

## M.Sc Biotechnology

**Total credits: 98**

### **Semester I**

<b>COURSE CODE</b>	<b>PAPER</b>	<b>CREDITS</b>
PSBTTC101	Cell Biology	4
PSBTTC102	General & Applied Microbiology	4
PSBTTC103	Biochemistry & Metabolism	4
PSBTTC109	Molecular Biology	4
PSBTTC105	Laboratory course in General & Applied Microbiology and Cell Biology	4
PSBTTC106	Laboratory course in Biochemistry & Metabolism and Molecular Biology	4
<b>TOTAL</b>		<b>24</b>

### **Semester II**

<b>COURSE CODE</b>	<b>PAPER</b>	<b>CREDITS</b>
PSBTTC210	Genetic Engineering	4
PSBTTC202	Enzymology	4
PSBTTC211	Genetics and Genomics	4
PSBTTC204	Molecular Virology	2
PSBTTC205	Immunology	4
PSBTTC213	Research methodology and Scientific communications	1
PSBTTC206	Laboratory course in Genetic Engineering and Enzymology	4
PSBTTC212	Laboratory course in Genetics and Genomics and Immunology	4
<b>TOTAL</b>		<b>27</b>

### **Semester III**

<b>COURSE CODE</b>	<b>PAPER</b>	<b>CREDITS</b>
PSBTTC301	Plant Biotechnology	4
PSBTTC302	Bioprocess Engineering	4
PSBTTC308	Bioinformatics & Biostatistics	2
PSBTTC304	IPRs, bioethics and entrepreneurship development	2
PSBTTC317	Nanotechnology in Biology	2
PSBTTC316	Project writing	1
PSBTTC312	Laboratory course in Plant Biotechnology	2
PSBTTC311	Laboratory course in Bioinformatics and Biostatistics	2
PSBTTC313	Laboratory course in Bioprocess Engineering	2
	MOOCs from SWAYAM	4
<b>TOTAL</b>		<b>25</b>

**By the end of 3<sup>rd</sup> Semester students have to complete a 4 credit course from MOOCs platform**

#### **Semester IV**

<b>COURSE CODE</b>	<b>PAPER</b>	<b>CREDITS</b>
PSBTDC406	Research Project+Project presentation+Viva-Voce+Dissertation	8
PSBTDC402	Journal Club	2
PSBTTC403	Animal Biotechnology	4
PSBTTC404	Environmental Biotechnology	4
	Open Course (from other department of the University)	4
<b>TOTAL</b>		<b>22</b>

**Students will register for a minimum of 4 credits of course from other Departments of the University in semester 4**

**Open courses offered by the School: Techniques in Biotechnology to the 4<sup>th</sup> Semester students (4 credits)**