

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY

Courses of Study and Scheme of Examination of B.E. First Year (2012-13) Common to all branches of Engineering except Bio-Tech. & Bio-Medical Engg.

FIRST SEMESTER

S.	Board of			_	iods	-	Schei		xamination	Total	Credit		
No	Study	Subject Code	Subject		Week			The		Marks	[L+[<u>T+P</u>]]		
	•			L	T	Р	ESE	СТ	TA		2		
1	Basic Sciences	300114(14)	Applied Mathematics-I	4	1	-	80	20	20	120	5		
2	Humanities	300111(46)	Professional Communication in English		-	-	80	20	20	120	4		
3	Basic Sciences	300112(11)	Applied Chemistry	4	1	-	80	20	20	120	5		
4	Mechanical Engineering	300211(37)	Engineering Graphics	2	1	4	80	20	20	120	5		
5	Elect. Engg.	300118(24)	Elements of Electrical Engineering (New)	4	1	-	80	20	20	120	5		
6	Basic Sciences	300121(11)	Applied Chemistry (Lab)	-	-	2	40	ı	20	60	1		
7	Elect. Engg.	300126(24)	Elements of Electrical Engineering (Lab)	-	-	2	40	1	20	60	1		
8	Mechanical Engineering	300124(37)	Workshop Practice	-	-	3	40	ı	20	60	2		
9	Humanities	300127(46)	Library & Seminar	-	-	1	-	ı	20	20	1		
	_	TOTA	L	18	4	12	520	100	180	180 800			

L-Lecture, T-Tutorial, P-Practical, ESE - End Semester Exam, CT- Class Test, TA- Teacher's Assessment

- Note: (i) The teaching in the 1st and 2nd semester will be divided in two groups consisting of various branches as shown below: P1-GROUP: Electronics & Communication, Information Technology, Electronics & Instrumentation, Electrical, Chemical, Electrical & Electronics; Q1-GROUP: Computer Science, Mechanical, Civil, Mining and Applied Electronics & Instrumentation, Metallurgy Mechatronics.
 - (ii) Applied Mathematics-I will be taught to both the groups in the first semester.
 - (iii) Library & seminar will be conducted by the relevant discipline/humanities as decided by the Principal.



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Courses of Study and Scheme of Examination of B.E. First Year (2012-13) Common to all branches of Engineering except Bio-Tech. & Bio-Medical Engg.

SECOND SEMESTER

S.	Board of	6.1 6.1		_	iods	-	Schei		kamination	Total	Credit		
No	Study	Subject Code Subject		L	Weel T	Р	ESE	Theo CT	ory TA	Marks	[L+[<u>T+P]]</u> 2		
1	Basic Sciences	300214(14)	Applied Mathematics-II	4	1	-	80	20	20	120	5		
2	Civil Engg.	300212(20)	Environment & Ecology		-		80	20	20	120	4		
3	Basic Sciences	300218(15)	Applied Physics (New)	4	1	-	80	20	20	120	5		
4	Civil Engg.	300216(20)	Basic Civil Engineering	4	1	-	80	20	20	120	5		
5	Mechanical Engg.	300219(37)	Fundamental of Mechanical Engineering (New)	4	1	-	80	20	20	120	5		
6	Basic Sciences	300228(15)	Applied Physics (Lab)	ı	-	2	40	ı	20	60	1		
7	Mechanical Engg.	300229(37)	Mechanical Engineering (Lab)	ı	-	2	40	1	20	60	1		
8	Humanities	300221(46)	Communication Skills (Lab)	-	-	3	40	ı	20	60	2		
9	Humanities	300220(46)	Library & Seminar		-	1	-	ı	20	20	1		
		TOTA	L	20	4	8	520	100	180	180 800			

L-Lecture, T-Tutorial, P-Practical, ESE – End Semester Exam, CT- Class Test, TA- Teacher's Assessment

Note:

- (i) The teaching in the 1st and 2nd semester will be divided in two groups consisting of various branches as shown below: P1-GROUP: Electronics & Communication, Information Technology, Electronics & Instrumentation, Electrical, Chemical, Electrical & Electronics; Q1-GROUP: Computer Science, Mechanical, Civil, Mining and Applied Electronics & Instrumentation, Metallurgy, Mechatronics.
- (ii) Applied Mathematics-II will be taught to both the groups in the second semester.
- (iii) Library & seminar will be conducted by the relevant discipline/humanities as decided by the Principal.

CHHATTISGARH SWAMI VIVEKANAD TECHNICALUNIVERSITY, BHILAI

Scheme of Teaching & Examination

BE (Applied Electronics & Instrumentation Engineering) III Semester

Sl. No.	Board of Studies	Subject Code	Subject Name	Periods Per Week		Scheme of Exam. (Theory/ Practical)			Total Marks	Credit L+(T+P)/2	
				L	T	P	ESE	CT	TA		
1	Applied Mathematics	312351(14)	Mathematics - III	4	1	-	80	20	20	120	5
2	Electronics and Instrumentation	312352(27)	Basic Electronics	3	1	-	80	20	20	120	4
3	Electronics and Instrumentation	312353(27)	Measurement & Instruments	3	1	-	80	20	20	120	4
4	Electronics and Instrumentation	312354(27)	Network Analysis & Synthesis	3	1	-	80	20	20	120	4
5	Electronics and Instrumentation	312355(27)	Programming with 'C'	3	1	-	80	20	20	120	4
6	Electronics and Telecomm.	312356(28)	Digital Logic Design	3	1	-	80	20	20	120	4
7	Electronics and Instrumentation	312361(27)	Programming with 'C' Laboratory	-	-	3	40	-	20	60	2
8	Electronics and Instrumentation	312362(27)	Basic Electronics Laboratory	-	-	3	40	-	20	60	2
9	Electronics and Instrumentation	312363(27)	Measurement & Instruments Laboratory	-	-	3	40	-	20	60	2
10	Electronics and Instrumentation	312364(27)	Digital Logic Circuit Laboratory	-	-	3	40	-	20	60	2
11	Humanities	312365(46)	Value Education	-	-	2	-	-	40	40	1
12			Library	-	-	1	-	-	-	-	-
			Total	19	6	15	640	120	240	1000	34

L: Lecture, T: Tutorial, P: Practical, ESE: End Semester Exam, CT: Class Test, TA: Teachers Assessment Note: Duration of all theory papers will be of Three Hours.

CHHATTISGARH SWAMI VIVEKANAD TECHNICAL UNIVERSITY, BHILAI SCHEME OF TEACHING AND EXAMINATION

BE (Applied Electronics & Instrumentation Engineering) IV Semester

S. No.	Board of Studies	Subject Code	Subject Name	Pe	riods Wee		(me of E Theory ractica	/	Total Marks	Credit L+(T+P)/2
1 NO.		Code	-	L	Т	P	ES E	CT	TA	Marks	
1	Applied Mathematics	312451(14)	Mathematics - IV	3	1	-	80	20	20	120	4
2	Electronics &Instrumentation	312452(27)	Applied Electronics	3	1	-	80	20	20	120	4
3	Electrical Engg.	312453(24)	Electrical Machines	3	1	-	80	20	20	120	4
4	Electronics & Instrumentation	312454(27)	Sensors & Transducers	3		-	80	20	20	120	3
5	Electronics & Telecomm.	312455(28)	Microprocessor & Interfaces	3	1	-	80	20	20	120	4
6	Electronics &Telecomm.	312456(28)	Signals & Systems	3	1	-	80	20	20	120	4
7	Applied Electronics & Instrumentation	312461(12)	Applied Electronics Laboratory	-	-	4	40	-	20	60	2
8	Applied Electronics &Instrumentation	312462(12)	Sensors & Transducers Laboratory	_	-	3	40	_	20	60	2
9	Applied Electronics & Instrumentation	312463(12)	Electronics Workshop	-	-	4	40	-	20	60	2
10	Applied Electronics & Instrumentation	312464(12)	Microprocessor & Interfaces Laboratory	-	-	4	40	-	20	60	2
11	Humanities	312465(46)	Health, Hygiene & Yoga	-	-	2	-	-	40	40	1
12			Library	-	-	1	-	-	-	-	-
			Total	18	5	18	640	120	240	1000	32

L: Lecture, T: Tutorial, P: Practical, ESE: End Semester Exam, CT: Class Test, TA: Teachers Assessment Note (1): Duration of all theory papers will be of Three Hours.

Note (2): Industrial Training of six weeks is mandatory for B.E. student. It is to be completed in two parts. The first part will be in summer after IV semester after which students have to submit a training report which will be evaluated by the college teachers during B.E. V semester.

Chhattisgarh Swami Vivekanand Technical University, Bhilai (C.G.)

Scheme of Teaching and Examination B.E. V SEMESTER

APPLIED ELECTRONICS AND INSTRUMENTATION

S. No	Board of Studies	Subject Code	Subject Name		Periods Per Week		(me of l Theor ractica	y/	Total Marks	Credit L+(T+P)/2
				L	T	P	ESE	CT	TA		
1	Electronics and Instrumentation	312551(27)	Signal Conditioning Circuits	3	1	-	80	20	20	120	4
2	Electronics and Instrumentation	312552(27)	Industrial Instrumentation	3	1	-	80	20	20	120	4
3	Applied Electronics and Instrumentation	312553(12)	Communication Systems & Engineering	3	1	-	80	20	20	120	4
4	Applied Electronics and Instrumentation	312554(12)	Medical Measurements & Instrumentation	3	1	-	80	20	20	120	4
5	Electronics and Instrumentation	312555(27)	Control System Engineering	3	1	-	80	20	20	120	4
6	Electronics and Telecomm.	312556(28)	Advanced Microprocessor & Interfacing	3	1	-	80	20	20	120	4
7	Applied Electronics and Instrumentation	312561(12)	Control System Engineering Laboratory	-	-	3	40	-	20	60	2
8	Applied Electronics and Instrumentation	312562(12)	Signal Conditioning Circuits Laboratory	-	-	4	40	-	20	60	2
9	Applied Electronics and Instrumentation	312563(12)	Advanced Microprocessor & Interfacing Laboratory	-	-	4	40	-	20	60	2
10	Applied Electronics and Instrumentation	312564(12)	Medical Measurements & Instrumentation Laboratory	-	-	2	40	-	20	60	1
11	Humanities	300565(46)	Personality Development	-	-	2	-	-	20	20	1
12	Applied Electronics and Instrumentation Applied Electronics and Instrumentation Bractical Training Evaluation/ Library		-	-	1	-	-	20	20	1	
	Total			18	6	16	640	120	240	1000	33

L: Lecture T: Tutorial P: Practical

ESE: End Semester Examination CT: Class Test TA: Teacher's Assessment

^{*} Industrial Training of ten weeks is mandatory for B.E. student. It is to be completed in two parts. The first part will be in summer after IV sem. after which students have to submit a training report which will be evaluated by the college teachers during B.E. V sem.

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Scheme of Teaching & Examination B.E. VI SEMESTER APPLIED ELECTRONICS AND INSTRUMENTATION

S. No.	Board of Studies	Subject Code	Subject Name		Periods Per Week			ne of Ex ry/ Prac		Total Marks	Credit L+(T+P)/2
					T	P	ESE	CT	TA		
1	Electronics and Instrumentation	312651(27)	Process Dynamics & Control	3	1	-	80	20	20	120	4
2	Electronics and Instrumentation	312652(27)	Programmable Logic Controller	3	1	-	80	20	20	120	4
3	Applied Electronics and Instrumentation	312653(12)	Virtual Instrumentation	3	1	-	80	20	20	120	4
4	Electronics and Instrumentation	312654(27)	Digital Signal Processing	3	1	-	80	20	20	120	4
5	Electronics and Telecomm.	312655(28)	Microcontroller & Embedded Systems	3	1	-	80	20	20	120	4
6	Refer Table	- 1	Professional Elective -1	3	-	-	80	20	20	120	3
7	Applied Electronics and Instrumentation	312661(12)	Programmable Logic Controller Laboratory	-	-	2	40	-	20	60	1
8	Applied Electronics and Instrumentation	312662(12)	Microcontroller & Embedded Systems Laboratory	-	-	4	40	-	20	60	2
9	Applied Electronics and Instrumentation	312663(12)	Digital Signal Processing Laboratory	-	-	4	40	-	20	60	2
10	Applied Electronics and Instrumentation	312664(12)	Electronics Simulation Laboratory	-	-	4	40	-	20	60	2
11	Management	300665(76)	Managerial Skills	-	-	2	-	-	40	40	1
	Library					1	-	-			-
	Total					17	640	120	240	1000	31

L: Lecture T: Tutorial P: Practical

ESE: End Semester Examination **CT:** Class Test **TA:** Teachers' Assessment

Note: Industrial Training of eight weeks is mandatory for B.E. students. It is to be completed in two equal parts. The first part must have been completed in summer after IV semester The second part to be completed during summer after VI semester after which students have to submit a training report which will be evaluated by college teachers during B.E. VII semester

		Table - 1 (Professi	onal Electives – I)			
S. No.	Board of Studies	Subject Code	Subject Name			
1	Electronics and Instrumentation	ectronics and Instrumentation 312671(27) Data Structure using 'C++'				
2	Electronics and Instrumentation	312672(27)	Microelectronic Devices & VLSI Technology			
3	Electronics and Instrumentation	312673(27)	Telecommunication Switching & Computer Network			
4	Electronics and Instrumentation	312674(27)	Microwave Instrumentation			
5	5 Electronics and Instrumentation 312675(27) Semiconductor Components & Materials					
6	Electronics and Instrumentation	312676(27)	Telematics			

Note:

- 1. 1/4th of total strength of students to minimum of twenty students is required to offer an elective in the college in a particular academic session.
- 2. Choice of elective course once made for an examination cannot be changed in future examinations.

Name of the Programme: Bachelor of Engineering :::: Duration of the Programme: Four Years

Chhattisgarh Swami Vivekanand Technical University, Bhilai (C. G.)

Scheme of Teaching and Examination B.E. VII SEMESTER APPLIED ELECTRONICS AND INSTRUMENTATION

S. No.	Board of Studies	Subject Code	Subject Name	Periods Per Week		Scheme of Exam. (Theory/ Practical)			Total Marks	Credit L+(T+P)/2	
				L	Т	P	ESE	CT	TA		
1	Electronics and Instrumentation	312731(27)	Industrial Electronics	4	1		80	20	20	120	5
2	Electronics and Instrumentation	327732(27)	Analytical Instrumentation	3	1		80	20	20	120	4
3	Electronics and Instrumentation	327733(27)	Advanced Instrumentation	3	1		80	20	20	120	4
4	Applied Electronics and Instrumentation	312734(12)	Power Electronic Devices & Drives	3	1		80	20	20	120	4
5	Professional Electiv	ve -2	Refer Table – 2	3	1		80	20	20	120	4
6	Applied Electronics and Instrumentation	312761(12)	Analytical Instrumentation Lab			4	40	-	20	60	2
7	Applied Electronics and Instrumentation	312762(12)	Virtual Instrumentation Laboratory			4	40	-	20	60	2
8	Applied Electronics and Instrumentation	312763(12)	Power Electronic Devices & Drives Laboratory			4	40	-	20	60	2
9	Applied Electronics and Instrumentation	312764(12)	Minor Project			4	100	-	40	140	2
10	Management	312765(76)	Innovative & Entrepreneurial Skills			2	-	-	40	40	1
11	Applied Electronics and Instrumentation	312766(12)	*Practical Training Evaluation/ Library			1	-	-	40	40	1
			Total	16	5	19	620	100	280	1000	31

L-Lecture, T- Tutorial, P- Practical, ESE- End Semester Examination, CT- Class Test, TA- Teacher's Assessment * To be completed after VI Semester and before the commencement of VII Semester

Tabl	le - 2 (Professional l	Electives -2)	
S. No.	Board of Studies	Subject Code	Subject Name
1	Applied Electronics and Instrumentation	312741(27)	Data Acquisition System & Technology
2	Electronics and Instrumentation 327742(27)		Instrumentation for Pollution Control
3	Electronics and Instrumentation	327743(27)	Instrumentation & Control in Iron & Steel Industries
4	Electronics and Instrumentation	327744(27)	Robotics & Automation
5	Electronics and Instrumentation	327745(27)	Instrumentation System Reliability
6	Electronics and Instrumentation	327746(27)	Neural Network & Fuzzy Logic Control

Note (1) - 1/4th of total strength of students subject to minimum of twenty students is required to offer an elective in the college in a particular academic session.

Note (2) - Choice of elective course once made for an examination cannot be changed in future examinations

Chhattisgarh Swami Vivekanand Technical University, Bhilai (C.G.)

Scheme of Teaching and Examination

B.E. VIII SEMESTER

APPLIED ELECTRONICS AND INSTRUMENTATION

S. No.	Board of Studies	Subject Code	Subject Name	Periods ject Name Per Week			Scheme of Exam. (Theory/ Practical)			Total Marks	Credit L+(T+P)/2
				L	T	P	ESE	CT	TA		
1	Electronics and Instrumentation	327831(27)	Optical Instrumentation	3	1		80	20	20	120	4
2	Electronics and Instrumentation	327832(27)	Digital Measurement Techniques	3	1		80	20	20	120	4
3	Applied Electronics and Instrumentation	312833(12)	Supervisory Control & Data Acquisition System	3	1		80	20	20	120	4
4	Professional	Elective -3	Refer Table - 3	3	1		80	20	20	120	4
5	Open Elective -4		Refer Table - 4	3	1		80	20	20	120	4
6	Applied Electronics and Instrumentation	312861(12)	Optical Instrumentation Laboratory			4	40	-	20	60	2
7	Applied Electronics and Instrumentation	312862(12)	MATLAB & Simulink Laboratory			4	40	-	20	60	2
8	Applied Electronics and Instrumentation	312863(12)	Process Instrumentation Laboratory			4	40	-	20	60	2
9	Applied Electronics and Instrumentation	312864(12)	Major Project			5	100	-	80	180	3
10	Applied Electronics and Instrumentation	312865(12)	Report writing & seminar	-	-	2	-	-	40	40	1
11			Library	-	-	1	_	_	_	-	-
			Total	15	5	20	620	100	280	1000	30

L-Lecture, T- Tutorial, P- Practical, ESE- End Semester Examination, CT- Class Test, TA-Teacher's Assessment

		Table - 3 (Pro	ofessional Electives -3)
S. No.	Board of Studies	Subject Code	Subject Name
1	Electronics and Instrumentation	327841(27)	Advanced Control System
2	Electronics and Instrumentation	327842(27)	Fundamentals Of MEMS
3	Applied Electronics and Instrumentation	312843(12)	Environmental Instrumentation
4	Electronics and Instrumentation	327844(27)	Power Plant Instrumentation
5	Electronics and Instrumentation	327845(27)	Digital Image Processing
6	Electronics and Instrumentation	327846(27)	Operating Systems

Note (1) - 1/4th of total strength of students subject to minimum of twenty students is required to offer an elective

in the college in a particular academic session.

Note (2) - Choice of elective course once made for an examination cannot be changed in future examinations

Table - IV

	Open Elective –IV									
S.No.	Board of Studies	Code	Name of Subject							
1	Management	300851(76)	Enterprise Resource Planning (Except CSE & IT Branch)							
2	Information Technology	300852(33)	E-Commerce & strategic IT (Except CSE & IT Branch)							
3	Management	300853(76)	Technology Management							
4	Information Technology	300854(33)	Decision Support & Executive Information system							
5	Computer Science & Engg.	300855(22)	Software Technology							
6	Management	300856(76)	Knowledge Entrepreneurship							
7	Management	300857(76)	Finance Management							
8	Management	300858(76)	Project Planning, Management & Evaluation							
9	Mechanical Engg.	300859(37)	Safety Engineering							
10	Computer Science & Engg.	300801(22)	Bio Informatics							
11	Mechanical Engg.	300802(37)	Energy Conservation & Management							
12	Nanotechnology	300803(47)	Nanotechnology							
13	Management	300804(76)	Intellectual Property Rights							
14	Mechanical Engg.	300805(37)	Value Engineering							
15	Civil Engg.	300806(20)	Disaster Management							
16	Civil Engg.	300807(20)	Construction Management							
17	Civil Engg.	300808(20)	Ecology and Sustainable Development							
18	Chem. Engg.	300809(19)	Non Conventional Energy Sources							
19	Electrical Engg.	300810(24)	Energy Auditing & Management (Except Electrical Engg. Branch)							
20	Mechanical Engg.	300811(37)	Managing Innovation & Entrepreneurship							
21	Information Technology	300812(33)	Biometrics							
22	Information Technolgy	300813(33)	Information Theory & Coding							
23	Computer Science & Engg.	300814(22)	Supply Chain Management							
24	Computer Science & Engg.	300815(22)	Internet & Web Technology							
25	Electrical Engg.	300816(24)	Electrical Estimation and Costing							
26	Electrical& Electronics Engg.	300817(25)	Non Conventional Energy Sources							
27	Computer Science & Engg.	300818(22)	Big Data and Hadoop							

Note (1) 1/4th of total strength of students is required to offer an elective in the college in a particular academic session. (2) - Choice of elective course once made for an examination cannot be changed

Table - IV

Open Elective –IV			
S.No.	Board of Studies	Code	Name of Subject
1	Management	300851(76)	Enterprise Resource Planning (Except CSE & IT Branch)
2	Information Technology	300852(33)	E-Commerce & strategic IT (Except CSE & IT Branch)
3	Management	300853(76)	Technology Management
4	Information Technology	300854(33)	Decision Support & Executive Information system
5	Computer Science & Engg.	300855(22)	Software Technology
6	Management	300856(76)	Knowledge Entrepreneurship
7	Management	300857(76)	Finance Management
8	Management	300858(76)	Project Planning, Management & Evaluation
9	Mechanical Engg.	300859(37)	Safety Engineering
10	Computer Science & Engg.	300801(22)	Bio Informatics
11	Mechanical Engg.	300802(37)	Energy Conservation & Management
12	Nanotechnology	300803(47)	Nanotechnology
13	Management	300804(76)	Intellectual Property Rights
14	Mechanical Engg.	300805(37)	Value Engineering
15	Civil Engg.	300806(20)	Disaster Management
16	Civil Engg.	300807(20)	Construction Management
17	Civil Engg.	300808(20)	Ecology and Sustainable Development
18	Chem. Engg.	300809(19)	Non Conventional Energy Sources
19	Electrical Engg.	300810(24)	Energy Auditing & Management (Except Electrical Engg. Branch)
20	Mechanical Engg.	300811(37)	Managing Innovation & Entrepreneurship
21	Information Technology	300812(33)	Biometrics
22	Information Technolgy	300813(33)	Information Theory & Coding
23	Computer Science & Engg.	300814(22)	Supply Chain Management
24	Computer Science & Engg.	300815(22)	Internet & Web Technology
25	Electrical Engg.	300816(24)	Electrical Estimation and Costing
26	Electrical& Electronics Engg.	300817(25)	Non Conventional Energy Sources
27	Computer Science & Engg.	300818(22)	Big Data and Hadoop

Note (1) 1/4th of total strength of students is required to offer an elective in the college in a particular academic session.

(2) - Choice of elective course once made for an examination cannot be changed