

SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI



THREE /FOUR YEAR DEGREE OF BACHELOR OF SCIENCE

Bachelor of Science

SUBJECT: Web Designing and Development

FACULTY: SCIENCE AND TECHNOLOGY

(Courses effective from Academic Year 2026-2027)

Under Uniform NEP 2020

SCHEME

Semester I and II

Semester III and IV

Semester V and VI

Sant Gadge Baba Amravati University, Amravati

FACULTY: Science and Technology

**Teaching and Learning Scheme: for the Degree of Bachelor of Science with the Major: Web Designing and Development
(Three Years- Six Semesters Bachelor's Degree Programme)**

FIRST YEAR: SEMESTER – I

Mode of Teaching	Vertical No.	The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs./Week)	Vertical Workload (Hrs./Week)
Classroom Teaching/ Lab Work (Practical)/ Outdoor / Field	a.	Major/Minor: Web Designing and Development	Theory1	138201	Fundamentals of Computer	2	2	6
			Lab/Practical-1	138202	Laboratory on Office Automation Tools	2	4	
	b.	Major/Minor:	-	-	-	4	6	6
	c.	Generic/ Open Elective	Theory1	138271	Information Communication Technology	2	2	4
			Theory2	138272	Business Data Processing	2	2	
	d.	VSC	-	-	-	-	-	4
		SEC	Lab/Practical-3	138281	Laboratory on Information Communication Technology Tools	2	4	
	e.	AEC - English	Theory	-	-	1	1	6
		AEC –MIL	Theory	-	-	1	1	
		IKS-Generic	Theory	-	-	2	2	
		VEC	Theory	-	-	2	2	
	f.	CC	Outdoor	-	-	2	4	4
		TOTAL				22	30	30

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FIRST YEAR: SEMESTER – II

Mode of Teaching	Ver. No	The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs./Week)	Vertical Workload (Hrs./Week)
Classroom Teaching/ Lab Work (Practical)/ Outdoor / Field	a.	Major: Web Designing and Development	Theory2	138203	Programming with C	2	2	6
			Lab/Practical-4	138204	Laboratory on Programming with C	2	4	
	b.	Minor: Web Designing and Development	-	-	-	4	6	6
	c.	Generic/ Open Elective	Theory3	138273	E Business	2	2	4
			Theory4	138274	Website Design Principles	2	2	
	d.	VSC	Lab/Practical-6	138282	Laboratory on E-Commerce	2	4	8
		SEC	Lab/Practical-7	138283	Laboratory on Web Publishing	2	4	
	e.	AEC - English	Theory	-	-	1	1	4
		AEC –MIL	Theory	-	-	1	1	
		VEC	Theory	-	-	2	2	
	f.	CC	Outdoor	-	-	2	4	4
		TOTAL				22	32	32

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SECONOD YEAR: SEMESTER – III

Mode of Teaching	Ver. No	The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs./Week)	Vertical Workload (Hrs./Week)
Classroom Teaching/ Lab Work (Practical)/ Outdoor / Field	a.	Major: Web Designing and Development	Theory3	138205	Data Structure (DS)	2	2	10
			Theory4	138206	Relational Database Management System (RDBMS)	2	2	
			Lab/Practical-8	138207	Laboratory on DS and RDBMS	2	4	
		IKS – Major Specific	Theory	138208	IKS in Computational Sciences	2	2	
	b.	Minor: Web Designing and Development	Theory3	138261	Data Structure and RDBMS	2	2	6
			Lab/Practical-9	138262	Laboratory on Data Structure and RDBMS	2	4	
	c.	Generic/ Open Elective	Theory5	138275	E Content Development	2	2	2
	d.	VSC	Lab/Practical-10	138284	Laboratory on MySQL	2	4	4
	e.	AEC - English	Theory	-	-	1	1	2
		AEC –MIL	Theory	-	-	1	1	
	f.	FP/CES	Project	138291	Field Project / Community Engagement Services in Web Designing and Development: Phase-I	2	4	8
		CC	Outdoor	-	-	2	4	
		TOTAL				22	32	32

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SECOND YEAR: SEMESTER – IV

Mode of Teaching	Vertical No	The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs./Week)	Vertical Workload (Hrs./Week)
Classroom Teaching/ Lab Work (Practical)/ Outdoor / Field	a.	Major: Web Designing and Development	Theory5	138209	OOP with C++	2	2	10
			Theory6	138210	Computer Networks	2	2	
			Theory	138211	Python Programming	2	2	
			Lab/Practical-11	138212	Laboratory on OOP with C++ and Python Programming	2	4	
	b.	Minor: Web Designing and Development	Theory4	138263	C++ and Python Programming	2	2	6
			Lab/Practical-12	138264	Laboratory on C++ and Python Programming	2	4	
	c.	Generic/ Open Elective	Theory6	138276	Web Technologies	2	2	2
	d.	VSC	Lab/Practical-13	138285	Database using Access Laboratory	2	4	4
	e.	AEC - English	Theory	-	-	1	1	2
		AEC –MIL	Theory	-	-	1	1	
	f.	FP/CES	Project	138292	Field Project / Community Engagement Services in Web Designing and Development: Phase-II	2	4	8
		CC	Outdoor	-	-	2	4	
		TOTAL				22	32	32

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THIRD YEAR: SEMESTER – V

Mode of Teaching	Vertical No	The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/Week)	Vertical Workload (Hrs/Week)
Classroom Teaching/ Lab Work (Practical)/ Outdoor / Field	a.	Major: Web Designing and Development	Theory7	138213	Web Designing with Java script	2	2	20
			Theory8	138214	Python Programming for Web Application	2	2	
			Theory9	138215	Responsive Web Designing	2	2	
			Lab/Practical-15	138216	Laboratory for web designing on Java script and Python Programming	2	4	
		Major: Web Designing and Development	Theory1	138217	PHP Programming	2	2	
			Theory1	138218	UI/UX Design			
			Lab/Practical-17	138219	Laboratory on PHP Programming	2	4	
			Lab/Practical-17	138220	Laboratory on UI/UX Design			
	b.	Minor: Data Analytics	Theory5	138265	Fundamentals of Web Designing and Development	2	2	6
			Lab/Practical-18	138266	Laboratory on HTML and CSS	2	4	
	c.	Generic/ Open Elective	-			-	-	-
	d.	VSC	Lab/Practical-19	138286	Laboratory on Content Management System with WordPress	2	4	8
		SEC	Lab/Practical	138287	Laboratory on Web Designing with Bootstrap	2	4	
	e.	VEC	-			-	-	0
	f.	FP/CES	Project	138293	Project in Web Designing and Development	2	4	4
		CC	-		-	-	-	-
		TOTAL			22	34	34	
			*Theory		Foundation of Artificial Intelligence	2	2	2

** Implementation of the Course of “Foundation of Artificial Intelligence” for the U.G. Programmes Under all the faculties. As per Extra-Ordinary Notification No. 241/2025 of SGBAU, dated 24/12/2025. Students will earn grade from written examination marks conducted by the concerning college.*

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THIRD YEAR: SEMESTER – VI

Mode of Teaching	Vertical. No	The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/Week)	Vertical Workload (Hrs/Week)	
Classroom Teaching/ Lab Work (Practical)/ Outdoor / Field	a.	Major: Web Designing and Development	Theory10	138221	Full Stack Web Development	2	2	16	
			Theory11	138222	Advanced Web Application with Node. JS	2	2		
			Theory	138223	Web Security and Deployment	2	2		
			Lab/Practical-20	138224	Laboratory on Full Stack and Node.JS	2	4		
		Major: Web Designing and Development	Theory2	138225	Mobile Responsive Web Design	2	2		
			Theory2	138226	E-Commerce Website Development				
			Lab/Practical-22	138227	Laboratory on Mobile Responsive Web Design	2	4		
			Lab/Practical-22	138228	Laboratory on E-commerce Website Development				
	b.	Minor: Web Designing and Development	Theory6	138267	Web Development with PHP and Java Script	2	2	6	
			Lab/Practical-23	138268	Laboratory on PHP and Java Script	2	4		
	c.	Generic/ Open Elective	-		-	-	-	0	
	d.	VSC	Lab/Practical-24	138288	Laboratory on Apache Server	2	4	4	
	e.	VEC	-		-	-	-	-	
	f.	Internship / Apprenticeship	OJT	138294	Internship / Apprenticeship in Web Designing and Development	4	8	8	
			FP/CES	Project	-	-	-		-
			-			-	-		-
		TOTAL				22	36	36	

Notes:

- a. # Here mention the title of Degree. For example - Degree of Bachelor of Science with the Major: Data Analytics Discipline / Subject Data Analytics as Degree of Bachelor of Science (Data Analytics)
- b. The strength of the batch of the Practical for UG Classes shall be 16 with an addition of 10% with the permission of Hon'ble Vice Chancellor. However, for Music Discipline the batch size shall be of 7 students. The number of the students required to constitute a batch or calculate the workload shall be in accordance with the relevant Government Resolution in force at the time, applicable to specific time, region, course type, mode of instruction, and other pertinent factors.
- c. 1 Credit shall mean 1 Hour Teaching per Week per Semester (Total 15 Hrs/ Semester), the duration of 1 Teaching Period will be 60 Minutes. For Practical 1 Credit shall mean 2 Hour Teaching per Week per Semester (Total 30 Hrs/ Semester).
- d. For Examination and Evaluation of Theory Courses, 40 % Marks shall be assigned to Internal Examination and 60% Marks shall be assigned to end-semester external university examination.
- e. **Co-curricular Courses:** Health and wellness, Yoga Education, Sports and Fitness, Cultural Activities, NSS/NCC, Fine/Applied/Visual/Performing Arts During Semester I, II, III, IV, V and VI. These courses may be taught by Physical Education Director or may be assigned to Language Teacher by the Principal of HEI based on the expertise of the concerned.
- f. Value Education Courses to be selected from the Basket of Courses provided by the University. These courses may be assigned to the Language Teacher by the Principal of HEI based on the expertise of the concerned.
- g. **Generic / Open Elective Courses (GE/OE):** Courses to be selected from the Basket of Courses provided by the University
- h. **Abbreviations:** Department Specific Core: DSC, Department Specific Elective: DSE, FSC: Faculty Specific Core, FSE: Faculty Specific Elective, Indian Knowledge System: IKS, Inter Faculty Specific Core: IFSC, Inter Faculty Specific Elective: IFSE, Theory : Th, Practical/Practicum: Pr, Environment Studies: ES, Pre-requisite Course mandatory if applicable: Prq, Laboratory: Lab (Practical), Generic/ Open Electives: OE; Vocational Skill and Skill Enhancement Courses: VSEC; Vocational Skill Courses: VSC; Skill Enhancement Courses: SEC; Ability Enhancement Courses: AEC; Value Education Courses: VEC; OJT: On Job Training: Internship/ Apprenticeship; Field projects: FP; Community Engagement and Service: CES; Co-curricular Courses: CC; RM: Research Methodology; Research Project: RP; MIL: Modern Indian Language

Curriculum Design:

Each theory paper of Major: Data Analytics shall be of 2 Credits comprising of 4 Units with Teaching Hours as mentioned in the table. The pattern of theory papers shall be as per following template –

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
4.5	I	101200	XXXXXX	2	30	2 Hrs	30

The Curriculum of any Course shall be designed as per following template:

Course Objectives:				
Course Outcomes:	As per Blooms Taxonomy (4 to 6)			
Unit System	Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies
Unit I	Detailed pointwise contents with at least four points	8 Hrs	8 Marks	BoS shall recommend suitable pedagogical strategies, both classical and contemporary innovations, for integration into the Teaching, Learning, and Evaluation (T, L, & E) Processes. These strategies should be tailored to enhance the delivery and comprehension of the course content within each Unit, ensuring that they align with the educational objectives and learning outcomes.
Unit II	Detailed pointwise contents with at least four points	7 Hrs	7 Marks	
Unit III	Detailed pointwise contents with at least four points	8 Hrs	8 Marks	
Unit IV	Detailed pointwise contents with at least four points	7 Hrs	7 Marks	
References:	Study Materials in the form of - Reference Books, Text Books, Research Articles, Digital Resources like Weblinks, E- Contents, Educational Software, Databases, etc.			
Model Questions:	Short Type (At least 8), Long Type (At least 4) and MCQs for Internal Assessment (At least 8) wherever applicable as the need of curriculum.			