



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+ <u>[T+P]</u>] 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+ <u>[T+P]]</u> 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.



SCHEME OF TEACHING AND EXAMINATION

B.E. III SEMESTER- AUTOMOBILE ENGINEERING

S. No.	Board of Study	Sub. Code	SUBJECT	PERIODS PER WEEK			SCHEME OF EXAM Theory/Practical			Total Marks	Credit L+(T+P/2)	ESE Duration
				L	T	P	ESE	CT	TA			
1.	Appl Mathematics	337351(37)	Mathematics-III	4	1	-	80	20	20	120	5	3 Hours
2.	Mech. Engg	337352 (37)	Machine Drawing	4	1	-	80	20	20	120	5	4 Hours
3.	Mech. Engg	382353 (37)	Automotive Petrol Engines	3	1	-	80	20	20	120	4	3 Hours
4	Mech. Engg	337354 (37)	Mechanics of Solids	4	1	-	80	20	20	120	5	3 Hours
5	Mech. Engg	337355 (37)	Engineering Thermodynamics	4	1	-	80	20	20	120	5	3 Hours
6	Mech. Engg	382356 (37)	Two & Three Wheeler	3	1	-	80	20	20	120	4	3 Hours
7	Mech. Engg	382361 (37)	Machine Drawing Lab	-	-	3	40	-	20	60	2	
8	Mech. Engg	382362 (37)	Material Testing Lab	-	-	2	40	-	20	60	1	
9	Mech. Engg	382363 (37)	Engineering Thermodynamics Lab	-	-	2	40	-	20	60	1	
10	Mech. Engg	382364 (37)	Two & Three Wheeler Lab	-	-	2	40	-	20	60	1	
11	Humanities	382365 (46)	Value Education	-	-	2	-	-	40	40	1	
12			Library	-	-	1	-	-	-	-	-	
Total				22	6	12	640	120	240	1000	34	

L – Lecturer

T – Tutorial,

P – Practical,

ESE – End Semester Exam,

CT – Class Test

TA – Teacher's Assessment

Note: Duration of all theory papers will be of **Three Hours** except for **Machine Drawing Paper** which is for **four hours**.



SCHEME OF TEACHING AND EXAMINATION

B.E. IV SEMESTER-AUTOMOBILE ENGINEERING

S. No.	Board of Study	Sub. Code	SUBJECT	PERIODS PER WEEK			SCHEME OF EXAM Theory/Practical			Total Marks	Credit L+(T+P/2)	ESE Duration
				L	T	P	ESE	CT	TA			
1.	Mech. Engg	337451(37)	Fluid Mechanics	4	1	-	80	20	20	120	5	3 Hours
2.	Mech. Engg	382452(37)	Automotive Diesel Engines	4	1	-	80	20	20	120	5	3 Hours
3.	Mech. Engg	337453(37)	Applied Thermodynamics	4	1	-	80	20	20	120	5	3 Hours
4	Mech. Engg	337454(37)	Kinematics of Machines	4	1	-	80	20	20	120	5	3 Hours
5	Mech. Engg	382455(37)	Automotive Chassis	4	1	-	80	20	20	120	5	3 Hours
6	Mech. Engg	337456(37)	Manufacturing Science-1	4	1	-	80	20	20	120	4	3 Hours
7	Mech. Engg	382461(37)	Fluid Mechanics Lab	-	-	2	40	-	20	60	1	
8	Mech. Engg	382462(37)	Automotive Petrol & Diesel Engines Lab	-	-	2	40	-	20	60	1	
9	Mech. Engg	382463(37)	Manufacturing Technology Lab	-	-	2	40	-	20	60	1	
10	Mech. Engg	382464(37)	Automotive Chassis Lab	-	-	2	40	-	20	60	1	
11	Humanities	382465(46)	Health, Hygiene & Yoga	-	-	2	-	-	40	40	1	
12			Library	-	-	1	-	-	-	-	-	
Total				23	6	11	640	120	240	1000	34	

L – Lecturer

P – Practical,

TA – Teacher's Assessment

T – Tutorial,

ESE – End Semester Exam, CT – Class Test

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 sem. after which students have to submit a training report which will be evaluated by the college teachers during B.E. V sem.



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SCHEME OF TEACHING AND EXAMINATION

B.E. V SEMESTER- AUTOMOBILE ENGINEERING

S. No.	Board of Study	Sub. Code	SUBJECT	PERIODS PER WEEK			SCHEME OF EXAM Theory/Practical			Total Marks	Credit L+(T+P/2)
				L	T	P	ESE	CT	TA		
1.	Mech. Engg	382551(37)	Design Of Machine Elements	4	1	-	80	20	20	120	5
2.	Mech. Engg	382552(37)	Automotive Transmission	3	1	-	80	20	20	120	4
3.	Mech. Engg	337553 (37)	Dynamics of Machines	4	1	-	80	20	20	120	5
4	Mech. Engg	382554 (37)	Automotive Electrical & Electronics	4	1	-	80	20	20	120	5
5	Mech. Engg	382555 (37)	Automotive Fuels & Lubricants	3	1	-	80	20	20	120	4
6	Mech. Engg	337556 (37)	Operation Research	4	1	-	80	20	20	120	5
7	Mech. Engg	382561(37)	Design Of Machine Elements Lab	-	-	2	40	-	20	60	1
8	Mech. Engg	382562(37)	Automobile Electrical & Electronics Lab	-	-	2	40	-	20	60	1
9	Mech. Engg	382563 (37)	Dynamics of Machines Lab	-	-	2	40	-	20	60	1
10	Mech. Engg	382564(37)	Automotive Fuels & Lubricants Lab	-	-	2	40	-	20	60	1
11	Humanities	300565 (46)	Personality Development	-	-	2	-	-	20	20	1
12	Mech. Engg	382566 (37)	* Practical Training Evaluation/Library	-	-	2	-	-	20	20	1
Total				22	6	12	640	120	240	1000	34

L – Lecturer

P – Practical,

TA – Teacher's Assessment

T – Tutorial,

ESE – End Semester Exam,

CT – Class Test



SCHEME OF TEACHING AND EXAMINATION

B.E. VI SEMESTER- AUTOMOBILE ENGINEERING

S. No.	Board of Study	Sub. Code	SUBJECT	PERIODS PER WEEK			SCHEME OF EXAM Theory/Practical			Total Marks	Credit L+(T+P/2)
				L	T	P	ESE	CT	TA		
1.	Mech. Engg	382651(37)	Vehicle Maintenance	4	1	-	80	20	20	120	5
2.	Mech. Engg	382652(37)	Vehicle Design	4	1	-	80	20	20	120	5
3.	Mech. Engg	382653(37)	Automotive Engine Component Design	4	1	-	80	20	20	120	5
4	Mech. Engg	337654 (37)	Heat & Mass Transfer	4	1	-	80	20	20	120	5
5	Mech. Engg	337655 (37)	Production Management	3	1	-	80	20	20	120	4
6	Refer Table-I		Professional Elective-I	4	1	-	80	20	20	120	5
7	Mech. Engg	382661(37)	Vehicle Maintenance Lab	-	-	2	40	-	20	60	1
8	Mech. Engg	382662(37)	Automotive Engine Chassis Components Lab	-	-	2	40	-	20	60	1
9	Mech. Engg	382663 (37)	Production Management Lab	-	-	2	40	-	20	60	1
10	Mech. Engg	382664 (37)	HMT Lab	-	-	2	40	-	20	60	1
11	Management	382665(76)	Management Skills	-	-	2	40	-	40	40	1
12			Library	-	-	1	-	-	-	-	-
Total				23	6	11	640	120	240	1000	34

L – Lecturer
P – Practical,
TA – Teacher's Assessment

T – Tutorial,
ESE – End Semester Exam, CT – Class Test

Table – I
Professional Elective - I

S.No.	Branch	Subject Code	Subject
1	Automobile	382671(82)	Engine Auxillary Systems
2	Automobile	382672(82)	Vehicle Transport Management
3	Automobile	382673(82)	New Generation And Hybrid Vehicles
4	Automobile	382674(82)	Supercharging And Scavenging
5	Automobile	382675(82)	Automotive Aerodynamics
6	Automobile	337676(37)	Maintenance and Reliability

Note: (1) $\frac{1}{4}^{\text{th}}$ of total strength of students subject to minimum of 20 students is required to offer and 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.



SCHEME OF TEACHING AND EXAMINATION

B.E. VII SEMESTER- AUTOMOBILE ENGINEERING

S. No.	Board of Study	Sub. Code	SUBJECT	PERIODS PER WEEK			SCHEME OF EXAM Theory/Practical			Total Marks	Credit L+(T+P/2)
				L	T	P	ESE	CT	TA		
1.	Mech. Engg	382731(37)	Automotive Air Conditioning	3	1	-	80	20	20	120	4
2.	Mech. Engg	382732(37)	Vehicle Body Engineering & Safety	4	1	-	80	20	20	120	5
3.	Mech. Engg	382733(37)	Computer Aided Design & Manufacturing	4	1	-	80	20	20	120	5
4	Mech. Engg	382734(37)	Vehicle Dynamics	4	1	-	80	20	20	120	5
5	Refer Table - II		Professional Elective-II	4	1	-	80	20	20	120	5
6	Mech. Engg	382761(37)	Engine Reconditioning Lab	-	-	3	40	-	20	60	2
7	Mech. Engg	382762(37)	Vehicle Testing Lab	-	-	3	40	-	20	60	2
8	Mech. Engg	382763(37)	Computer Aided Design & Manufacturing Lab	-	-	3	40	-	20	60	2
9	Mech. Engg	382764(37)	Minor Project	-	-	3	100	-	40	140	2
10	Management	382765(76)	Innovative & Entrepreneurial Skills	-	-	2	-	-	40	40	1
11	Mech. Engg	382766(37)	** Practical Training Evolution/Library	-	-	1	-	-	40	40	1
Total				19	5	15	620	100	280	1000	34

L – Lecturer

P – Practical,

TA – Teacher's Assessment

T – Tutorial,

ESE – End Semester Exam,

CT – Class Test

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

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Table – II
Professional Elective - II

S.No.	Branch	Subject Code	Subject
1	Automobile	382742 (82)	Advanced Theory Of I.C Engines
2	Automobile	382743 (82)	Auto Pollution Control
3	Automobile	382744 (82)	Tribology
4	Automobile	337741 (37)	Quality Control & Total Quality Management
5	Automobile	382745 (82)	Tractor & Farm Equipments
6	Automobile	382746 (82)	Computer Simulation of I.C Engine Process
7	Automobile	382747 (82)	Artificial Intelligence & Expert Systems

Note: (1) 1/4th of total strength of students subject to minimum of 20 students is required to offer and 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.



SCHEME OF TEACHING AND EXAMINATION B.E. VIII SEMESTER-AUTOMOBILE ENGINEERING

S. No.	Board of Study	Sub. Code	SUBJECT	PERIODS PER WEEK			SCHEME OF EXAM Theory/Practical			Total Marks	Credit L+(T+P/2)
				L	T	P	ESE	CT	TA		
1.	Mech. Engg	337831(37)	Robotics	4	1	-	80	20	20	120	5
2.	Mech. Engg	382832(37)	Manufacturing Technology	4	1	-	80	20	20	120	5
3.	Mech. Engg	337833(37)	Industrial Engineering & Management	4	1	-	80	20	20	120	5
4	Refer Table - III		Professional Elective-III	4	1	-	80	20	20	120	5
5	Refer Table - IV		Open Elective-IV	4	1	-	80	20	20	120	5
6	Mech. Engg	382861(37)	Robotics Lab	-	-	2	40	-	20	60	1
7	Mech. Engg	382862(37)	Manufacturing Technology Lab	-	-	2	40	-	20	60	1
8	Mech. Engg	382863(37)	Computer Aided Chassis Design Lab	-	-	2	40	-	20	60	1
9	Mech. Engg	382864(37)	Major Project	-	-	6	100	-	80	180	3
10	Mech. Engg	382865()	Report Writing & Seminar	-	-	2	-	-	40	40	1
11			Library	-	-	1	-	-	-	-	-
Total				20	5	15	620	100	280	1000	32

L – Lecturer

T – Tutorial,

P – Practical,

ESE – End Semester Exam,

CT – Class Test

TA – Teacher's Assessment

Table – III
Professional Elective - III

S.No.	Branch	Subject Code	Subject
1	Mech	337841(37)	Mechatronics
2	Automobile	382842(82)	Vibration and Noise Control in Automobiles
3	Automobile	382843(82)	Combustion Process
4	Automobile	382844(82)	Vehicle Design Characteristics
5	Mech	337845(37)	Soft Computing Techniques
6	Automobile	382846(82)	Fuel Cell Technology

Note: (1) $\frac{1}{4}^{\text{th}}$ of total strength of students subject to minimum strength of 20 students is required to offer and 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 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