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| ***Code*** | ***Title*** | ***Credits*** | ***Option*** |
| First Semester | | | |
| PP 5101 | General Microbiology | 2 | Compulsory |
| PP 5108 | Methods in Microbiology and Microbial  Technology | 3 | Compulsory |
| PP 5109 | Molecular Microbiology | 2 | Compulsory |
| PP 5110 | Microbial Genomics | 2 | Compulsory |
| PP 5196 | Practicum in Molecular and  Applied Microbiology | 2 | Compulsory |
| PP 5199 | Seminar | 1 | Compulsory |
| PP 5155 | Immunology | 2 | Elective |
| AE 5107 | Water Quality for Agriculture and Environment | 3 | Elective |
| AE 5152 | Environmental Impact Assessment | 2 | Elective |
| AE 5156 | Environment and Industry | 3 | Elective |
| AE 5157 | Solid Waste Management | 2 | Elective |
| AS 5109 | Dairy Chemistry | 2 | Elective |
| FT 5105 | Food Microbiology | 2 | Elective |
| FT 5111 | Food Safety | 2 | Elective |
| SS 5106 | Environmental Pollution and Control | 2 | Elective |
| SS 5109 | Microbial Ecology | 3 | Elective |
| Second Semester | | | |
| PP 5211 | Microorganisms with Medical Importance | 2 | Compulsory |
| PP 5212 | Aquatic Microbiology and Water Quality | 2 | Compulsory |
| PP 5213 | Industrial Microbiology and Biotechnology | 2 | Compulsory |
| PP 5214 | Molecular Plant Microbial Interactions | 2 | Compulsory |
| PP 5208 | Molecular Diagnostics for Plant Protection | 2 | Elective |
| PP 5252 | Molecular Virology | 2 | Elective |
| PP 5256 | Techniques and Strategies in Plant Molecular  Biology | 3 | Elective |
| AB 5252 | Bioinformatics | 2 | Elective |
| AE 5213 | Bioreactor and Bio-Environment Design and  Control Systems | 2 | Elective |
| AS 5207 | Dairy Engineering | 2 | Elective |
| AS 5217 | Microbiology of Dairy, Meat, Fish and Egg  Products | 3 | Elective |
| SS 5113 | Environmental Microbiology | 2 | Elective |