



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. No	Board of Study	Subject Code	Subject	Periods Per Week			Scheme of Examination			Total Marks	Credit [L+[T+P] 2
							Theory				
				L	T	P	ESE	CT	TA		
1	Basic Sciences	300114(14)	Applied Mathematics-I	4	1	-	80	20	20	120	5
2	Humanities	300111(46)	Professional Communication in English	4	-	-	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	-	20	60	1
7	Elect. Engg.	300126(24)	Elements of Electrical Engineering (Lab)	-	-	2	40	-	20	60	1
8	Mechanical Engineering	300124(37)	Workshop Practice	-	-	3	40	-	20	60	2
9	Humanities	300127(46)	Library & Seminar	-	-	1	-	-	20	20	1
TOTAL				18	4	12	520	100	180	800	29

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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SECOND SEMESTER

S. No	Board of Study	Subject Code	Subject	Periods Per Week			Scheme of Examination			Total Marks	Credit [L+[T+P] 2
							Theory				
				L	T	P	ESE	CT	TA		
1	Basic Sciences	300214(14)	Applied Mathematics-II	4	1	-	80	20	20	120	5
2	Civil Engg.	300212(20)	Environment & Ecology	4	-	-	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)	-	-	2	40	-	20	60	1
7	Mechanical Engg.	300229(37)	Mechanical Engineering (Lab)	-	-	2	40	-	20	60	1
8	Humanities	300221(46)	Communication Skills (Lab)	-	-	3	40	-	20	60	2
9	Humanities	300220(46)	Library & Seminar	-	-	1	-	-	20	20	1
TOTAL				20	4	8	520	100	180	800	29

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

Note:

- 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.
- Applied Mathematics-II will be taught to both the groups in the second semester.
- Library & seminar will be conducted by the relevant discipline/humanities as decided by the Principal.

CHHATTISGARH SWAMI VIVEKANAD TECHNICAL UNIVERSITY, BHILAI

Scheme of Teaching & Examination

BE (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	327351(14)	Mathematics - III	4	1	-	80	20	20	120	5
2	Electronics and Instrumentation	327352(27)	Basic Electronics	3	1	-	80	20	20	120	4
3	Electronics and Instrumentation	327353(27)	Measurement & Instruments	3	1	-	80	20	20	120	4
4	Electronics and Instrumentation	327354(27)	Network Analysis & Synthesis	3	1	-	80	20	20	120	4
5	Electronics and Instrumentation	327355(27)	Programming with 'C'	3	1	-	80	20	20	120	4
6	Electronics and Telecomm.	327356(28)	Digital Logic Design	3	1	-	80	20	20	120	4
7	Electronics and Instrumentation	327361(27)	Programming with 'C' Laboratory	-	-	3	40	-	20	60	2
8	Electronics and Instrumentation	327362(27)	Basic Electronics Laboratory	-	-	3	40	-	20	60	2
9	Electronics and Instrumentation	327363(27)	Measurement & Instruments Laboratory	-	-	3	40	-	20	60	2
10	Electronics and Instrumentation	327364(27)	Digital Logic Circuit Laboratory	-	-	3	40	-	20	60	2
11	Humanities	327365(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 (Electronics & Instrumentation Engineering) IV 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	327451(14)	Mathematics – IV	3	1		80	20	20	120	4
2	Electronics & Instrumentation	327452(27)	Applied Electronics	3	1		80	20	20	120	4
3	Electrical	327453(24)	Electrical Machines	3	1		80	20	20	120	4
4	Electronics & Instrumentation	327454(27)	Sensors & Transducers	3			80	20	20	120	3
5	Electronics & Telecomm.	327455(28)	Microprocessor & Interfaces	3	1		80	20	20	120	4
6	Electronics & Telecomm.	327456(28)	Signals & Systems	3	1		80	20	20	120	4
7	Electronics & Instrumentation	327461(27)	Applied Electronics Laboratory			4	40	-	20	60	2
8	Electronics & Instrumentation	327462(27)	Sensors & Transducers Laboratory			3	40	-	20	60	2
9	Electronics & Instrumentation	327463(27)	Electronics Workshop			4	40	-	20	60	2
10	Electronics & Instrumentation	327464(27)	Microprocessor & Interfaces Laboratory			4	40	-	20	60	2
11	Humanities	327465(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

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	T	P	ESE	CT	TA		
1	Electronics and Instrumentation	327551(27)	Signal Conditioning Circuits	3	1		80	20	20	120	4
2	Electronics and Instrumentation	327552(27)	Industrial Instrumentation	3	1		80	20	20	120	4
3	Electronics and Instrumentation	327553(27)	Communication Engineering	3	1		80	20	20	120	4
4	Electronics and Instrumentation	327554(27)	Thermodynamics & Fluid Mechanics	3	1		80	20	20	120	4
5	Electronics and Instrumentation	327555(27)	Control System Engineering	3	1		80	20	20	120	4
6	Electronics and Telecomm.	327556(28)	Advanced Microprocessor & Interfacing	3	1		80	20	20	120	4
7	Electronics and Instrumentation	327561(27)	Control System Engineering Laboratory			3	40	-	20	60	2
8	Electronics and Instrumentation	327562(27)	Signal Conditioning Circuits Laboratory			4	40	-	20	60	2
9	Electronics and Instrumentation	327563(27)	Advanced Microprocessor & Interfacing Laboratory			4	40	-	20	60	2
10	Electronics and Instrumentation	327564(27)	Electronic Simulation Laboratory			2	40	-	20	60	1
11	Humanities	300565(46)	Personality Development			2	-	-	20	20	1
12	Electronics and Instrumentation	327566(27)	Practical 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 eight weeks is mandatory for B.E. students. 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 semester.*

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

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Scheme of teaching & Examination

B.E. VI SEMESTER

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	T	P	ESE	CT	TA		
1	Electronics and Instrumentation	327651(27)	Process Dynamics & Control	3	1	-	80	20	20	120	4
2	Electronics and Instrumentation	327652(27)	Programmable Logic Controller	3	1	-	80	20	20	120	4
3	Electronics and Instrumentation	327653(27)	Biomedical Instrumentation	3	1	-	80	20	20	120	4
4	Electronics and Instrumentation	327654(27)	Digital Signal Processing	3	1	-	80	20	20	120	4
5	Electronics and Telecomm.	327655(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	Electronics and Instrumentation	327661(27)	Programmable Logic Controller Laboratory	-	-	2	40	-	20	60	1
8	Electronics and Instrumentation	327662(27)	Microcontroller & Embedded Systems Laboratory	-	-	4	40	-	20	60	2
9	Electronics and Instrumentation	327663(27)	Digital Signal Processing Laboratory	-	-	4	40	-	20	60	2
10	Electronics and Instrumentation	327664(27)	Biomedical Instrumentation Laboratory	-	-	4	40	-	20	60	2
11	Management	300665(76)	Managerial Skills	-	-	2	-	-	40	40	1
			Library	-		1	-	-			-
Total				18	5	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 (Professional Electives -1)

S. No.	Board of Studies	Subject Code	Subject Name
1	Electronics and Instrumentation	327671(27)	Data Structure using 'C++'
2	Electronics and Instrumentation	327672(27)	Microelectronic Devices & VLSI Technology
3	Electronics and Instrumentation	327673(27)	Telecommunication Switching & Computer Network
4	Electronics and Instrumentation	327674(27)	Microwave Instrumentation
5	Electronics and Instrumentation	327675(27)	Semiconductor Components & Materials
6	Electronics and Instrumentation	327676(27)	Telematics

Note:

- 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.
- Choice of elective course once made for an examination cannot be changed in future examinations.

Name of the Programme: Bachelor of Engineering

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Duration of the programme: Four Years

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

Scheme of Teaching and Examination

B.E. VII SEMESTER

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	T	P	ESE	CT	TA		
1	Electronics and Instrumentation	327731(27)	Virtual Instrumentation	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	Electronics and Instrumentation	327734(27)	Power Electronic Devices & Drives	3	1		80	20	20	120	4
5	Professional Elective -2		Refer Table – 2	3	1		80	20	20	120	4
6	Electronics and Instrumentation	327761(27)	Power Electronic Devices & Drives Laboratory			4	40	-	20	60	2
7	Electronics and Instrumentation	327762(27)	Virtual Instrumentation Laboratory			4	40	-	20	60	2
8	Electronics and Instrumentation	327763(27)	Advanced Instrumentation Laboratory			4	40	-	20	60	2
9	Electronics and Instrumentation	327764(27)	Minor Project			4	100	-	40	140	2
10	Management	327765(76)	Innovative & Entrepreneurial Skills			2	-	-	40	40	1
11	Electronics and Instrumentation	327766(27)	*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

Table - 2 (Professional Electives -2)			
S. No.	Board of Studies	Subject Code	Subject Name
1	Electronics and Instrumentation	327741(27)	Digital Process Control
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

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	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	Electronics and Instrumentation	327833(27)	Industrial Electronics	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	Electronics and Instrumentation	327861(27)	Optical Instrumentation Laboratory			4	40	-	20	60	2
7	Electronics and Instrumentation	327862(27)	MATLAB & Simulink Laboratory			4	40	-	20	60	2
8	Electronics and Instrumentation	327863(27)	Process Instrumentation Laboratory			4	40	-	20	60	2
9	Electronics and Instrumentation	327864(27)	Major Project			5	100	-	80	180	3
10	Electronics and Instrumentation	327865(27)	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 (Professional 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	Electronics and Instrumentation	327843(27)	SCADA & HMI
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

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 Technology	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 Technology	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