

Regulation, Scheme and syllabus for B.Voc Degree Programme in Production Technology

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1. Introduction

It has been a long felt necessity to align higher education with the emerging needs of the economy so as to ensure that the graduates of higher education system have adequate knowledge and skills for employment and entrepreneurship. The higher education system has to incorporate the requirements of various industries in its curriculum, in an innovative and flexible manner while developing a holistic and well groomed graduate.

Under the National Skills Development Corporation, many Sector Skill Councils representing respective industries have/are being established. One of the mandates of Sector Skill Councils is to develop National Occupational Standards (NOSs) for various job roles in their respective industries. It is important to embed the competencies required for specific job roles in the higher education system for creating employable graduates.

The University Grants Commission (UGC) has launched a scheme on skills development based higher education as part of college/university education, leading to Bachelor of Vocation (B.Voc.) Degree with multiple exits such as Diploma/Advanced Diploma under the NSQF. The B.Voc. programme is focused on universities and colleges providing undergraduate studies which would also incorporate specific job roles and their NOSs alongwith broad based general education. This would enable the graduates completing B.Voc. to make a meaningful participation in accelerating India's economy by gaining appropriate employment, becoming entrepreneurs and creating appropriate knowledge.

2. Objectives

2.1 To provide judicious mix of skills relating to a profession and appropriate content of General Education.

2.2 To ensure that the students have adequate knowledge and skills, so that they are work ready at each exit point of the programme.

2.3 To provide flexibility to the students by means of pre-defined entry and multiple exit points.

2.4 To integrate NSQF within the undergraduate level of higher education in order to enhance employability of the graduates and meet industry requirements. Such graduates apart from meeting the needs of local and national industry are also expected to be equipped to become part of the global workforce.

2.5 To provide vertical mobility to students coming out of 10+2 with vocational subjects.

3. Levels of Awards

The certification levels will lead to Diploma/Advanced Diploma/B. Voc. Degree in one or more vocational areas and will be offered under the aegis of the University. This is out-lined in Table I.

Awards	Award Duration	Corresponding NSQF level
Diploma	1 Year	5
Advanced Diploma	2 Years	6
B.Voc. Degree	3 Years	7

Table I : Awards

4. Eligibility for admission in B.Voc

The eligibility condition for admission to B.Voc.programme shall be 10+2 or equivalent, in any stream.

5. CREDIT STRUCTURE

NSQF Level	Skill Component Credits	General Educational Credits	Normal Calendar Duration	Exit Points/ Awards
Year 3	36	24	Six Semester	B. Voc.
Year 2	36	24	Four Semester	Advanced Diploma
Year 1	36	24	Two Semester	Diploma
Total	108	72		

6. The class structure and pattern of the examination

- The Number of students in a theory class shall not exceed 25.
- Maximum number of students in a batch for practical in first four semesters shall consist of 20 students and for fifth & sixth semester the batch shall consist of 15 students.
- The rules for admission to the subsequent (next) semesters will be the same as per the University guidelines.
- The Theory (**ESE**) and Practical Examinations will be conducted by the University at the end of each semester.
- The marks of internal (**IA**) and practical exam (**ESE**) should be submitted to University in the prescribed format.
- Assessment of skill component should be done by sector skill council or industry partner.

7. PROGRAMME STRUCTURE

Semester I

Sr. No.	Course Code	Name of the Course	Teaching scheme			Evaluation Scheme			Credits	Total Marks	
			L	T	P	IA	MSE	ESE			
General Education											
			Theory								
1	BVSWC101	IT Foundation and Programming Concepts	3	0	0	10	0	40	3	50	
2	BVSWC102	Web Designing	3	0	0	10	0	40	3	50	
3	BVSWC103	Programming in C	3	0	0	10	0	40	3	50	
4	BVSWC104	Operating System (OS)	3	0	0	10	0	40	3	50	
Total									12	200	
Skill Components											
			Lab/Practical								
5	BVSWL105	Web Designing Lab	0	0	1	25	0	25	1.5	50	
6	BVSWL106	C Programming Lab	0	0	1	25	0	25	1.5	50	
On-Job-Training (OJT)/Qualification Packs (Any One)											
7	BVSWE117	Technical Writer (SSC/Q0505)	200							15	200
8	BVSWE128	Infrastructure Engineer (SSC/Q0801)									
9	BVSWE139	Associate – CRM (SSC/Q2202)									
Total									18	300	

Semester II

Sr. No.	Course Code	Name of the Course	Teaching scheme			Evaluation Scheme			Credits	Total Marks	
			L	T	P	IA	MSE	ESE			
General Education											
			Theory								
1	BVSWC201	Data Structures	3	0	0	10	0	40	3	50	
2	BVSWC202	Concepts of Data Mining	3	0	0	10	0	40	3	50	
3	BVSWC203	OOPs with Java	3	0	0	10	0	40	3	50	
4	BVSWC204	Multimedia Tools & Applications / DBMS	3	0	0	10	0	40	3	50	
Total									12	200	
Skill Components											
			Lab/Practical								
5	BVSWL205	Data Structure Lab	0	0	1	25	0	25	1.5	50	
	BVSWL206	Java Lab	0	0	1	25	0	25	1.5	50	
On-Job-Training (OJT)/Qualification Packs (Any one more QP to be opted from the QPs mentioned in the semester I)											
7	BVSWE217	Web Developer (SSC/Q0503)	200							15	200
8	BVSWE228	Test Engineer (SSC/Q1301)									
Total									18	300	

Semester III

Sr. No.	Course Code	Name of the Course	Teaching scheme			Evaluation Scheme			Credits	Total Marks
			L	T	P	IA	MSE	ESE		
General Education										
			Theory							
1	BVSWC301	Linux Operating System – Operations and Management	3	0	0	10	0	40	3	50
2	BVSWC302	Software Engineering	3	0	0	10	0	40	3	50
3	BVSWC303	Web Development using PHP	3	0	0	10	0	40	3	50
4	BVSWC304	Windows Development Fundamental	3	0	0	10	0	40	3	50
			Total						12	200
Skill Components										
			Lab/Practical							
4	BVSWL305	Web Development using PHP Lab	0	0	1	25	0	25	1.5	50
5	BVSWL306	Window Development Fundamentals Lab	0	0	1	25	0	25	1.5	50
On-Job-Training (OJT)/Qualification Packs (Any One)										
6	BVSWE317	Junior Data Associate (SSC/Q0401)	200						15	200
7	BVSWE328	IP Executive (SSC/Q6201)								
8	BVSWE339	Security Analyst (SSC/Q0901)								
			Total						18	300

Semester IV

Sr. No.	Course Code	Name of the Course	Teaching scheme			Evaluation Scheme			Credits	Total Marks
			L	T	P	IA	MSE	ESE		
General Education										
			Theory							
1	BVSWC401	Software Testing and Project Management	3	0	0	10	0	40	3	50
2	BVSWC402	Android Application Development	3	0	0	10	0	40	3	50
3	BVSWC403	Window Configuration and Server Administration	3	0	0	10	0	40	3	50
4	BVSWC404	Management Information Systems	3	0	0	10	0	40	3	50
								Total	12	200
Skill Components										
5	BVSWL405	Android Application Development Lab	0	0	1	25	0	25	1.5	50
6	BVSWL406	MIS Lab	0	0	1	25	0	25	1.5	50
7	BVSWE417	QA Engineer (SSC/Q1302)	200						15	200
8	BVSWE428	Software Engineer (SSC/Q4601)								
			Total						18	300

Semester V

Sr. No.	Course Code	Name of the Course	Teaching scheme			Evaluation Scheme			Credits	Total Marks
			L	T	P	IA	MSE	ESE		
General Education										
			Theory							
1	BVSWC501	Technology Trends in IT	3	0	0	10	0	40	3	50
2	BVSWC502	Window Mobile Application Development	3	0	0	10	0	40	3	50
3	BVSWC503	Introduction to Python Programming	3	0	0	10	0	40	3	50
4	BVSWC504	Introduction to Microprocessors	3	0	0	10	0	40	3	50
Total									12	200
Skill Components										
5	BVSWL505	Window Mobile Application Development Lab	0	0	1	25	0	25	1.5	50
6	BVSWL506	Python Programming Lab	0	0	1	25	0	25	1.5	50
7	BVSWE517	Management Trainee (SSC/Q6301)	200						15	200
8	BVSWE528	Associate - Transactional F&A (SSC/Q2301)								
9	BVSWE539	Consultant Network Security (SSC/Q0917)								
Total									18	300

Semester VI

Sr. No.	Course Code	Name of the Course	Teaching scheme			Evaluation Scheme			Credits	Total Marks		
			L	T	P	IA	MSE	ESE				
General Education												
Theory												
1	BVSWC601	Introduction to AI	3	0	0	10	0	40	3	50		
2	BVSWC602	e-Commerce	3	0	0	10	0	40	3	50		
3	BVSWC603	Computer Network Security	3	0	0	10	0	40	3	50		
4	BVSWC604	Introduction to Biometrics	3	0	0	10	0	40	3	50		
Total									12	200		
Skill Components												
Lab/Practical												
1	BVSWL605	AI Lab	0	0	1	25	0	25	1.5	50		
2	BVSWL606	Computer Network Security Lab	0	0	1	25	0	25	1.5	50		
On-Job-Training (OJT)/Qualification Packs (Any One)												
3	BVSWE617	Master Trainer for Software Developer (SSC/Q0509)	200						15		200	
4	BVSWE628	Hardware Engineer (SSC/Q4701)										
Total									18	300		