



**ARKA JAIN University**  
Jharkhand (Jamshedpur)

Recognized by **UGC**  
Approved by **AICTE**

Scheme of study of the Program  
**Bachelor of Science (Bio-Technology)**  
Semester I, II, III, IV, V & VI  
(w.e.f batch 2018 )

**SEMESTER-I**

S.No	Name of the Subject	Credits	Contact Hours Per Week	Total Marks	End Term Theory/ Practical Exam	Mid Term Theory/ Practical Exam	CIA **	Attendance
1	Biochemistry And Metabolism*	4	4	100	60	20	15	5
2	Cell Biology*	4	4	100	60	20	15	5
3	Practical#	4	4	100	60	20	15	5
4	Environmental Sciences∞	2	2	50	35	10	2.5	2.5
5	Entrepreneurship and Small Business»	3	3	50	35	10	2.5	2.5
6	English∞	2	2	50	35	10	2.5	2.5
	<b>TOTAL</b>	<b>19</b>	<b>19</b>	<b>450</b>	<b>285</b>	<b>90</b>	<b>52.5</b>	<b>22.5</b>

**SEMESTER-II**

S.No	Name Of The Subject	Credits	Contact Hours Per Week	Total Marks	End Term Theory/ Practical Exam	Mid Term Theory/ Practical Exam	CIA **	Attendance
1	Mammalian physiology *	4	4	100	60	20	15	5
2	Plant physiology*	4	4	100	60	20	15	5
3	Practical#	4	4	100	60	20	15	5
4	Biotechnology and human welfare ▲	4	4	100	60	20	15	5
5	Practical ▲	2	2	50	30	15	2.5	2.5
6	Math and computer»	2	3	50	35	10	2.5	2.5
7	Hindi∞	2	2	50	35	10	2.5	2.5
	<b>TOTAL</b>	<b>22</b>	<b>23</b>	<b>550</b>	<b>340</b>	<b>115</b>	<b>67.5</b>	<b>27.5</b>

**SEMESTER-III**

S.No	Name of the Subject	Credit	Contact Hours Per Week	Total Marks	End Term Theory/ Practical Exam	Mid Term Theory/ Practical Exam	CIA **	Attendance
1	Genetics*	4	4	100	60	20	15	5
2	General Microbiology*	4	4	100	60	20	15	5
3	Practical	4	4	100	60	20	15	5
4	Chemistry-1*	4	4	100	60	20	15	5
5	Chemistry-1 (P)*	2	2	50	30	15	2.5	2.5
6	Bacteriology and Virology▲	4	4	100	60	20	15	5
7	Bacteriology and Virology (P) ▲	2	2	50	30	15	2.5	2.5
8	Molecular Diagnostics#	4	4	100	60	20	15	5
	<b>TOTAL</b>	<b>28</b>	<b>28</b>	<b>700</b>	<b>420</b>	<b>150</b>	<b>95</b>	<b>35</b>

**SEMESTER-IV**

S.No	Name of the Subject	Credit	Contact Hours Per Week	Total Marks	End Term Theory/ Practical Exam	Mid Term Theory/ Practical Exam	CIA **	Attendance
1	Molecular Biology*	4	4	100	60	20	15	5
2	Immunology*	4	4	100	60	20	15	5
3	Practical	4	4	100	60	20	15	5
4	Chemistry-2\$	4	4	100	60	20	15	5
5	Microbial Metabolism▲	4	4	100	60	20	15	5
6	Microbial Metabolism (P) ▲	2	2	50	30	15	2.5	2.5
7	Industrial Fermentations#	4	4	100	60	20	15	5
	<b>TOTAL</b>	<b>26</b>	<b>26</b>	<b>650</b>	<b>390</b>	<b>135</b>	<b>92.5</b>	<b>32.5</b>

**SEMESTER V**

S.No	Name of the Subject	Credit	Contact Hours Per Week	Total Marks	End Term Theory/ Practical Exam	Mid Term Theory/ Practical Exam	CIA **	Attendance
1	Bioprocess Technology*	4	4	100	60	20	15	5
2	Recombinant DNA Technology*	4	4	100	60	20	15	5
3	Practical*	4	4	100	60	20	15	5
4	Bioinformatics	4	4	100	60	20	15	5
5	Bioinformatics (P)	2	2	50	30	15	2.5	2.5
6	Animal Biotechnology #	4	4	100	60	20	15	5
7	Animal Biotechnology (P)	2	2	50	30	15	2.5	2.5
	<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>600</b>	<b>360</b>	<b>140</b>	<b>70</b>	<b>30</b>

**SEMESTER VI**

S.No	Name of the Subject	Credit	Contact Hours Per Week	Total Marks	End Term Theory/ Practical Exam	Mid Term Theory/ Practical Exam	CIA **	Attendance
1	Bio Analytical Tools*	4	4	100	60	20	15	5
2	Bio Analytical Tools (P)*	2	2	50	30	15	2.5	2.5
3	Genomics and Proteomics*	4	4	100	60	20	15	5
4	Genomics and Proteomics (P)*	2	2	50	30	15	2.5	2.5
5	Environmental Biotechnology	4	4	100	60	20	15	5
6	Environmental Biotechnology(P)	2	2	50	30	15	2.5	2.5
7	Plant Biotechnology #	4	4	100	60	20	15	5
8	Plant Biotechnology (P)	2	2	50	30	15	2.5	2.5
9	Project	4						
	<b>TOTAL</b>	<b>28</b>	<b>24</b>	<b>650</b>	<b>360</b>	<b>140</b>	<b>70</b>	<b>30</b>

\*Core Subjects    ▲ Generic Subjects    ∞Ability Enhancement Subjects

# SEC: Skill Enhancement Courses    \$ DSE: Discipline Specific Elective

\*\*CIA - Continuous internal Assessment - Based on Class Participation / Assignment

**Note: Approved By BOS Dated 23.04.2018& Approved by Academic Council Dated 1.05.2018**