

**COURSE STRUCTURE FOR M.Sc. Microbiology**

<b>ADAMAS UNIVERSITY</b>							
<b>DEPARTMENT OF MICROBIOLOGY</b>							
<b>M.Sc. Microbiology Semester - I</b>							
<b>Type of the Course</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Contact Hours Per Week</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credit</b>
<b>CORE (Theory)</b>	<b>MIB2150 1</b>	<b>Biomolecules and Biomolecular Interaction</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>
<b>CORE (Theory)</b>	<b>MIB2150 3</b>	<b>Biophysical Chemistry and Bioanalytical Techniques</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>
<b>CORE (Theory)</b>	<b>MIB2154 2</b>	<b>Bacteriology and Virology</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>
<b>CORE (Theory)</b>	<b>MIB2154 3</b>	<b>Microbial Genetics and Cell biology</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>
<b>CORE (Theory)</b>	<b>MIB2154 6</b>	<b>Ecology and Evolution</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>
<b>CORE (Practical)</b>	<b>MIB2254 4</b>	<b>Biomolecules, Biophysical Chemistry and Bioanalytical Techniques Lab</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>2</b>
<b>CORE (Practical)</b>	<b>MIB2254 5</b>	<b>Bacteriology, virology and Microbial Genetics Lab</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>2</b>
<b>CORE (Theory)</b>	<b>MIB2153 6</b>	<b>Bioethics and Intellectual Property Rights</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>
<b>Foundation</b>	<b>MIB2257 1</b>	<b>Professional Development Course 1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>
<b>Total</b>			<b>27</b>	<b>18</b>	<b>0</b>	<b>9</b>	<b>23</b>

ADAMAS UNIVERSITY							
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M.Sc. Microbiology Semester - II							
Type of the Course	Course Code	Course Name	Contact Hours Per Week	L	T	P	Credit
CORE (Theory)	MIB21509	Molecular Biology	3	3	0	0	3
CORE (Theory)	MIB21511	Recombinant DNA Technology	3	3	0	0	3
CORE (Theory)	MIB21513	Environmental Microbiology	3	3	0	0	3
CORE (Theory)	MIB21515	Bioinformatics and Computational Biology	3	3	0	0	3
CORE (Practical)	MIB22547	Molecular Biology and Recombinant DNA technology Lab	4	0	0	4	2
CORE (Practical)	MIB22514	Environmental Microbiology Lab	4	0	0	4	2
CORE (Practical)	MIB22516	Bioinformatics and Computational Biology Lab	4	0	0	4	2
CORE (Theory) Discipline Specific Elective-I	MIB21517 / MIB21518 / MIB21519 / MIB21520 / MIB21521	Any One of the following*: Enzyme and Enzyme Technology / Food and Dairy: Safety and Quality Control / Drug Design and Development / Host-Pathogen Interaction / Recent Advances in Vaccine Technology.	3	3	0	0	3
Foundation	MIB22572	Professional Development Course 2	1	0	0	1	1
<b>Total</b>			<b>28</b>	<b>15</b>	<b>1</b>	<b>13</b>	<b>22</b>

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**M.Sc. Microbiology Semester - III**

Type of the Course	Course Code	Course Name	Contact Hours Per Week	L	T	P	Credit
CORE (Theory)	MIB21549	Immunology and medical Microbiology	3	3	0	0	3
CORE (Theory)	MIB21550/ MIB21551	Epidemiology and Diagnostics*/ Natural product and toxicology#	3	3	0	0	3
CORE (Theory)	MIB21526	Bioprocess Technology	3	3	0	0	3
CORE (Theory)	MIB21528	Microbial Metabolism	3	3	0	0	3
CORE (Practical)	MIB22548	Immunology and Medical Microbiology Lab	4	0	0	4	2
CORE (Practical)	MIB22527	Bioprocess Technology Lab	4	0	0	4	2
CORE (Practical)	MIB22553/ MIB22554	Epidemiology and Diagnostics Lab*/ Natural product and toxicology Lab#	4	0	0	4	2
CORE (Theory) Discipline Specific Elective-II	MIB21555 MIB21556/ MIB21531/ MIB21532/ MIB21557/ MIB21558	Any One of the following*: Applied toxicology#/ Environmental toxicology# / Research Methodology, Biostatistics and GLP /Pharmaceutical Microbiology / Advanced laboratory diagnostics* /Biomedical nanotechnology*	3	3	0	0	3
FOUNDATION	MIB24535	Industry Internship					2
Foundation	MIB22573	Professional Development Course 3	1	0	1	0	1
<b>Total</b>			<b>27</b>	<b>15</b>	<b>0</b>	<b>12</b>	<b>24</b>

\*Natural product discovery and toxicology specialization; #Diagnostics and Epidemiology specialization

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M.Sc. Microbiology Semester - IV							
Type of the Paper	Paper Code	Theory / Practical	Contact Hours Per Week	L	T	P	Credit
CORE	MIB25540	Comprehensive Viva	4	4	0	0	4
CORE	MIB25541	Dissertation	6	0	0	6	15
<b>Total</b>			<b>9</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>19</b>

\* Offering of DSE subjects will vary from year to year, subject to the availability of faculty

**Total credit distribution semester-wise:**

Semester	I	II	III	IV	Total
Credits	23	22	24	19	88