# BHARATHIAR UNIVERSITY, COIMBATORE – 641 046

**B.Sc., MICROBIOLOGY DEGREE COURSE**

**CBCS – OBE PATTERN: (AFFILIATED COLLEGES)**

**(Revised Scheme- 11.09.2023)**

**(For the students admitted during the academic year 2022-23)**

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| **Part** | **Study Components** | **Course Title** | **Course / Subject Code** | **Ins. hrs / Week** | **Examinations** | | | | **Credits** |
| **Dur.** | **CIA** | **Marks** | **Total Marks** |
|  | **SEMESTER – I** | |  |  |  |  |  |  |  |
| I | Language – I | | 11T/M/H/F | 6 | 3 | 50 | 50 | 100 | 4 |
| II | English – I | | 12E | 6 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper – I : Fundamentals of Microbiology | | 13A | 6 | 3 | 50 | 50 | 100 | 4 |
| III | Core Practical – I | | 23P | 4 | - | - | - | - | - |
| III | Allied – A : Paper – I: Biostatistics and Computer Applications I | | 1AB | 4 | 3 | 30 | 45 | 75 | 3 |
| III | Allied Practical – I | | 2PB | 2 | - | - | - | - | - |
| IV | Environmental Studies # | | 1FA | 2 | 3 | - | 50 | 50 | 2 |
|  | **TOTAL** | |  | **30** | **15** | **180** | **245** | **425** | **17** |

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|  | **SEMESTER – II** |  |  |  |  |  |  |  |
| I | Language – II | 21T/M/H/F | 6 | 3 | 50 | 50 | 100 | 4 |
| II | English – II | 22E | 4 | 3 | 25 | 25 | 50\* | 2 |
|  | Language Proficiency for Employability |  | 2 | - | 25 | 25 | 50\*\* | 2 |
|  | http://kb.naanmudhalvan.in/Special:Filepath/Camb ridge\_Course\_Details.pdf |
| III | Core Paper – II : Analytical Microbiology | 23A | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper – III : General Biology | 23B | 3 | 3 | 50 | 50 | 100 | 4 |
| III | Core Practical – I | 23P | 3 | 6 | 30 | 45 | 75 | 3 |
| III | Allied – A : Paper – II: Biostatistics and ComputerApplications – II | 2AB | 4 | 3 | 30 | 45 | 75 | 3 |
| III | Allied Practical – I (Biostatistics and Computer Applications) | 2PB | 2 | 3 | 25 | 25 | 50 | 2 |
| IV | Value Education – Human Rights # | 2FB | 2 | 3 | - | 50 | 50 | 2 |
|  | **TOTAL** |  | **30** | **27** | **285** | **365** | **650** | **26** |
|  | **Swatch Bharath Summer Internship** |  |  |  |  |  |  |  |
|  | **SEMESTER – III** |  |  |  |  |  |  |  |
| I | Language – III | 31T/M/H/F | 6 | 3 | 50 | 50 | 100 | 4 |
| II | English – III | 32E | 6 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper – IV : Microbial Diversity | 33A | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Core Practical – II | 43P | 3 | - | - | - | - | - |
| III | Allied – B : Paper – I: Biochemistry – I / Zoology – I | 3AC | 4 | 3 | 30 | 45 | 75 | 3 |
| III | Allied Practical – II | 43Q | 2 | - | - | - | - | - |
| IV | Skill based Subject – I: Diagnostic Microbiology – I | 3ZA | 3 | 3 | 30 | 45 | 75 | 3 |
| IV | Tamil @ / Advanced Tamil # (OR) Non – MajorElective – I (Yoga for Human  Excellence # / Women’s Rights # ) | 3FD | 2 | 3 | - | 50 | 50 | 2 |
| IV | Naan Mudhalvan – Digital skills for employability | **3NM** |  |  | **25** | **75** | **100** | **2** |
|  | **TOTAL** |  | **30** | **18** | **235** | **365** | **600** | **20+2** |

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|  | **SEMESTER – IV** |  |  |  |  |  |  |  |
| I | Language – IV | 41T/M/H  /F | 6 | 3 | 50 | 50 | 100 | 4 |
| II | English – IV | 42E | 6 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper – V : Microbial Physiology | 43A | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Core Practical – II | 43P | 4 | 6 | 50 | 50 | 100 | 4 |
| III | Allied – B : Paper – II: Biochemistry – II /Zoology –II | 4AC | 4 | 3 | 30 | 45 | 75 | 3 |
| III | Allied Practical – II | 43Q | 2 | 3 | 25 | 25 | 50 | 2 |
| IV | NAAN MUDHALVAN-Digital  Skills for employability – Office Fundamentals |  | 2 | - | 25 | 25 | 50\*  \* | 2 |
|  | http://kb.naanmudhalvan.in/Special:Filepath/ Microsoft.-Course\_details\_.xlsx |
| I V | Tamil @ / Advanced Tamil # (OR) Non – MajorElective – II (General Awareness #) | 4FA | 2 | 3 | - | 50 | 50 | 2 |
|  | **TOTAL** |  | **30** | **24** | **280** | **345** | **625** | **25** |
|  | **SEMESTER – V** |  |  |  |  |  |  |  |
| III | Core Paper – VI : Microbial Genetics | 53A | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper – VII : Principles of Immunology | 53B | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper – VIII : Food Microbiology | 53C | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper – IX : Medical Microbiology | 53D | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Elective – I | 5EA | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Core Practical – III | 63P | 5 | - | - | - | - | - |
| IV | Skill based Subject – II: Diagnostic Microbiology – II | 5ZC | 3 | 3 | 30 | 45 | 75 | 3 |
|  | **TOTAL** |  | **30** | **18** | **280** | **295** | **575** | **23** |
|  | **SEMESTER – VI** |  |  |  |  |  |  |  |
| III | Core Paper – X: Industrial Microbiology | 63A | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper – XI : Environmental and Agricultural Microbiology | 63B | 5 | 3 | 50 | 50 | 100 | 4 |
| III | Core Paper – XII : Virology | 63C | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Elective – II | 6EA | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Elective – III | 6ED | 4 | 3 | 50 | 50 | 100 | 4 |
| III | Core Practical – III | 63P | 5 | 9 | 40 | 60 | 100 | 4 |
| IV | Skill based Subject – Practical | 6ZP | 3 | 6 | 30 | 45 | 75 | 3 |
| IV | Extension activities @ | 67A | - | - | 50 | - | 50 | 2 |
| IV | Employability readiness – Naandi – Naan Mudhalvan course |  | 20 | - | - | - | - | - |
|  | **TOTAL** |  | **30** | **30** | **370** | **355** | **725** | **29** |
|  | **GRAND TOTAL** |  |  |  |  |  | **3600** | **142** |

**Institutional training / Internship:** Students should undergo an institutional training / Internship for acontinuous period of 15days before semester VI. It is evidenced by certificate issued by the Principal ofthe College.

@ No University Examinations. Only Continuous Internal Assessment (CIA).# No Continuous Internal Assessment (CIA). Only University Examinations.

\* **Swatch Bharath Summer Internship is mandatory – Extra 2 credit points would be given.**

* \*English II – University Semester examination will be conducted for 50 marks (As per existing pattern of examination) and it will be converted for 25 marks.
* \*\*Naan Mudhalvan – Skill Courses –external marks will be assessed by Industry and internal will be offered by respective course teacher.

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| **List of Elective papers (Colleges can choose any ONE GROUP of the paper as electives)** | | | |
| **S. No.** | **Group** | **Title of the subject** | **Sub. Code** |
| **Elective – I** | **A** | Recombinant DNA Technology - I | **5EA** |
| **B** | Plant Therapeutics | **5EB** |
| **C** | Medical coding | **5EC** |
| **Elective – II** | **A** | Recombinant DNA Technology – II | **6EA** |
| **B** | Entrepreneurial Microbiology | **6EB** |
| **C** | Medical Biochemistry | **6EC** |
| **Elective - III** | **A** | Dairy Microbiology | **6ED** |
| **B** | Bionanotechnology | **6EE** |
| **C** | Bioinformatics | **6EF** |