



# 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 1<sup>st</sup> and 2<sup>nd</sup> 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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**Common to all branches of Engineering except Bio-Tech. & Bio-Medical Engg.**

## 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 1<sup>st</sup> and 2<sup>nd</sup> 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 Vivekanand Technical University, Bhilai

## SCHEME OF TEACHING AND EXAMINATION

### BE (ELECTRICAL ENGINEERING) III Semester

Sl.No.	Board of Studies	Subject Code	Subject	Periods per week			Scheme of Exam Theory/Practical			Total Marks	Credit L+(T+P) /2
				L	T	P	ESE	CT	TA		
1	Appl. Mathematics	324351(14)	Mathematics III	3	1		80	20	20	120	4
2	Electrical Engg.	324352(24)	Electrical Machines -I	4	1		80	20	20	120	5
3	Electrical & Electronics Engg.	324353(25)	Basic Electronics	3	1		80	20	20	120	4
4	Electrical & Electronics Engg.	324354(25)	Electric Circuits	3	1		80	20	20	120	4
5	Electrical Engg.	324355(24)	Electrical Engg. Material	3	1		80	20	20	120	4
6	Electrical Engg.	324356(24)	Electrical Power Generation	3	1		80	20	20	120	4
7	Electrical Engg.	324361(24)	Electrical Machines -I Lab			3	40		20	60	2
8	Electrical & Electronics Engg.	324362(24)	Basic Electronics Lab			3	40		20	60	2
9	Electrical & Electronics Engg.	324363(24)	Electrical Circuits Lab			3	40		20	60	2
10	Electrical Engg.	324364(24)	Electrical Workshop			3	40		20	60	2
11	Humanities	324365(46)	Value Education			2			40	40	1
12			Library			1					
<b>Total</b>				<b>19</b>	<b>6</b>	<b>15</b>	<b>640</b>	<b>120</b>	<b>240</b>	<b>1000</b>	<b>34</b>

**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 Vivekananda Technical University, Bhilai

## SCHEME OF TEACHING AND EXAMINATION BE (ELECTRICAL ENGINEERING) IV SEMESTER

S.No.	Board of Studies	Subject Code	Subject	Periods per week			Scheme of Exam Theory / Practical			Total Marks	Credit L+(T+P)/2
				L	T	P	ESE	CT	TA		
1	Electrical & Electronics Engg.	324451(25)	Analog Electronics	3	1		80	20	20	120	4
2	Electrical Engg.	324452(24)	Electro Magnetic Theory	3	1		80	20	20	120	4
3	Electrical & Electronics Engg.	324453(25)	Network Analysis & Synthesis	3	1		80	20	20	120	4
4	Electrical & Electronics Engg.	324454(25)	Digital Electronics & Logic Design	3	1		80	20	20	120	4
5	Electrical Engg.	324455(24)	Electrical Power Systems	3	1		80	20	20	120	4
6	Electrical Engg.	324456(24)	Electrical Measurements & Measuring Instruments	3	1		80	20	20	120	4
7	Electrical & Electronics Engg.	324461(24)	Analog Electronics Lab			3	40		20	60	2
8	Electrical & Electronics Engg.	324462(24)	Digital Electronics and Logic Design Lab			3	40		20	60	2
9	Electrical Engg.	324463(24)	Electrical Power Systems I Lab			3	40		20	60	2
10	Electrical Engg.	324464(24)	Electrical Measurements & Measuring Instruments Lab			3	40		20	60	2
11	Humanities etc.	324465(46)	Health, Hygiene & Yoga			2			40	40	1
12			Library			1					
	<b>Total</b>			<b>18</b>	<b>6</b>	<b>15</b>	<b>640</b>	<b>120</b>	<b>240</b>	<b>1000</b>	<b>33</b>

**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 ELECTRICAL ENGINEERING

S. No.	Board of Studies	Subject Code	Subject	Periods per week			Scheme of Exam Theory/ Practical			Total Marks	Credit L+(T+P) /2
				L	T	P	ESE	CT	TA		
1	Electrical Engg.	324551(24)	Electrical Machines-II	4	1	-	80	20	20	120	5
2	Electrical Engg.	324552(24)	Microprocessor & Interfacing	3	1	-	80	20	20	120	4
3	Electrical Engg.	324553(24)	Applied Numerical Analysis	3	1	-	80	20	20	120	4
4	Electrical Engg.	324554(24)	Integrated Circuits	3	1	-	80	20	20	120	4
5	Electrical Engg.	324555(24)	Control System Engg.	3	1	-	80	20	20	120	4
6	Electrical Engg.	324556(24)	Communication Theory	3	1	-	80	20	20	120	4
7	Electrical Engg.	324561(24)	Electrical Machines-II Lab	-	-	3	40	-	20	60	2
8	Electrical Engg.	324562(24)	Microprocessor & Interfacing Lab	-	-	3	40	-	20	60	2
9	Electrical Engg.	324563(24)	Control System Engg. Lab	-	-	3	40	-	20	60	2
10	Electrical Engg.	324564(24)	Mini Project	-	-	3	40	-	20	60	2
11	Humanities etc.	300565(46)	Personality Development	-	-	2	-	-	20	20	1
12	Electrical Engg.	324566(24)	*Practical Training Evaluation / Library/Industry Institute Interaction	-	-	1	-	-	20	20	1
<b>Total</b>				<b>19</b>	<b>6</b>	<b>15</b>	<b>640</b>	<b>120</b>	<b>240</b>	<b>1000</b>	<b>35</b>

**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. 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. VI SEMESTER ELECTRICAL ENGINEERING

S. No.	Board of Studies	Subject Code	Subject	Periods per week			Scheme of Exam Theory/Practical			Total Marks	Credit L+(T+P)/2
				L	T	P	ESI	CT	TA		
1	Electrical Engg.	324651(24)	Power System Analysis	3	1	-	80	20	20	120	4
2	Electrical Engg.	324652(24)	Electrical Machines -III	4	1	-	80	20	20	120	5
3	Electrical Engg.	324653(24)	Power Electronics	4	1	-	80	20	20	120	5
4	Electrical Engg.	324654(24)	Instrumentation Techniques	3	1	-	80	20	20	120	4
5	Electrical Engg.	324655(24)	Principles of Digital Signal Processing	3	1	-	80	20	20	120	4
6	Refer Table -I		Professional Elective- I	3	1	-	80	20	20	120	4
7	Electrical Engg.	324661(24)	Power System Analysis Lab	-	-	3	40	-	20	60	2
8	Electrical Engg.	324662(24)	Electrical Machines -III Lab	-	-	3	40	-	20	60	2
9	Electrical Engg.	324663(24)	Power Electronics Lab	-	-	3	40	-	20	60	2
10	Electrical Engg.	324664(24)	Instrumentation Techniques Lab	-	-	3	40	-	20	60	2
11	Management	300665(76)	Managerial Skills	-	-	2	-	-	40	40	1
12	Electrical Engg.	-----	Library/Industry Institute Interaction	-	-	1	-	-	-	-	-
<b>Total</b>				<b>20</b>	<b>6</b>	<b>15</b>	<b>640</b>	<b>120</b>	<b>240</b>	<b>1000</b>	<b>35</b>

**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 – I**

S. No.	Board of Studies	Subject Code	Subject
1.	Electrical Engg.	324671(24)	Fibre Optics
2.	Electrical Engg.	324672(24)	Computer Aided Design of Electrical Machine
3.	Electrical Engg.	324673(24)	Process Control
4.	Electrical Engg.	324674(24)	Computer System Architecture
5.	Electrical Engg.	324675(24)	Power System Planning & Reliability
6.	Electrical Engg.	324676(24)	Cyber Security

**Note (1) –** 1/4<sup>th</sup> of the 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. VII SEMESTER ELECTRICAL ENGINEERING

S.No.	Board of Studies	Subject Code	Subject	Periods per week			Scheme of Exam			Total Marks	Credit L+(T+P)/2
				L	T	P	ESE	CT	TA		
1	Electrical Engg.	324731(24)	Switchgear & Protection	4	1	-	80	20	20	120	5
2	Electrical Engg.	324732(24)	Modern Control System	4	1	-	80	20	20	120	5
3	Electrical Engg.	324733(24)	Electrical Drives	4	1	-	80	20	20	120	5
4	Electrical Engg.	324734(24)	Energy Auditing and Management	4	1	-	80	20	20	120	5
5	<b>Refer Table -2</b>		<b>Professional Elective-II</b>	4	1		80	20	20	120	5
6	Electrical Engg.	324761(24)	Switchgear & Protection Lab	-	-	3	40	-	20	60	2
7	Electrical Engg.	324762(24)	Electrical Drives Lab	-		3	40	-	20	60	2
8	Electrical Engg.	324763(24)	Programming and Simulation in MATLAB	-	-	3	40	-	20	60	2
9	Electrical Engg.	324764(24)	Project Phase-I	-	-	4	100	-	40	140	2
10	Management	324765(76)	Innovative & Entrepreneurial Skills	-	-	1	-	-	40	40	1
11	Electrical Engg.	324766(24)	**Practical Training Evaluation	-	-	1	-	-	40	40	1
<b>Total</b>				<b>20</b>	<b>5</b>	<b>15</b>	<b>620</b>	<b>100</b>	<b>280</b>	<b>1000</b>	<b>35</b>

L - Lecture, T - Tutorial,

P - Practical, ESE- End Semester Exam , CT- Class Test

TA - Teacher's Assessment

**\*\*To be completed after VI Sem. and before the commencement of VII Sem.**

**Table -2 Professional Electives-II**

S.No	Board of Studies	Subject Code	Subject
1	Electrical Engg.	324741(24)	Power Apparatus System
2	Electrical Engg.	324742(24)	Systems Software
3	Electrical Engg.	324743(24)	Modeling & Simulation
4	Electrical Engg.	324744(24)	Advanced Microprocessor
5	Electrical Engg.	324745(24)	Embedded system software in C
6	Electrical Engg.	324746(24)	Microcontroller & embedded Systems
7	Electrical Engg.	324747(24)	Digital Image Processing

Note (1) One fourth 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 ELECTRICAL ENGINEERING**

S.No.	Board of Studies	Subject Code	Subject	Periods per week			Scheme of Exam Theory/ Pract.			Total Marks	Credit L+(T+P)/2
				L	T	P	ESE	CT	TA		
1	Electrical Engg.	324831(24)	High Voltage Engg.	4	1	-	80	20	20	120	5
2	Electrical Engg.	324832(24)	Management Concepts & Techniques	4	1	-	80	20	20	120	5
3	Electrical Engg.	324833(24)	Installation Maintenance & Testing of Electrical Equipments.	4	1	-	80	20	20	120	5
4	<b>Refer Table -3</b>		<b>Elective-III</b>	4	1	-	80	20	20	120	5
5	<b>Refer Table -4</b>		<b>Open Elective-IV</b>	4	-	-	80	20	20	120	4
6	Electrical Engg.	324861(24)	High Voltage Engg Lab	-	-	3	40	-	20	60	2
7	Electrical Engg.	324862(24)	Installation Maintenance & Testing of Electrical Equipments., Lab	-	-	3	40	-	20	60	2
8	Electrical Engg.	324863(24)	Computer Simulation Lab	-	-	3	40	-	20	60	2
9	Electrical Engg.	324864(24)	Project Phase-II	-	-	6	100	-	80	180	3
10	Electrical Engg.	324865(24)	Report Writing & Seminar	-	-	1	-	-	40	40	1
<b>Total</b>				<b>20</b>	<b>4</b>	<b>16</b>	<b>620</b>	<b>100</b>	<b>280</b>	<b>1000</b>	<b>34</b>

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

**Table -III Electives-III**

<b>Board of Studies</b>	<b>Subject Code</b>	<b>Subject</b>
1. Electrical Engg.	324841(24)	EHV AC & DC Transmission
2. Electrical Engg.	324842(24)	Flexible A C transmission System
3. Electrical Engg.	324843(24)	Bio Medical Instrumentation
4. Electrical Engg.	324844(24)	VLSI Design
5. Electrical Engg.	324845(24)	Robotics and Automation
6. Electrical Engg.	324846(24)	Artificial Neural Network & Fuzzy Logic
7. Electrical Engg.	324847(24)	Radar & Television
8. Electrical Engg.	324848(24)	Satellite Communication



Table - IV

Open Elective –IV			
S.No.	Board of Studies	Code	Name of Subject
1	Management	300851(76)	Enterprise Resource Planning ( <b>Except CSE &amp; IT Branch</b> )
2	Information Technology	300852(33)	E-Commerce & strategic IT ( <b>Except CSE &amp; IT Branch</b> )
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 ( <b>Except Electrical Engg. Branch</b> )
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) 1/4<sup>th</sup> 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 ( <b>Except CSE &amp; IT Branch</b> )
2	Information Technology	300852(33)	E-Commerce & strategic IT ( <b>Except CSE &amp; IT Branch</b> )
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 ( <b>Except Electrical Engg. Branch</b> )
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) 1/4<sup>th</sup> 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