DEPARTMENT OF MICROBIOLOGY

B.Sc. in Microbiology Semester - I

| Type of the Course | Revised course code | Course Name | Contact Hours Per Week | L | Т | Р | Credi |
|--|------------------------|---|------------------------------|----|---|---|-------|
| CORE Theory | MIB11001 | Introduction to Microbiology and Microbial Diversity | 4 | 3 | 1 | 0 | 4 |
| CORE Practical | MIB12002 | Introduction to Microbiology and Microbial Diversity Lab | 3 | 0 | 0 | 3 | 2 |
| CORE Theory | MIB11003 | Biochemistry | 4 | 3 | 1 | 0 | 4 |
| CORE Practical | MIB12004 | Biochemistry Lab | 3 | 0 | 0 | 3 | 2 |
| AECC I | ENG11057 | English Language and Literature | 2 | 1 | 1 | 0 | 2 |
| FOUNDATION | DGS11001 | Design Thinking | 2 | 2 | 0 | 0 | 2 |
| Generic Elective 1 (GE1) Theory | BOT11001/ ZOL11001 | Any one of the following: Elective Botany I / Elective Zoology I | 4 | 3 | 1 | 0 | 4 |
| Generic Elective 1 (GE1) Practical | BOT12002/ ZOL12002 | Corresponding Practical (any one): Elective Botany I Lab / Elective Zoology I Lab | 3 | 0 | 0 | 3 | 2 |
| Total | | | 25 | 12 | 4 | 9 | 22 |

*6 credit course for non lab based subject

ADAMAS UNIVERSITY

DEPARTMENT OF MICROBIOLOGY

| Type of the Course | Revised course code | Course Name | Contact Hours Per Week | L | T | Р | Credi |
|--|------------------------|--|---------------------------|----|---|---|-------|
| CORE Theory | MIB11005 | Bacteriology | 4 | 3 | 1 | 0 | 4 |
| CORE Practical | MIB12006 | Bacteriology Lab | 3 | 0 | 0 | 3 | 2 |
| CORE Theory | MIB11007 | Virology | 4 | 3 | 1 | 0 | 4 |
| CORE Practical | MIB12008 | Virology Lab | 3 | 0 | 0 | 3 | 2 |
| AECC II Theory | EVS11112 | Environmental Science and Energy Resources | 2 | 2 | 0 | 0 | 2 |
| FOUNDATION | EIC11001 | Venture Ideation | 2 | 2 | 0 | 0 | 2 |
| Generic Elective 2 [#] (GE2*) Theory | BOT11003/ ZOL 11003 | Any one of the following: Elective Botany II / Elective Zoology II / | 4 | 3 | 1 | 0 | 4 |
| Generic Elective 2 [#] (GE2*) Practical | BOT12004/ ZOL12004 | Corresponding Practical (any one): Elective Botany II Lab / Elective Zoology II Lab | 3 | 0 | 0 | 3 | 2 |
| Total | | | 25 | 13 | 3 | 9 | 22 |

B.Sc. Microbiology Semester - II

*6 credit course for non lab based subject; # same subject to be continued as in semester I

| | | AMAS UNIVERSITY <u>fment of microbiolog</u> | Υ | | | | |
|---|---|---|---------------------------------|----|---|----|--------|
| | B.Sc. N | Iicrobiology Semester - I | II | | | | |
| Type of the Course | Revised course code | Course Name | Contact Hours Per Week | L | Т | Р | Credit |
| CORE Theory | MIB11009 | Cell Biology | 4 | 3 | 1 | 0 | 4 |
| CORE Practical | MIB12010 | Cell Biology Lab | 3 | 0 | 0 | 3 | 2 |
| CORE MIB11011 Microbial Genetics Theory | | 4 | 3 | 1 | 0 | 4 | |
| CORE Practical | MIB12012 Microbial Genetics Lab | | 3 | 0 | 0 | 3 | 2 |
| CORE MIB11013 Environmental Microbiology Theory | | 4 | 3 | 1 | 0 | 4 | |
| CORE Practical | Lab | | 3 | 0 | 0 | 3 | 2 |
| Skill Enhancement Course I (SEC I) Theory MIB11016 Food and F Indu | | Microbial Quality Control in Food and Pharmaceutical Industries / Food Fermentation Techniques | 2 | 0 | 0 | 0 | 2 |
| FOUNDATION | SOC14100 | Community Service | - | - | - | - | 1 |
| FOUNDATION | IDP14001 | Interdisciplinary Project | 3 | 0 | 0 | 3 | 3 |
| Generic Elective 3 [#] (GE3*) Theory | PHY11015/ CSE11641/ CHM11151/ SDS11506 | Any one of the following: Elective Physics I / Elective Computer Science I / Elective Chemistry I/ Elective Statistics I* / | 4 | 3 | 1 | 0 | 4 |
| Generic Elective 3 [#] (GE3*) Practical | PHY12016/ CSE12642/ CHM12152 | Corresponding Practical (any one): Elective Physics ILab/ Elective Computer Science ILab/ Elective Chemistry ILab/ | 3 | 0 | 0 | 3 | 2 |
| Total | | 1 | 33 | 12 | 4 | 15 | 30 |

*6 credit course for non lab based subject

| | | ADAMAS UNIVER DEPARTMENT OF MICRO | - | | | | |
|--|---|--|------------------------------|----|---|----|--------|
| | | B.Sc. Microbiology Sem | ester - IV | | | | |
| | Revised course code | Course Name | Contact Hours Per Week | L | Т | Р | Credit |
| CORE Theory | MIB11017 | Molecular Biology | 4 | 3 | 1 | 0 | 4 |
| CORE Practical | MIB12018 | Molecular Biology Lab | 3 | 0 | 0 | 3 | 2 |
| CORE Theory | MIB11019 | Immunology | 4 | 3 | 1 | 0 | 4 |
| CORE Practical | MIB12020 | Immunology Lab | 3 | 0 | 0 | 3 | 2 |
| CORE Theory | MIB11021 | Microbial Physiology and Metabolism | 4 | 3 | 1 | 0 | 4 |
| CORE Practical | MIB12022 | Microbial Physiology and Metabolism Lab | 3 | 0 | 0 | 3 | 2 |
| FOUNDATI ON Skill Enhancemen t Course II (SEC II) Theory | MIB11023 / MIB11024 | Any one of the following: Microbial Diagnosis in Health Clinics / Management of Human Microbial Diseases | 2 | 2 | 0 | 0 | 2 |
| FOUNDATI ON | PSG11021 | Human Values and Professional Ethics | 2 | 2 | 0 | 0 | 2 |
| Generic Elective 4 [#] (GE4*) Theory | PHY11024 /CSE1164 3/CHM11 153/ SDS11507 | Any one of the following: Elective Physics II / Elective Computer Science II / Elective Chemistry II / Elective Statistics II* / | 4 | 3 | 1 | 0 | 4 |
| Generic Elective 4 [#] (GE4*) Practical | PHY12025 /CSE1264 4/CHM12 154 | Corresponding Practical (any one): Elective Physics II Lab/ Elective Computer Science II Lab/ Elective Chemistry II Lab/ | 3 | 0 | 0 | 3 | 2 |
| Total | | 1 | 32 | 16 | 4 | 12 | 28 |

*6 credit course for non lab based subject; # same subject to be continued as in semester III

| | I | ADAMAS UNIVERS | | | | | |
|--|------------------------------------|--|------------------------------|----|---|----|-------|
| | | B.Sc. Microbiology Seme | ster - V | | | | |
| Type of Course | Revised course code | Course Name | Contact Hours Per Week | L | Т | Р | Credi |
| CORE Theory | MIB11025 | Food and Diary Microbiology | 4 | 3 | 1 | 0 | 4 |
| CORE Practical | MIB12026 | Food and Diary Microbiology Lab | 3 | 0 | 0 | 3 | 2 |
| CORE Theory | MIB11027 | Recombinant DNA Technology | 4 | 3 | 1 | 0 | 4 |
| CORE Practical | MIB12028 | Recombinant DNA Technology Lab | 3 | 0 | 0 | 3 | 2 |
| CORE Discipline Specific Elective I (DSE I) Theory | MIB11029/ MIB11030/ MIB11031 | Any one of the following: Bioinformatics / Biomathematics and Biostatistics/ Plant Pathology | 4 | 3 | 1 | 0 | 4 |
| CORE Discipline Specific Elective I (DSE I) Practical | | Corresponding Practical (any one): Bioinformatics Lab / Biomathematics and Biostatistics Lab/ Plant Pathology Lab | 3 | 0 | 0 | 3 | 2 |
| CORE Discipline Specific Elective II (DSE II) Theory | MIB11035/ MIB11036/ MIB11037 | Any one of the following: Microbial Biotechnology/ Advances in Microbiology/ Inheritance Biology | 4 | 3 | 1 | 0 | 4 |
| CORE Discipline Specific Elective II (DSE II) Practical | MIB12038/ MIB12039/ MIB12040 | Corresponding Practical (any one): Microbial Biotechnology Lab/ Advances in Microbiology Lab/Inheritance Biology Lab | 3 | 0 | 0 | 3 | 2 |
| FOUNDATI ON | MIB14041 | Industry Internship | | | | | 2 |
| Total | | 1 | 28 | 12 | 4 | 12 | 26 |

*6 credit course for non-lab based subject. Note: Offer of DSE courses may vary from year to year based on availability of faculty

| | D | ADAMAS UNIVERSI DEPARTMENT OF MICROB | | | | | |
|--|------------------------|---|------------------------------|----|---|----|--------|
| | F | B.Sc. Microbiology Semes | ter - VI | | | | |
| Type of the course | Revised course code | Course Name | Contact Hours Per Week | L | Т | Р | Credit |
| CORE Theory | MIB11042 | Medical Microbiology | 4 | 3 | 1 | 0 | 4 |
| CORE Practical | MIB12043 | Medical Microbiology Lab | 3 | 0 | 0 | 3 | 2 |
| CORE Theory | MIB11044 | Industrial Microbiology | 4 | 3 | 1 | 0 | 4 |
| CORE Practical | MIB12045 | Industrial Microbiology Lab | 3 | 0 | 0 | 3 | 2 |
| CORE Discipline Specific Elective III (DSE III) Theory | MIB11046/ MIB11047 | Any one of the following: Microbial Physiology / Biosafety and Intellectual Property Rights* / | 4 | 3 | 1 | 0 | 4 |
| CORE Discipline Specific Elective III (DSE III) Practical | MIB12048 | Corresponding Practical (any one): Microbial Physiology Lab | 3 | 0 | 0 | 3 | 2 |
| | MIB15049 | Dissertation | 6 | 0 | 0 | 6 | 6 |
| FOUNDATI ON (any one) | MIB15050/ MIB14051 | Seminar on Contemporary Research in Microbiology/ Educational tour | 2 | 2 | | | 2 |
| Total | | · | 29 | 11 | 3 | 15 | 26 |

*Any one of two

Total credit distribution semester-wise:

| Semester | Ι | II | III | IV | V | VI | Total |
|----------|----|----|-----|----|----|----|-------|
| Credits | 22 | 22 | 30 | 28 | 26 | 26 | 154 |

NB: 1 credit ~ 15 contact hours