOTAL | CREDITS | COURSE | FACULTY | | |
|-------|-----------|--|---|---|----|--------|--------|-------|---------|---------------------------------|----------------|--|--|
| 5.110 | CODE | SCESECT | | - | • | | SCHEME | | CREDITS | TYPE | Incolli | | |
| | COLL | | | | | CIE | ESE | | | 1112 | | | |
| | THEORY | | | | | | | | | | | | |
| 1 | UBS5007 | Medical Microbiology | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty | | |
| 2 | UBS5008 | Immunology | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty | | |
| 3 | UBS5009 | Genetic Engineering | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty | | |
| 4 | | Departmental Elective-1(DE- 1) | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty | | |
| 5 | USS5401 | Communication Skill and Personality Development | 2 | 0 | 0 | 100 | 0 | 100 | *2 | Minor Co- curricular | Other faculty | | |
| | 1 | - | | 1 | | PRACTI | CAL | | 1 | • | 1 | | |
| 6 | UBS5205 | Experiments in Medical Microbiology & Immunology | 0 | 0 | 4 | 80 | 20 | 100 | 2 | Major | Own faculty | | |
| 7 | UBS5206 | Experiments in Genetic Engineering | 0 | 0 | 4 | 80 | 20 | 100 | 2 | Major | Own faculty | | |
| 8 | UBS5601IS | Industrial Training/ Internship (Mini Project Phase I) | 0 | 0 | 6 | 100 | 0 | 100 | 3 | Major Industrial Training | Own faculty | | |
| TOTAL | | | | 0 | 14 | 520 | 280 | 800 | 25 | | | | |

L - Lecture

T - Tutorial

P - Practical

CIE - Continuous Internal Evaluation

ESE-End Semester Exam

| Departn | Departmental Elective-1(DE-1) | | | | | | | | |
|---------|--------------------------------------|--|--|--|--|--|--|--|--|
| Sub | Sub Sub Name | | | | | | | | |
| Code | | | | | | | | | |
| UBS5103 | Nanotechnology | | | | | | | | |
| UBS5104 | UBS5104 Human Microbial | | | | | | | | |
| | Disease Management | | | | | | | | |

STUDY & EVALUATION SCHEME B. SC (H) MICROBIOLOGY III YEAR: VI SEMESTER

| S.NO | SUBJECT | SUBJECT | L | T | P | | | TOTAL | CREDITS | COURSE | FACULTY | | |
|------|---|--|-------|-------------|----|-------|------|-------|---------|----------------------------|----------------|--|--|
| | CODE | | | | | SCHI | | | | TYPE | | | |
| | | | | | | CIE | ESE | | | | | | |
| | THEORY | | | | | | | | | | | | |
| 1 | UBS6007 | Food Microbiology | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty | | |
| 2 | UBS6008 Industrial Microbiology 4 0 0 40 60 100 4 | | Major | Own faculty | | | | | | | | | |
| 3 | UBS6009 | Bioinformatics | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty | | |
| 4 | | Departmental Elective-2 (DE-2) | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty | | |
| 5 | UAP6401 | Analytic Ability and Digital Awareness | 2 | 0 | 0 | 100 | 0 | 100 | *2 | Minor Co- curricular | Other faculty | | |
| | | | | | | PRACT | ICAL | | | | | | |
| 6 | UBS6206 | Experiment in Food & Industrial Microbiology | 0 | 0 | 4 | 80 | 20 | 100 | 2 | Major | Own faculty | | |
| 7 | UBS6207 | Experiments in Bioinformatics and Microbial Genomics | 0 | 0 | 4 | 80 | 20 | 100 | 2 | Major | Own faculty | | |
| 8 | UBS6702PJ | Mini Project | 0 | 0 | 6 | 80 | 20 | 100 | 3 | Mini Project | Own faculty | | |
| | TOTA | L | 18 | 0 | 14 | 500 | 300 | 800 | 25 | J | · | | |

L - Lecture

T - Tutorial

P - Practical

CIE - Continuous Internal Evaluation

ESE-End Semester Exam

| Departmental Elective-2 (DE-2) | | | | | | | | | |
|--------------------------------|--|--|--|--|--|--|--|--|--|
| Sub Code | Sub Name | | | | | | | | |
| UBS6105 | Microbial Quality Control in Pharmaceutical Industry | | | | | | | | |
| UBS6106 | Medical Biotechnology | | | | | | | | |

STUDY & EVALUATION SCHEME B. SC (H) MICROBIOLOGY IV YEAR: VII SEMESTER

| S. NO. | SUBJECT CODE | SUBJECT | L | T | P | EVALU. SCHI | | TOTAL | CREDITS | COURSE TYPE | FACULTY |
|-----------|-----------------|---|----|---|----|----------------|------|-------|---------|------------------|----------------|
| NO. | CODE | | | | | CIE | ESE | | | ITE | |
| | | | | | | THE | | | | | |
| 1 | UBS7011 | Plant Pathology | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty |
| 2 | UBS7007 | Microbial Genomics and Proteomics | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty |
| 3 | UBS7008 | Intellectual Property Rights | 5 | 0 | 0 | 40 | 60 | 100 | 5 | Major | Own faculty |
| 4 | | Departmental Elective-3 (DE-3) | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Own faculty |
| | • | | | | | PRACT | ICAL | | | | |
| 5 | UBS7203 | Microbial Genomics and Proteomics Lab | 0 | 0 | 2 | 80 | 20 | 100 | 1 | Major | Own faculty |
| 6 | UBS7206 | Plant Pathology Lab | 0 | 0 | 2 | 80 | 20 | 100 | 1 | Major | Own faculty |
| 7 | | Departmental Elective-3 (DE-3) | 0 | 0 | 2 | 80 | 20 | 100 | 1 | | |
| 8 | UBS7701PJ | Major Project : Phase 1 | 0 | 0 | 12 | 80 | 20 | 100 | 6 | Major Project | Own faculty |
| | TOTAI | | 17 | 0 | 18 | 480 | 320 | 800 | 26 | | |

L - Lecture

T - Tutorial

P - Practical

CIE - Continuous Internal Evaluation

ESE-End Semester Exam

| DEPARTMENTAL ELECTIVE-3 (DE-3) | | | | | | | | | |
|-----------------------------------|------------------------|--|--|--|--|--|--|--|--|
| SUB CODE | SUB NAME | | | | | | | | |
| UBS7104 | Dairy Microbiology | | | | | | | | |
| UBS7105 | Soil Microbiology | | | | | | | | |
| UBS7204 | Dairy Microbiology Lab | | | | | | | | |
| UBS7205 | Soil Microbiology Lab | | | | | | | | |

STUDY & EVALUATION SCHEME B. SC (H) MICROBIOLOGY IV YEAR: VIII SEMESTER

| S. | SUBJECT | SUBJECT | L | T | P | EVALU | ATION | TOTAL | CREDITS | COURSE | FACULTY |
|-----|-----------|---|---|---|----|-------|---------------|-------|---------|--------------------|----------------|
| NO. | CODE | | | | | SCHI | SCHEME | | | TYPE | |
| | | | | | | CIE | ESE | | | | |
| | | | | | | THE | ORY | | | | |
| 1 | UMA8003 | Biostatistics | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Major | Other faculty |
| 2 | UBS8008 | Technical Writing and Literature Survey | 5 | 0 | 0 | 40 | 60 | 100 | 5 | Major | Own faculty |
| 3 | UBS8008 | Research Publication Ethics | 5 | 0 | 0 | 40 | 60 | 100 | 5 | Major | Own faculty |
| 4 | | Departmental Elective-4 (DE-4) | 5 | 0 | 0 | 40 | 60 | 100 | 5 | Major | Own faculty |
| 5 | | Minor Elective-3 | 4 | 0 | 0 | 40 | 60 | 100 | 4 | Minor /Elective | Other faculty |
| | | | | | | PRACT | TICAL | | | | |
| 6 | UMA8201 | Biostatistics Lab | 0 | 0 | 2 | 80 | 20 | 100 | 1 | Major | Other faculty |
| 7 | UBS8701PJ | Major Project : Phase-2 | 0 | 0 | 12 | 80 | 20 | 100 | 6 | Major Project | Own faculty |
| | TOTAL | | | | 14 | 360 | 340 | 700 | 30 | | |

L - Lecture

T - Tutorial

P - Practical

CIE - Continuous Internal Evaluation

ESE-End Semester Exam

| DEPARTMENTAL ELECTIVE-4 (DE- | | | | | | | |
|------------------------------|------------------------|--|--|--|--|--|--|
| SUB CODE SUB NAME | | | | | | | |
| UBS8105 | Mycology and Phycology | | | | | | |
| UBS8106 Parasitology | | | | | | | |

STUDY & EVALUATION SCHEME B. SC (H) MICROBIOLOGY

LIST OF ELECTIVES

| S.NO. | COURSE | COURSE NAME | CREDIT | SEMESTER |
|-------|---------|----------------------------------|--------|----------|
| | CODE | | | |
| 1 | UBS2307 | Systematic Bacteriology (Minor | 4 | II |
| | | Elective-1) | | |
| 2 | UBS4306 | Public Health Microbiology | 4 | IV |
| | | (Minor Elective-2) | | |
| 3 | UBS8304 | Microbiological Analysis of Air, | 4 | VIII |
| | | Water and Soil (Minor Elective- | | |
| | | 3) | | |