



School of Science
Department of Biological Sciences
NEP 2020 - Course Structure

Program Name: Bachelor of Science (Wine Technology) (Honours / Honours with Research)
Level 4.5 (Semester – I)

For Batch: AY 25-26 onwards

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
MAJOR(MANDATORY + ELECTIVES)												
1	Major	NYWT 101	Basis of Oenology	3	-	-	3	50	-	100	-	100
2	Major	NYWT102	Principles of Microbiology	3	-	-	3	50	-	100	-	100
MINOR: NA												
NA												
Open Electives(OE)*												
3	Mandatory		Open Elective – I	4	-	-	4	50	-	100	-	100
Vocational and Skill Enhancement (VSEC)												
4	VSC	NYWT 111	Oenology lab	-	-	4	2	-	50	-	50	100
5	SEC	NYWT 112	Basic Techniques in Microbiology	-	-	4	2	-	50	-	50	100
Ability/Value Education Courses/ Indian Knowledge System(AEC/VEC/IKS)*												
6	AEC		AEC I	-	-	4	2	-	50	-	50	100
7	VEC		VEC I	-	-	4	2	-	50	-	50	100
8	IKS		IKS	-	-	4	2	-	50	-	50	100
OJT/FP/CEP/CC/RP												
9	CC		CC I	-	-	4	2	-	50	-	50	100
TOTAL				10	-	24	22	150	300	300	300	900

CIA: Continuous Internal Assessment ESE: End Semester Theory Exam. L: Theory Lecture, T: Tutorial, P: Practical	VSC- Vocational Skill Courses	CIA	Weightage	Description
	SEC- Skill Enhancement Courses	CIA 1	10%	Home Assignment
	AEC- Ability Enhancement Courses	CIA 2	20%	Mid-Term Exam (MTE)
	VEC – Value Education Courses	CIA 3	10%	Activity/Project and research based learning along with seminar presentation
	IKS- Indian Knowledge System	CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
	OJT – On Job Training	CIA TOTAL	50%	
FP – Field Project				
CEP – Community Engagement Project				
CC – Co-curricular Courses				
RP – Research Project				
* Refer University Notification				
Written Examination – End Semester Exam (ESE)			50%	
TOTAL			100%	

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NEP 2020 - Course Structure

Program Name: Bachelor of Science (Wine Technology) (Honours / Honours with Research)

Level 4.5 (Semester – II)

For the Batch: AY 25-26 onwards

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA	Summative Assessment ESE			
									Course	Lab	Course	
								MAJOR(MANDATORY + ELECTIVES)				
1	Major	NYWT 201	Fundamentals of Biochemistry	3	-	-	3	50	-	100	-	100
2	Major	NYWT 202	Fermentation Technology	3	-	-	3	50	-	100	-	100
MINOR												
3	Minor	NYWT01	Minor I	2	-	-	2	50	-	100	-	100
Open Electives(OE)*												
4	Mandatory		Open Elective - II	4	-	-	4	50	-	100	-	100
Vocational and Skill Enhancement (VSEC)												
5	SEC	NYWT 211	Biochemistry Lab	-	-	4	2	-	50	-	50	100
6	VSC	NYWT 212	Fermentation Technology laboratory	-	-	4	2	-	50	-	50	100
Ability/Value Education Courses/ Indian Knowledge System(AEC/VEC/IKS)*												
7	AEC		AEC - II	-	-	4	2	-	50	-	50	100
8	VEC		VEC- II	-	-	4	2	-	50	-	50	100
OJT/FP/CEP/CC/RP												
9	CC		CC II	-	-	4	2	-	50	-	50	100
TOTAL				12	-	20	22	200	250	400	250	900

CIA: Continuous Internal Assessment ESE: End Semester Theory Exam. L: Theory Lecture, T: Tutorial, P: Practical	VSC- Vocational Skill Courses	CIA	Weightage	Description
	SEC- Skill Enhancement Courses	CIA 1	10%	Home Assignment
	AEC- Ability Enhancement Courses	CIA 2	20%	Mid-Term Exam (MTE)
	VEC – Value Education Courses	CIA 3	10%	Activity/Project and research based learning along with seminar presentation
	IKS- Indian Knowledge System	CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
	OJT – On Job Training	CIA TOTAL	50 %	
	FP – Field Project			
CEP – Community Engagement Project	Written Examination – End Semester Exam (ESE)		50%	
CC – Co-curricular Courses	TOTAL		100%	
RP – Research Project				
* Refer University Notification				

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Program Name: Bachelor of Science (Wine Technology) (Honours / Honours with Research)

Level 5.0 (Semester – III)

For the Batch: AY 25-26onwards

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
MAJOR (MANDATORY + ELECTIVES)												
1	Major	NYWT 301	Vineyard Technology	4	-	-	4	50	--	100	--	100
2	Major	NYWT 302	Viticulture	4	-	-	4	50	--	100	--	100
MINOR												
3	Minor		Minor II	4	--		4	50	--	100	--	100
Open Electives (OE)*												
4	Mandatory		Open Elective - III	2	--		2	50	--	100	--	100
Vocational Skill Course (VSC)												
5	VSC	NYWT 311	Yeast Technology lab	--	--	4	2	--	50	--	50	100
Ability/Value Education Courses/ Indian Knowledge System(AEC/VEC/IKS)*												
6	AEC		AEC - III	2	--		2	50	-	100	-	100
OJT/FP/CEP/CC/RP												
7	FP	NYWT 312	Field Project	--	--	4	2	--	50	--	50	100
8	CC		CC III	--	--	4	2	--	50	--	50	100
TOTAL				16	-	12	22	250	150	400	200	800

CIA: Continuous Internal Assessment ESE: End Semester Theory Exam. L: Theory Lecture, T: Tutorial, P: Practical	VSC- Vocational Skill Courses	CIA	Weightage	Description
	SEC- Skill Enhancement Courses	CIA 1	10%	Home Assignment
	AEC- Ability Enhancement Courses	CIA 2	20%	Mid-Term Exam (MTE)
	VEC – Value Education Courses	CIA 3	10%	Activity/Project and research based learning along with seminar presentation
	IKS- Indian Knowledge System	CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
	OJT – On Job Training	CIA TOTAL	50%	
	FP – Field Project			
CEP – Community Engagement Project	Written Examination – End Semester Exam (ESE)			50%
CC – Co-curricular Courses	TOTAL			100%
RP – Research Project				
* Refer University Notification				

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Program Name: Bachelor of Science (Wine Technology) (Honours / Honours with Research)
Level 5.0 (Semester – IV) **For the Batch: AY 25-26onwards**

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
MAJOR (MANDATORY + ELECTIVES)												
1	Major	NYWT 401	Sensory Evaluation and Analysis	4	-	-	4	50	--	100	--	100
2	Major	NYWT 402	Alcoholic beverages and Health benefits	4	-	-	4	50	--	100	--	100
MINOR												
3	Minor	NYWT	Minor III	4	--		4	50	--	100	--	100
Open Electives (OE)*												
4	Mandatory		Open Elective - IV	2	--		2	50	--	100	--	100
Skill Enhancement Course (SEC)												
5	SEC	NYWT 411	Wine & hospitality business	--	--	4	2	--	50	--	50	100
Ability/Value Education Courses/ Indian Knowledge System (AEC/VEC/IKS)*												
6	AEC		AEC - IV	2	--	--	2	50	--	100	--	100
OJT/FP/CEP/CC/RP												
7	CEP	NYWT 412	Community Engagement Project	--	--	4	2	--	50	--	50	100
8	CC		CC IV	--	--	4	2	--	50	--	50	100
TOTAL				16	-	12	22	250	150	500	150	800

Exit option: Award of UG Diploma in Major and Minor with 88credits and additional 4 credits core NSQF Course / Internship or Continue with Major and Minor

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CIA: Continuous Internal Assessment ESE: End Semester Theory Exam. L: Theory Lecture, T: Tutorial, P: Practical	VSC- Vocational Skill Courses SEC- Skill Enhancement Courses AEC- Ability Enhancement Courses VEC – Value Education Courses IKS- Indian Knowledge System OJT – On Job Training FP – Field Project CEP – Community Engagement Project CC – Co-curricular Courses RP – Research Project * Refer University Notification	CIA	Weightage	Description
		CIA 1	10%	Home Assignment
		CIA 2	20%	Mid-Term Exam (MTE)
		CIA 3	10%	Activity/Project and research based learning along with seminar presentation
		CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
		CIA TOTAL	50 %	
		Written Examination – End Semester Exam (ESE)		50%
		TOTAL	100%	

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Program Name: Bachelor of Science (Wine Technology) (Honours / Honours with Research)
Level 5.5 (Semester – V) For the Batch: AY 25-26 onwards

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
MAJOR (MANDATORY + ELECTIVES)												
1	Major	NYWT 501	Chemical Engineering in wine technology	4	-	-	4	50	--	100	--	100
2	Major	NYWT 502	Waste treatment in wine technology	4	-	-	4	50	--	100	--	100
3	Major	NYWT 503	Regulatory policies for Alcoholic beverages Beverages	-	-	4	2	--	50	--	50	100
Major Elective– I												
4	Major	NYWT --	Major Elective - I	4	-	-	4	50	-	100	-	100
Minor												
5	Minor		Minor IV	4	--		4	50	--	100	--	100
VocationalSkill Courses (VSC)												
6	VSC	NYWT 511	Seasonal Vineyard Practices & Management	-	-	4	2	--	50	--	50	100
FP/CEP												
7	FP / CEP	NYWT 512	Filed Project /Community Engagement Project	--	--	4	2	--	50	--	50	100
TOTAL				16	-	12	22	200	150 150	400	150	700

CIA: Continuous Internal Assessment ESE: End Semester Theory Exam. L: Theory Lecture, T: Tutorial, P: Practical	VSC- Vocational Skill Courses SEC- Skill Enhancement Courses AEC- Ability Enhancement Courses VEC – Value Education Courses IKS- Indian Knowledge System OJT – On Job Training FP – Field Project CEP – Community Engagement Project CC – Co-curricular Courses RP – Research Project * Refer University Notification	CIA	Weightage	Description
		CIA 1	10%	Home Assignment
		CIA 2	20%	Mid-Term Exam (MTE)
		CIA 3	10%	Activity/Project and research based learning along with seminar presentation
		CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
		CIA TOTAL	50%	
		Written Examination – End Semester Exam (ESE)		
		TOTAL	100%	

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Program Name: Bachelor of Science (Wine Technology) (Honours / Honours with Research)
Level 5.5 (Semester – VI) **For the Batch: AY 25-26 onwards**

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
MAJOR (MANDATORY + ELECTIVES)												
1	Major	NYWT 601	Grape and wine composition	4	-	-	4	50	--	100	--	100
2	Major	NYWT 602	Grapevine Physical and Ecological Environment	4	-	-	4	50	--	100	--	100
3	Major	NYWT 603	Legal Protection: Brand, Model, Design Logistics	-	-	4	2	--	50	--	50	100
Major Elective - II												
4	Major	NYWT E--	Major Elective - II	4	-	-	4	50	-	100	-	100
Minor												
5	Minor		Minor VI	4	--		4	50	--	100	--	100
OJT												
6	OJT	NYWT 612		--	--	8	4	--	50	--	50	100
TOTAL				16	-	12	22	200	100	400	50	600

CIA: Continuous Internal Assessment ESE: End Semester Theory Exam. L: Theory Lecture, T: Tutorial, P: Practical	VSC- Vocational Skill Courses SEC- Skill Enhancement Courses AEC- Ability Enhancement Courses VEC – Value Education Courses IKS- Indian Knowledge System OJT – On Job Training FP – Field Project CEP – Community Engagement Project CC – Co-curricular Courses RP – Research Project * Refer University Notification	CIA	Weightage	Description
		CIA 1	10%	Home Assignment
		CIA 2	20%	Mid-Term Exam (MTE)
		CIA 3	10%	Activity/Project and research based learning along with seminar presentation
		CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
		CIA TOTAL	50%	
Written Examination – End Semester Exam (ESE)			50%	
		TOTAL	100%	

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Course Code	Major Elective II
NYWT E04	Global Wine Regions & Industry
NYWTE05	Food and Industrial Microbiology
NYWT E06	Health benefits of alcoholic beverages

Exit option: Award of UG Degree in Major with 132 credits or Continue with Major and Minor

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NEP 2020 - Course Structure

Program Name: Bachelor of Science (Wine Technology) (Honours / Honours with Research)
Level 6.0 (Semester – VII) **For the Batch: AY 25-26 onwards**

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
MAJOR (MANDATORY + ELECTIVES)												
1	Major	NYWT 701	Vine to wine	4	-	-	4	50	--	100	--	100
2	Major	NYWT 702	Industrial waste treatment & Environmental management	4	-	-	4	50	--	100	--	100
3	Major	NYWT 703	Biochemistry of Alcohol, Beer and Wine	4			4	50		--	50	100
4	Major	NYWT 704	Handling and maintenance of equipments in alcohol	-	-	4	2		50			100-
Major Elective – III												
5	Major	NYWT	Major Elective - III	4	-	-	4	50	-	100	-	100
Minor												
6	Minor	17RDP101	Research Methodology	4	--		4	50	--	100	--	100
TOTAL				20	-	4	22	250	50	400	50	600

CIA: Continuous Internal Assessment ESE: End Semester Theory Exam. L: Theory Lecture, T: Tutorial, P: Practical	VSC- Vocational Skill Courses	CIA	Weightage	Description
	SEC- Skill Enhancement Courses	CIA 1	10%	Home Assignment
	AEC- Ability Enhancement Courses	CIA 2	20%	Mid-Term Exam (MTE)
	VEC – Value Education Courses	CIA 3	10%	Activity/Project and research based learning along with seminar presentation
	IKS- Indian Knowledge System	CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
	OJT – On Job Training	CIA TOTAL	50%	
FP – Field Project				
CEP – Community Engagement Project				
CC – Co-curricular Courses				
RP – Research Project				
* Refer University Notification				
Written Examination – End Semester Exam (ESE)			50%	
TOTAL			100%	

Course Code	Major Elective III
NYWT E07	Indian history of alcoholic beverages
NYWT E08	Vineyard Management
NYWT E09	Green Technology

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Program Name: Bachelor of Science (Wine Technology) (Honours / Honours with Research)

Level 6.0 (Semester – VIII)

For the Batch: AY 25-26 onwards

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment		Summative Assessment		
								CIA		ESE		
								Cours e	Lab	Course	Lab	
MAJOR (MANDATORY + ELECTIVES)												
1	Major	NYWT 801	Chemical and Plant Engineering	4	-	-	4	50	--	100	--	100
2	Major	NYWT 802	Advanced Instrumentation	4	-	-	4	50	--	100	--	100
3	Major	NYWT 803	Marketing of alcoholic beverages	4	-		4	50	--	100		100
4	Major	NYWT 804	Food Safety, Standards and Regulations.	-	-	4	2	--	50	--	50	100
Major Elective - II												
4	Major	NYWT	Major Elective - IV	4	-	-	4	50	-	100	-	100
OJT												
6	OJT	NYWT 812		--	--	8	4	--	50	--	50	100
TOTAL				16	-	12	22	200	100	400	100	600

CIA: Continuous Internal Assessment ESE: End Semester Theory Exam. L: Theory Lecture, T: Tutorial, P: Practical	VSC- Vocational Skill Courses	CIA	Weightage	Description
	SEC- Skill Enhancement Courses	CIA 1	10%	Home Assignment
	AEC- Ability Enhancement Courses	CIA 2	20%	Mid-Term Exam (MTE)
	VEC – Value Education Courses	CIA 3	10%	Activity/Project and research based learning along with seminar presentation
	IKS- Indian Knowledge System	CIA 4	10%	Behavioural Attitude +General Discipline Theory +Practical attendance
	OJT – On Job Training	CIA TOTAL	50%	
CEP – Community Engagement Project				
CC – Co-curricular Courses				
RP – Research Project				
* Refer University Notification				
Written Examination – End Semester Exam (ESE)			50%	
TOTAL			100%	

Course Code	Major Elective IV
NYWT E10	Second Generation Biofuels
NYWT E 11	Grape and Wine Composition
NYWT E 12	Business Management and Communication in Wine

Exit option: Award of UG Honours Degree in Major and Minor with 176 credits.

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ABILITY ENHANCEMENT COURSE (AEC) BASKET

S.No.	COURSE CODE	NAME OF THE COURSE	SEMESTER
1	NHSA01	Communicative English	I
2	NHSA06	Organizational Behavior	
3	NHSA07	Journalistic writing	
4	NHSA03	Value Education	
5	NHSA04	Introduction to Sanskrit	
6	NHSA05	Elementary Marathi	
7	NHSA02	Personality Development and Soft Skills	II
8	NHSA08	Creative Writing	
9	NHSA09	Orientation and Leadership Development	
10	NSSA01	IP and Scientific writing	III
11	NSSA02	Data analysis and interpretation	
12	NSSA03	Publication Ethics	
13	NSSA04	Scientific policies and practices	IV
14	NSSA05	Literature and Publication	
15	NSSA06	Scientific media	

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VALUE EDUCATION COURSE (VEC) BASKET

S.No.	COURSE CODE	NAME OF THE COURSE	SEMESTER
1	NSSV02	Sustainable Development	I
2	NLWV01	The Constitution and Human Rights	
3	NSSV03	Scientific Ethics	
4	NSSV04	Science and Society	II
5	NSSV05	Waste to Wealth	
6	NSSV01	Environmental Studies	

INDIAN KNOWLEDGE SYSTEM (IKS) BASKET

Sr.No.	COURSE CODE	NAME OF THE COURSE	SEMESTER
1	NSSI01	Ethnomedicine	I
2	NSSI02	Vedic Mathematics	
3	NSSI03	Nature as Medicine	
4	NSSI04	Ancient World and Modern Science	
5	NSSI05	Science and Spirituality	

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CO-CURRICULAR COURSE (CC) BASKET

Sr.No.	COURSE CODE	NAME OF THE COURSE	SEMESTER
1	NSSC01	Physical Education and Mental Health	I
2	NYCM112	Yoga Meditation	
3	NSSC02	Ethics and Human Rights	II
4	NSSC03	Science Clubs	
5	NSSC04	Food Adulteration	
6	NSSC05	Bio-media	
7	NSSC06	Wild Life Photography	III
8	NSSC07	Awareness and Recycling of Plastic	
9	NSSC08	Health and Hygiene	
10	NSSC09	Courtroom Strategies and Tactics	IV
11	NSSC10	Scientific Journalism	
12	NSSC11	Organic and Residue Free Farming	
13	NSSC12	Soil and water analysis	

OPEN ELECTIVE (OE) BASKET

Sr.No.	COURSE CODE	NAME OF THE COURSE	SEMESTER
1	NSSO01	Fundamentals of Statistics	I
2	NSSO02	Introduction to Nano science and Nanotechnology	
3	NSSO03	Diseases and Control Measures	II
4	NSSO04	Horticulture	

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MINORS

Note: Student from B.Sc. (Wine Technology) with minor in Microbiology shall choose from following

Sr.No.	COURSE CODE	NAME OF THE COURSE	SEMESTER
1	NYWTM01	Industrial Microbiology	II
2	NYWTM 02	History and culture of fermented drinks	III
3	NYWTM 03	Microbial Fermentation and Biotechnology	IV
4	NYWTM 04	Bacterial physiology and Management	V
5	NYWTM 05	Bacterial Physiology and fermentation	VI

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