



Hindi Vidya Prachar Samiti's

Ramniranjan Jhunjhunwala College

of Arts, Science & Commerce

(Empowered Autonomous College)

Affiliated to

UNIVERSITY OF MUMBAI

Syllabus for the T. Y. B.Sc. (under NEP)

Program: B.Sc. BOTANY

Program Code: RJSUBOT

ON JOB TRAINING

Course Code: RJOJTBOT361

Semester VI

(Revised in alignment with the NEP2020 facilitating the inter-and multidisciplinary learning and multiple entry and exit of the students)

Level 5.5

(CBCS)

Revised to be implemented from 2025-2026

Preamble

The National Education Policy 2020 aims at imparting skill-based learning and caters to the multiple entry and exit facility for the students thus empowering them to acquire knowledge at their pace. In the three-year UG program, the student has two exit options. Students also have the option of choosing the Honors program of four years study in a given discipline and later converting it to five-year integrated PG degree program. As an undergraduate student, he/she learns the core subject (Major), subject complementing the core subject (Minor), a course from other discipline (OEC or GEC) Vocational and Skill Enhancement course from the Major (VSEC). The remaining verticals under NEP 2020 are IKS (Indian Knowledge System), AEC (Ability Enhancement Course), VEC (Value Education Course) and with progressive three years of UG, student also completes at different levels OJT (On Job Training), FP (Field Projects), CEP (Community Engagement Program), RP (Research Project) which helps him/her in understanding their roots, application of the knowledge for the benefit of self and the society. Vertical CC (Co-curricular activities and activities related to yoga and human well-being) helps in preparing youth with good character and interpersonal relationships.

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**Credit Structure for B Sc Semester VI as per NEP 2020 Implemented
from the academic year 2025-2026
Major Subject: Botany**

Semester VI
Level 5.5 Major Botany

Courses	Credits	Total Credits	Course Titles
Major Theory I Plant Physiology and Biochemistry	4	12	RJDSCBOT361
Major Theory II Genetics and Biostatistics	4		RJDSCBOT362
Major Practical I	2		RJDSCBOTP361
Major Practical II	2		RJDSCBOTP362
Discipline specific Elective (DSE) I Theory Economic Botany	2	4	RJDSEBOT361
Discipline specific Elective (DSE) I Practical Economic Botany	2		RJDSEBOTP361
Discipline Specific Elective Course (DSE) II Microbiology and Plant Pathology	2	4	RJDSEBOT362
Discipline Specific Elective Course (DSE) II Microbiology and Plant Pathology	2		RJDSEBOTP362
Vocational Skill Course (VSC) Plant Anatomy	2	2	RJVSCBOTP361
On Job Training (OJT)	4	4	RJOJTBOT361
Total Credits	22	22	

*As per University Grid

T.Y.B..Sc. Semester VI Botany Syllabus

Course Code	Unit	Topic Headings	Credits	Duration
RJDSCBOT361	Paper Title: Plant Physiology and Biochemistry			(60 hours)
	I	Enzymes	4	
	II	Nitrogen metabolism		
	III	Vegetative growth		
	IV	Photomorphogenesis		

Course Code	Unit	Topic Headings	Credits	Duration
RJDSCBOT362	Paper Title: Genetics and Biostatistics			(60 Hours)
	I	Genetic mapping in Eukaryotes	4	
	II	Gene mutations		
	III	Extra chromosomal Inheritance		
	IV	Biostatistics		

Course Code	Unit	Topic Headings	Credits	Duration
RJDSCBOTP361	Practical Title: Plant Physiology and Biochemistry			(60 hours)
			2	

Course Code	Unit	Topic Headings	Credits	Duration
RJDSCBOTP362	Practical Title: Genetics and Biostatistics			(60 hours)
			2	

Elective Course 1

Course Code	Unit	Topic Headings	Credits	Duration
RJDSEBOT361	Paper Title: Economic Botany			(30 hours)
	I	Fibers and Fiber yielding plants	2	
	II	Minor Cereals and Small grains		
	III	Essential Oil		
	IV	Spices and other flavoring materials		

Course Code	Unit	Topic Headings	Credits	Duration
RJDSEBOTP361	Practical Title: Economic Botany			(60 hours)
	I		2	

Elective Course 2

Course Code	Unit	Topic Headings	Credits	Duration
RJDSEBOT362	Paper Title: Microbiology and Plant Pathology			(30 hours)
	I	Types of microbes, Culturing of microbes	2	
	II	Role of microbes in fermentation		
	III	Plant pathology terms, plant diseases caused by fungi, bacteria and virus (one example each)		
	IV	Prevention and control measures for plant diseases		

Course Code	Unit	Topic Headings	Credits	Duration
RJDSEBOTP362	Practical Title: Microbiology and Plant Pathology			(60 Hours)
	I		2	

Course Code	Unit	Topic Headings	Credits	Duration
RJVSCBOTP361	Practical Title: Plant Anatomy			(60 Hours)
	I		2	

Course Code	Unit	Topic Headings	Credits	Duration
RJOJTBOT361	Paper Title: On Job Training (OJT)			(120 Hours)
			4	

Course code	Unit	Topic Headings	Credits	L/Week
RJ OJT BOT 361		On Job Training (OJT)	4	

OJT will be done in research institutions/ research center/School/ educational institution/NGO involved in environment related activities / Laboratories/Industry/Botanical gardens/Horticultural units

Minimum duration - 120 hours

Total marks for OJT- 100

OJT and Report writing

Dept. of _____ Course Code _____ Date _____

UID No _____ Roll No _____ Marks _____/100

Name of student: _____

Title of Assignment: _____

Assessment Grid: Place one tick in each appropriate row. Overall mark should reflect the positions of ticks in the individual rows. In boxes that have more than one set of marks, cancel out the marks that are not applicable and circle the correct marks.

OJT (Parameters)	Marks	80 – 100% Excellent	60 -80% Good	40 – 60% Satisfactory	20 – 40% Average
Work Done at OJT and attributes as per guidelines includes attendance	50	40-50 / 50	30-40/ 50	20-30 / 50	10-20/50
Report writing and conclusions	20	16-20 / 20	12-16 /20	08-12 / 20	04-08/20
Presentation Communication	30	24-30/30	18-24/30	12-18/30	06-12/30

Mapping of the course to Local/ Regional/National/International relevance

Class	Course Name	Course Code	Local relevance	Regional relevance	National relevance	International relevance
T Y B Sc Botany Major	OJT	RJOJTBOT361	✓	✓	✓	✓

Mapping of the course to Employability/ Entrepreneurship/Skill development

Class	Course Name	Course Code	Topic focusing on Employability/ Entrepreneurship/skill development	Employability/Entrepreneurship/Skill development	Specific activity
TYBSc Botany Major	OJT	RJOJTBOT361	Campus to corporate training, soft skills, teamwork	Organizational skills, teamwork, event management	On Job training in various sectors

Integration of Cross cutting Issues

Class	Course Code	Cross Cutting Issues
T Y BSc Botany	RJOJTBOT361	Ethics, UNSDG 4, 8 NEP2020 Interdisciplinary/Multidisciplinary