Name of all programs adopting elective course system: Mechanical **Program code:**

Details of Elective options offered by the University and those opted by the Institute

Academic Year	Semester (Sem-I or II)	Name of Class	Name of Elective Subject	Number of Students opted
2017-18	Sem-I	BE Mech 2012	**Elective -I**:Energy Audit & Mngt., Tribology, Reliability Engineering, Machine Tool Design	Energy Audit & Mngt = 116
			Elective-II: Gas Turbine Propulsion, Product Design & Development, Operation Research, Advanced Manufacturing Process.	Advanced Manufacturing Process = 97 Operation research = 19
2017-18	Sem-II	BE Mech 2012	**Elective-III:** Refrigeration& Air Conditioning and Equipment Design, Robotics, Industrial Engg.Open Elective.	Industrial Engg = 46. Open Elective : Automobile Engg = 70
			Elective-IV: Computational Fluid Dynamics, Finite Element Analysis, Design of pumps blowers and compressor.	Design of pumps blowers and compressor = 116

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422102

SVIT Mechanical Engg Dept.

Department of Mechanical Engineering AY 2017-18 Sem-I Class BE (Mech) (2012 Pattern) Elective choices from students

Seat No	Name of the Students	Elective-I (EAM)	Elective-II (AMP)	Elective-II (OR)
B120270801	SAURABH SHARAD DESHMUKH	EAM	AMP	
B120270802	AHER BHUSHAN PANDURANG	EAM	AMP	
B120270803	AHIRE DATTU DASHRATH	EAM	AMP	
B120270804	ANSARI RAJAFAIZ SABIR	EAM		OR
B120270805	AVHAD DIPAK PRAVIN	EAM	AMP	
B120270806	AVHAD UJJWALA KISAN	EAM	AMP	
B120270807	AWARE AKSHAY VILAS	EAM	AMP	
B120270808	BADGE SIDDHANT SIDDHARTH	EAM	AMP	
B120270809	BAGUL SANKET DILIP	EAM		OR
B120270810	BANGAL ANUPAM SHARAD	EAM	AMP	
B120270811	BELE DHANANJAY PRAKASH	EAM	AMP	
B120270812	BHABAD TUSHAR SAMPAT	EAM	AMP	
B120270813	BHAMARE MANOJ SANJAY	EAM	AMP	
B120270814	BHANDARE SAGAR SANJAY	EAM	AMP	
B120270815	BHANGALE BHUPENDRA RAMESH	EAM	AMP	
B120270816	BHAVAR MAHESH SANJAY	EAM		OR
B120270817	BHOYAR YOGESH DILIP	EAM		OR
B120270818	BIRADAR SANDESH DATTA	EAM	AMP	
B120270819	BODHAK RAHUL SAMPAT	EAM	AMP	
B120270820	BODKE PRAVIN ANIL	EAM	AMP	
B120270821	CHAKOR AKASH VITTHAL	EAM		OR
B120270822	CHAKOR AVINASH KACHESHWAR	EAM	AMP	
B120270823	CHAKOR SANDIP SHIVRAM	EAM	AMP	
B120270824	CHATUR ISHWAR RAVINDRA	EAM	AMP	
B120270825	CHAUDHARI AJAY BABURAO	EAM		OR
B120270826	CHAVARE AMOD DILEEP	EAM	AMP	
B120270827	DAHALE ABHISHEK SUNIL	EAM	AMP	
B120270828	DANDGE NIKHIL DADARAO	EAM	AMP	
B120270829	DEV PUSHPAK SANJAY	EAM	AMP	
B120270830	DHONDAGE NISHIKANT LAXMANRAO	EAM	AMP	
B120270831	DHONDGE CHAITANYA RAMESH	EAM	AMP	
B120270832	GAIDHANI PRADIP PRAKASH	EAM	AMP	
B120270833	GAIDHANI SUVARNA MOHAN	EAM	AMP	
B120270834	GAIKWAD ROHIT RAVINDRA	EAM	AMP	
B120270835	GHANWAT NEHA SUBHASH	EAM	AMP	
B120270836	GHODSARE SHANKAR KACHARU	EAM	AMP	
B120270837	GORDE SANKET SANJAY	EAM	AMP	
B120270838	GORKAL JOY SAMUEL	EAM	AMP	
B120270839	GOSAVI GANESH PANDIT	EAM	AMP	
B120270840	GOSAVI MADAN UDDHAVGIRI	EAM	AMP	
B120270841	GUNJAL SUDAM VISHNU	EAM	AMP	
B120270842	HEGANNAVAR NINGAPPA SATGONDA	EAM	AMP	
B120270843	HYALIJ BHUSHAN PRAKASH	EAM	AMP	
B120270844	JADHAV DHANANJAY SHANTILAL	EAM	AMP	
B120270845	JADHAV MOHINI SURYABHAN	EAM	AMP	
B120270846	JADHAV PRANANJALI DEORAM	EAM	AMP	
B120270847	JADHAV PRATIK SHARAD	EAM	AMP	
B120270848	JHA ASHUTOSH AMOL	EAM	AMP	
B120270851	KADLAG RUPESH RAJENDRA	EAM	AMP	
B120270852	KALSE SOMESH SHANKARRAO	EAM		OR
B120270853	KANADE MAYUR RAJARAM	EAM	AMP	
B120270854	KANADE RAKESH KISHOR	EAM	AMP	
B120270855	KANGNE GOPAL UTTAM	EAM	AMP	
B120270856	KATKADE HARSHADA VILAS	EAM	AMP	
B120270857	KEKANE SHUBHANGI ASHOK	EAM	AMP	
B120270858	KHAN ASAD FAYYAZ	EAM	AMP	
B120270859	KHAN SHAHRUKH ABID	EAM	AMP	
B120270861	KINGE SURAJ CHANDRAKANT	EAM	AMP	
B120270862	KOLATE PAVAN VILAS	EAM		OR
B120270863	KOLHE VISHAL VIKRAM	EAM	AMP	

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422101

B120270865	LOHARKAR SHREYAS RAVINDRA	EAM	AMP	
B120270866	MARATHE ABHISHEK VINAYAK	EAM		OR
B120270867	MEHTA RAHUL MURLIDHAR	EAM	AMP	
B120270868	MENE MAYUR HARI	EAM		OR
B120270869	MHASKE SWAPNIL SANJAY	EAM	AMP	
B120270870	MISHRA NILESH RAKESH	EAM	AMP	
B120270871	MOHITE POONAM RAJENDRA	EAM	AMP	
B120270872	NAGARE VIKAS DIGAMBAR	EAM	AMP	
B120270873	NATHE RAJENDRA BHARAT	EAM	AMP	
B120270875	NIRMAL ANKUSH DAGADU	EAM	AMP	
B120270876	PAGAR SAGAR MADHAVRAO	EAM	AMP	
B120270877	PAGARE AMOL MADHAV	EAM	AMP	
B120270878	PATHADE SWAPNIL SHANKAR	EAM		OR
B120270880	PATIL PREM KRUSHNADAS	EAM	AMP	
B120270881	PATIL SHUBHAM SHRIHARI	EAM	AMP	
B120270882	PATILRITESH NITIN	EAM		OR
B120270883	PAWAR BHATU NARAYAN	EAM		OR
B120270884	PAWAR SHEKHAR KAILAS	EAM	AMP	
B120270885	PAWAR SURAJSINGH ANIL	EAM	AMP	
B120270886	PAWAR SUYOG HARI	EAM	AMP	
B120270887	PHATANGARE TUSHAR BALASAHEB	EAM	AMP	
B120270888	POTKULERAHUL ARUN	EAM	AMP	
B120270889	PRAJAPATI ALPESH VIJAYKUMAR	EAM	AMP	
B120270890	RAJPUT BAJRANG PRALHADSING	EAM		OR
B120270891	RANADE AKASH MOHAN	EAM	AMP	
B120270892	RANADE SURAJ KHANDERAO	EAM	AMP	
B120270893	RANE YOGESH RAMDAS	EAM	AMP	
B120270895	SANANSE KRUSHNA GOVIND	EAM	AMP	
B120270896	SANAP SHASHIKANT DATTU	EAM	AMP	
B120270897	SAPKALE SUMIT LAXMAN	EAM	AMP	
B120270898	SAWANT VISHAL TULSHIRAM	EAM	AMP	
B120270899	SHELKE CHHAYA NIVRUTTI	EAM	AMP	
B120270900	SHETE CHAITANYA VISHWANATH	EAM	AMP	
B120270901	SHINDE GANESH DATTU	EAM	AMP	
B120270902	SHINDE NEETA ASHOK	EAM	AMP	
B120270903	SHINDE SHUBHAM CHANGDEO	EAM	AMP	
B120270904	SINGH ANURAG PRAMOD	EAM	AMP	
B120270905	SIRSAT NAVNATH CHANDRABHAN	EAM	AMP	
B120270906	SOLANKI NARAYAN CHATTARSINGH	EAM	AMP	
B120270907	SONAWANE DARSHAN HEMANT	EAM		OR
B120270908	SONAWANE KARTIK EKNATH	EAM	AMP	
B120270909	SONAWANE SAGAR BHIMAJI	EAM	AMP	
B120270910	SONAWANE TUSHAR SURESH	EAM		OR
B120270911	SULE VISHAL BHAGVAN	EAM	AMP	
B120270913	TUPE SUNIL GORAKH	EAM	AMP	
B120270914	TUPLONDHE SHUBHAM NITIN	EAM	AMP	
B120270915	UGHADE SHRIPAD ASHOKRAO	EAM	AMP	
B120270916	VIBHUTE BHAGYODAY SANJAY	EAM	AMP	
B120270917	WAJE VARSHA PANDHARINATH	EAM	AMP	
B120270918	WAJE VIJAY RUNJA	EAM	AMP	
B120270919	WAKCHAURE AMIT RAMESH	EAM	AMP	
B120270920	WANGALWAR PAVANKUMAR HARIDAS	EAM		OR
B120270921	YADAV POONAM MOHAN	EAM	AMP	
B120270922	YOGENDER SINGH BHATI	EAM		OR
B120270923	ZAMBRE SHUBHAM VASANT	EAM	AMP	
B120270929	Hire Pramod Bhila	EAM	AMP	
		117	99	18

Elective -I:Energy Audit & Mngt. (EAM),Tribology, Reliablity Engineering, Machine Tool Design
Elective-II: Gas Turbine Propulsion, Product Design & Development, Operation Research (OR), Advanced Manufacturing Process (AMP).

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422102

H.O.D
DEPARTMENT OF MECHANICAL ENGG
SIR VISVESVARAYA INSTITUTE OF
TECHNOLOGY CHINCHOLI,
NASIK

Department of Mechanical Engineering AY 2017-18 Sem-II Class BE (Mech) (2012 Pattern) Elective choices from students

Seat No	Name of the Students	EL-III (IE)	EL-III (AE)	Elective-IV
B120270801	SAURABH SHARAD DESHMUKH		AE	DPBC
B120270802	AHER BHUSHAN PANDURANG		AE	DPBC
B120270803	AHIRE DATTU DASHRATH		AE	DPBC
B120270804	ANSARI RAJAFAIZ SABIR		AE	DPBC
B120270805	AVHAD DIPAK PRAVIN		AE	DPBC
B120270806	AVHAD UJJWALA KISAN	IE		DPBC
B120270807	AWARE AKSHAY VILAS		AE	DPBC
B120270808	BADGE SIDDHANT SIDDHARTH	IE		DPBC
B120270809	BAGUL SANKET DILIP		AE	DPBC
B120270810	BANGAL ANUPAM SHARAD		AE	DPBC
B120270811	BELE DHANANJAY PRAKASH		AE	DPBC
B120270812	BHABAD TUSHAR SAMPAT	IE		DPBC
B120270813	BHAMARE MANOJ SANJAY		AE	DPBC
B120270814	BHANDARE SAGAR SANJAY		AE	DPBC
B120270815	BHANGALE BHUPENDRA RAMESH		AE	DPBC
B120270816	BHAVAR MAHESH SANJAY		AE	DPBC
B120270817	BHOYAR YOGESH DILIP		AE	DPBC
B120270818	BIRADAR SANDESH DATTA		AE	DPBC
B120270820	BODKE PRAVIN ANIL		AE	DPBC
B120270821	CHAKOR AKASH VITTHAL	IE		DPBC
B120270822	CHAKOR AVINASH KACHESHWAR	IE		DPBC
B120270823	CHAKOR SANDIP SHIVRAM	IE		DPBC
B120270824	CHATUR ISHWAR RAVINDRA		AE	DPBC
B120270825	CHAUDHARI AJAY BABURAO		AE	DPBC
B120270826	CHAVARE AMOD DILEEP		AE	DPBC
B120270827	DAHALE ABHISHEK SUNIL		AE	DPBC
B120270828	DANDGE NIKHIL DADARAO	IE		DPBC
B120270829	DEV PUSHPAK SANJAY		AE	DPBC
B120270830	DHONDAGE NISHIKANT LAXMANRAO	IE		DPBC
B120270831	DHONDGE CHAITANYA RAMESH	IE		DPBC
B120270832	GAIDHANI PRADIP PRAKASH		AE	DPBC
B120270833	GAIDHANI SUVARNA MOHAN	IE		DPBC
B120270834	GAIKWAD ROHIT RAVINDRA	IE		DPBC
B120270835	GHANWAT NEHA SUBHASH		AE	DPBC
B120270836	GHODSARE SHANKAR KACHARU		AE	DPBC
B120270837	GORDE SANKET SANJAY		AE	DPBC
B120270838	GORKAL JOY SAMUEL		AE	DPBC
B120270839	GOSAVI GANESH PANDIT		AE	DPBC
B120270840	GOSAVI MADAN UDDHAVGIRI	IE		DPBC
B120270841	GUNJAL SUDAM VISHNU		AE	DPBC
B120270842	HEGANNAVAR NINGAPPA SATGONDA		AE	DPBC
B120270843	HYALIJ BHUSHAN PRAKASH	IE		DPBC
B120270844	JADHAV DHANANJAY SHANTILAL		AE	DPBC
B120270845	JADHAV MOHINI SURYABHAN	IE		DPBC
B120270846	JADHAV PRANANJALI DEORAM		AE	DPBC
B120270847	JADHAV PRATIK SHARAD		AE	DPBC
B120270848	JHA ASHUTOSH AMOL		AE	DPBC
B120270851	KADLAG RUPESH RAJENDRA		AE	DPBC
B120270852	KALSE SOMESH SHANKARRAO		AE	DPBC
B120270853	KANADE MAYUR RAJARAM		AE	DPBC
B120270854	KANADE RAKESH KISHOR	IE		DPBC
B120270855	KANGNE GOPAL UTTAM	IE		DPBC
B120270856	KATKADE HARSHADA VILAS	IE		DPBC
B120270857	KEKANE SHUBHANGI ASHOK	IE		DPBC
B120270858	KHAN ASAD FAYYAZ		AE	DPBC
B120270859	KHAN SHAHRUKH ABID	IE		DPBC
B120270861	KINGE SURAJ CHANDRAKANT	IE		DPBC
B120270862	KOLATE PAVAN VILAS		AE	DPBC
B120270863	KOLHE VISHAL VIKRAM		AE	DPBC
B120270864	Lahane Mahendra Raghunath		AE	DPBC
B120270865	Loharkar Shreyas Ravindra		AE	DPBC

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422102

B120270866	Marathe Abhishek Vinayak	IE		DPBC
B120270867	Mehta Rahul Murlidhar	IE		DPBC
B120270868	Mene Mayur Hari		AE	DPBC
B120270869	Mhaske Swapnil Sanjay		AE	DPBC
B120270870	Mishra Nilesh Rakesh		AE	DPBC
B120270871	Mohite Poonam Rajendra	IE		DPBC
B120270872	Nagare Vikas Digambar		AE	DPBC
B120270873	Nathe Rajendra Bharat		AE	DPBC
B120270875	Nirmal Ankush Dagadu		AE	DPBC
B120270876	Pagar Sagar Madhavrao		AE	DPBC
B120270877	Pagare Amol Madhav	IE		DPBC
B120270878	Pathade Swapnil Shankar	IE		DPBC
B120270880	Patil Prem Krushnadas	IE		DPBC
B120270881	Patil Ritesh Nitin		AE	DPBC
B120270882	Patil Shubham Shrihari		AE	DPBC
B120270883	Pawar Bhatu Narayan		AE	DPBC
B120270884	Pawar Shekhar Kailas		AE	DPBC
B120270885	Pawar Surajsingh Anil	IE		DPBC
B120270886	Pawar Suyog Hari		AE	DPBC
B120270887	Phatangare Tushar Balasaheb	IE		DPBC
B120270888	Potkule Rahul Arun		AE	DPBC
B120270889	Prajapati Alpesh Vijaykumar	IE		DPBC
B120270890	Rajput Bajrang Pralhadsing		AE	DPBC
B120270891	Ranade Akash Mohan	IE		DPBC
B120270892	Ranade Suraj Khanderao	IE		DPBC
B120270893	Rane Yogesh Ramdas		AE	DPBC
B120270895	Sananse Krushna Govind		AE	DPBC
B120270896	Sanap Shashikant Dattu		AE	DPBC
B120270897	Sapkale Sumit Laxman	IE		DPBC
B120270898	Sawant Vishal Tulshiram		AE	DPBC
B120270899	Shelke Chhaya Nivrutti	IE		DPBC
B120270900	Shete Chaitanya Vishwanath		AE	DPBC
B120270901	Shinde Ganesh Dattu		AE	DPBC
B120270902	Shinde Neeta Ashok	IE		DPBC
B120270903	Shinde Shubham Changdeo		AE	DPBC
B120270904	Singh Anurag Pramod	IE		DPBC
B120270905	Sirsat Navnath Chandrabhan		AE	DPBC
B120270906	Solanki Narayan Chattarsingh	IE		DPBC
B120270907	Sonawane Darshan Hemant		AE	DPBC
B120270908	Sonawane Kartik Eknath	IE		DPBC
B120270909	Sonawane Sagar Bhimaji	IE		DPBC
B120270910	Sonawane Tushar Suresh		AE	DPBC
B120270911	Sule Vishal Bhagvan	IE	AE	DPBC
B120270913	Tupe Sunil Gorakh	IE		DPBC
B120270914	Tuplondhe Shubham Nitin		AE	DPBC
B120270915	Ughade Shripad Ashokrao	IE		DPBC
B120270916	Vibhute Bhagyoday Sanjay	IE		DPBC
B120270917	Waje Varsha Pandhrinath	IE		DPBC
B120270918	Waje Vijay Runja	IE		DPBC
B120270919	Wakchaure Amit Ramesh	IE		DPBC
B120270920	Wanglawar Pavankumar	IE		DPBC
B120270921	Yadav Poonam Mohan		AE	DPBC
B120270922	Yogender Singh Bhati	IE	AE	DPBC
B120270923	Zambre Shubham Vasant		AE	DPBC
B120270929	Hire Pramod Bhila	IE		DPBC
		48	68	116

Elective-III: Refrigeration & Air Conditioning and Equipment Design, Robotics, Industrial Engg. (IE) Open Elective (Automobile Engineering)(AE).
Elective-IV: Computational Fluid Dynamics, Finite Element Analysis, Design of pumps blowers and compressor (DPBC).

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422102

H.O.D
DEPARTMENT OF MECHANICAL ENGG
SIR VISVESVARAYA INSTITUTE OF
TECHNOLOGY, CHINCHOLI,
NASIK

B. E. (Mechanical) Semester – I

(w. e. f. Academic year 2015 - 16)

Code	Subject	Teaching Scheme (Weekly Load in hrs)			Examination Scheme(Marks)					
		Lect.	Tut	Practical	In-Sem	End-Sem	TW	PR+	OR+	Total
402041	Refrigeration and Air Conditioning	3	--	2	30	70	25	--	50	175
402042	CAD/ CAM Automation	3	--	2	30	70	--	50	--	150
402043	Dynamics of Machinery	4	--	2	30	70	25	--	50	175
402044	Elective – I	3	--	--	30	70	--	--	--	100
402045	Elective –II	3	--	--	30	70	--	--	--	100
402046	Project –I	--	2	--	--	--	50*	--	--	50
Total of Semester – I		16	2	6	150	350	100	50	100	750

B. E. (Mechanical) Semester – II

Code	Subject	Teaching Scheme (Weekly Load in hrs)			Examination Scheme(Marks)					
		Lect.	Tut	Practical	In-Sem	End-Sem	TW	PR+	OR+	Total
402047	Power Plant Engineering	4	--	2	30	70	25	--	50	175
402048	Mechanical System Design	4	--	2	30	70	--	--	50	150
402049	Elective-III	4	--	--	30	70	--	--	--	100
402050	Elective- IV	4	--	2	30	70	25	--	--	125
402051	Project – II	--	6	--	--	--	150	--	50	200
Total of Semester – II		16	6	6	120	280	200	--	150	750

\+ For all Oral/Practical heads: Examination will be based on term work and Theory Subject

* Assessment should be carried out by panel of examiners from same Institute

	Elective-I		Elective-II
Code	Subject	Code	Subject
402044 A	Energy Audit Management	402045 A	Gas Turbine Propulsion
402044 B	Tribology	402045 B	Product Design and Development
402044 C	Reliability Engineering	402045 C	Operation Research
402044 D	Machine Tool Design	402045 D	Advanced Manufacturing Processes
	Elective-III		**Elective-IV**
Code	Subject	Code	Subject
402049 A	Refrigeration and Air Conditioning Equipment Design	402050 A	Computational Fluid Dynamics
402049 B	Robotics	402050 B	Finite Element Analysis
402049 C	Industrial Engineering	402050 C	Design of Pumps, Blowers and Compressors
402049 D	Open Elective **		

**: Open Elective – Board of studies (BoS) - Mechanical will declare the list of subjects which can be taken under open electives or any other Electives that are being taught in the current semester, to the same level, as Elective – III under engineering faculty or individual college and Industry can define new elective with proper syllabus using defined framework of Elective III and GET IT APPROVED FROM BOARD OF STUDIES AND OTHER NECESSARY STATUTORY SYSTEMS IN THE SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE, BEFORE 30th NOVEMBER. Without approval from University statutory system, no one can introduce the open elective in curriculum.

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422102

Name of all programs adopting elective course system: Mechanical(Design) **Program code:**

Details of Elective options offered by the University and those opted by the Institute:

Academic Year	Semister (Sem-I or II)	Name of Class	Name of Elective Subject	Numer of Students opted
2017-18	Sem-I	ME Mech-I (2017)	**Elective-I**	
			Module-1 Energy Audit & Management, Project management.	 12 12
			Module-2 Environmental Pollution & Control	12
	Sem-I	ME Mech-II(2013)	**Elective-III**	
			Module-1 Industrial Tribology-I Industrial Tribology-II	 6 6
			Module-2 Reliability Engineering	6
	Sem-II	ME Mech-I (2017)	**Elective-II**	
			Module-1 Acoustic & Noise Control -I Vehicle Dynamics-I	 12 12
			Module-2 Process Equipment Design	12

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422102

SIR VISVESVARAYA INSTITUTE OF TECHNOLOGY,CHINCHOLI,NASHIK
DEPARTMENT OF MECHANICAL ENGINEERING
Elective-I

CLASS -M.E.(Design Engg.) I **Academic Year-2017-18**

Roll No	Name	Module-I	Module-II	Module-III
1	Aware Poonam Rajendra	Energy Audit & Management	Project management	Environmental Pollution & Control
2	Deore Manish Anantrao	Energy Audit & Management	Project management	Environmental Pollution & Control
3	Dhande Kajal Dnyaneshwar	Energy Audit & Management	Project management	Environmental Pollution & Control
4	Dheringe Shekhar Rajaram	Energy Audit & Management	Project management	Environmental Pollution & Control
5	Gaidhani Tushar Balu	Energy Audit & Management	Project management	Environmental Pollution & Control
6	Kadam Mukti Pramod	Energy Audit & Management	Project management	Environmental Pollution & Control
7	Kolhe Renuka Tejkumar	Energy Audit & Management	Project management	Environmental Pollution & Control
8	Sangale Swati Somnath	Energy Audit & Management	Project management	Environmental Pollution & Control
9	Shinde Amol Bhanudas	Energy Audit & Management	Project management	Environmental Pollution & Control
10	Wable Pushkar Kaushiram	Energy Audit & Management	Project management	Environmental Pollution & Control
11	Avhad Mayur Vishnu	Energy Audit & Management	Project management	Environmental Pollution & Control
12	Shinde Ganesh Revaji	Energy Audit & Management	Project management	Environmental Pollution & Control

SIR VISVESVARAYA INSTITUTE OF TECHNOLOGY,CHINCHOLI,NASHIK
DEPARTMENT OF MECHANICAL ENGINEERING
Elective-III

CLASS -M.E.(Design Engg.) I **Sem-I** **Academic Year-2017-18**

Roll No	Name	Module-I (Suject-1)	Module-I (Subject-2)	Module-II
1	Ganjwe Nishant Pandharinath	Industrial Tribology-I	Industrial Tribology-II	Reliability Engineering
2	Khandare Ganesh Nilesh	Industrial Tribology-I	Industrial Tribology-II	Reliability Engineering
3	Gaidhani Nilesh Vishram	Industrial Tribology-I	Industrial Tribology-II	Reliability Engineering

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422102

4	Borate Tapasya Jayram	Industrial Tribology-I	Industrial Tribology-II	Reliability Engineering
5	Kulkarni Parag Satish	Industrial Tribology-I	Industrial Tribology-II	Reliability Engineering
6	Nathe Ganesh Dnyaneshwar	Industrial Tribology-I	Industrial Tribology-II	Reliability Engineering

SIR VISVESVARAYA INSTITUTE OF TECHNOLOGY,CHINCHOLI,NASHIK
DEPARTMENT OF MECHANICAL ENGINEERING
Elective-II
CLASS -M.E.(Design Engg.) I Sem-II Academic Year-2017-18

Roll No	Name	Module-I	Module-II	Module-III
1	Aware Poonam Rajendra	Acoustic & Noise Control -I	Vehicle Dynamics-I	Process Equipment Design
2	Deore Manish Anantrao	Acoustic & Noise Control -I	Vehicle Dynamics-I	Process Equipment Design
3	Dhande Kajal Dnyaneshwar	Acoustic & Noise Control -I	Vehicle Dynamics-I	Process Equipment Design
4	Dheringe Shekhar Rajaram	Acoustic & Noise Control -I	Vehicle Dynamics-I	Process Equipment Design
5	Gaidhani Tushar Balu	Acoustic & Noise Control -I	Vehicle Dynamics-I	Process Equipment Design
6	Kadam Mukti Pramod	Acoustic & Noise Control -I	Vehicle Dynamics-I	Process Equipment Design
7	Kolhe Renuka Tejkumar	Acoustic & Noise Control -I	Vehicle Dynamics-I	Process Equipment Design
8	Sangale Swati Somnath	Acoustic & Noise Control -I	Vehicle Dynamics-I	Process Equipment Design
9	Shinde Amol Bhanudas	Acoustic & Noise Control -I	Vehicle Dynamics-I	Process Equipment Design
10	Wable Pushkar Kaushiram	Acoustic & Noise Control -I	Vehicle Dynamics-I	Process Equipment Design
11	Avhad Mayur Vishnu	Acoustic & Noise Control -I	Vehicle Dynamics-I	Process Equipment Design
12	Shinde Ganesh Revaji	Acoustic & Noise Control -I	Vehicle Dynamics-I	Process Equipment Design

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422102

M.E. Mechanical Engineering (Design Engineering) - 2017 Course

SEMESTER I

CODE	SUBJECT	TEACHING SCHEME	EXAMINATION SCHEME					CREDITS
		Lect./ Pr	Paper		TW	Oral/ Presentation	Total	
			In Semester Assessment	End Semester Assessment				
507201	Advanced Mathematics@	4	50	50	-	-	100	4
502202	Material Science and Mechanical Behavior of Materials	4	50	50	-	-	100	4
502203	Advanced Stress Analysis	4	50	50	-	-	100	4
502104	Research Methodology	4	50	50	-	-	100	4
502205	Elective I**	5	50	50	-	-	100	5
502206	Lab Practice I	4			50	50	100	4
	Total	25	250	250	50	50	600	25

SEMESTER II

CODE	SUBJECT	TEACHING SCHEME	EXAMINATION SCHEME					CREDITS
		Lect./ Pr	Paper		TW	Oral/ Presentation	Total	
			In Semester Assessment	End Semester Assessment				
502207	Analysis and Synthesis of Mechanisms	4	50	50	-	-	100	4
502208	Advanced Mechanical Vibrations	4	50	50	-	-	100	4
502209	Finite Element Method	4	50	50	-	-	100	4
502210	Elective II	5	50	50	-	-	100	5
502211	Lab Practice II	4	-	-	50	50	100	4
502212	Seminar I	4	-	-	50	50	100	4
Total		25	200	200	100	100	600	25

Note:
Elective I: Common to All M.E. Mechanical Specializations**
@ Syllabus is common with Automotive Engineering. Hence End Semester examination paper will be same.

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422101

Semester – I
Elective – I [502205]

CODE	TEACHING SCHEME	EXAMINATION SCHEME					CREDITS
	Lect. /Week	Paper		TW	Oral/ Presentation	Total	
		In Semester Assessment	End Semester Assessment				
502205	5	50	50	-	-	100	5

Modules of 2 Credits (Select any Two)			
Code No.	**Title**	**Code No.**	**Title**
ME2I – M1	Energy Audit and Management	**ME2I – M6**	Operation Management
ME2I – M2	Financial Management	**ME2I – M7**	Engineering Economics
ME2I – M3	Financial Costing	**ME2I – M8**	Technology Forecasting
ME2I – M4	Project Management	**ME2I – M9**	Technology Transfer
ME2I – M5	Energy Efficient Technologies in Electrical Systems	**ME2I – M10**	Human Rights
Modules of 1 Credit (Select any One)			
Code No.	**Title**	**Code No.**	**Title**
ME1I – M11	Environmental Pollution and Control	**ME1I – M12**	Intellectual property Rights

Note: For e.g., ME2I-M1 indicates
ME – Common to all M.E. Mechanical Course, 2 – 2 Credits, I – Elective I, M1 – Module 1

ME2I – M1 Energy Audit and Management
Definition, Energy audit- need, Types of energy audit, Energy management (audit) approach-understanding energy costs, Bench marking, Energy performance, Matching energy use to requirement, Maximizing system efficiencies, Optimizing the input energy requirements, Fuel and energy substitution, Energy audit instruments
Ref. Books: Guide Books, Bureau of Energy Efficiency

ME2I – M2 Financial Management
Investment-need, Appraisal and criteria, Financial analysis techniques- Simple payback period, Return on investment, Net present value, Internal rate of return, Cash flows, Risk and sensitivity analysis, Financing options, Energy performance contracting and role of Energy Service Companies (ESCOS).
Ref. Books: Guide Books, Bureau of Energy Efficiency

ME2I – M3 Financial Costing
Significance, Traditional absorption costing, Marginal costing, Contract costing, Activity based costing, Process costing
Ref. Books: Cost Accounting, N K Prasad, Book Syndicate Pvt. Ltd.

ME2I – M4 Project Management
Definition and scope of project, Technical design, Financing, Contracting, Implementation and performance monitoring, Implementation plan for top management, Planning Budget, Procurement Procedures, Construction, Measurement and Verification
Ref. Books: Guide Books, Bureau of Energy Efficiency

ME2I – M5 Energy Efficient Technologies in Electrical Systems

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422102

Semester – II
Elective II [502210]

CODE	TEACHING SCHEME	EXAMINATION SCHEME					CREDITS
	Lect. /Week	Paper		TW	Oral/ Presentation	Total	
		In Semester Assessment	End Semester Assessment				
502210	5	50	50	-	-	100	5

Modules of 2 Credits (Select any Two)			
Code No.	**Title**	**Code No.**	**Title**
DE2II-M1	Vehicle Dynamics – I	**DE2II-M5**	Mechanics of Composites
DE2II-M2	Vehicle Dynamics – II	**DE2II-M6**	Design of Composite Structure
DE2II-M3	Design of Material Handling Equipment – I	**DE2II-M7**	Acoustics and Noise Control - I
DE2II-M4	Design of Material Handling Equipment – II	**DE2II-M8**	Acoustics and Noise Control – II
Modules of 1 Credit (Select any One)			
Code No.	**Title**	**Code No.**	**Title**
DE1II-M9	Design of Piping System	**DE1II-M11**	Dynamics of Structures
DE1II-M10	Process Equipment Design	**DE1II-M12**	Robotics

Note: For e.g., DE2II-M1 indicates
DE – Design Engineering, 2 – 2 Credits, II – Elective II, M1 – Module 1
For e.g., DE1II-M12 indicates
DE – Design Engineering, 1 – 1 Credit, II – Elective II, M12 – Module 12

DE2II-M1 Vehicle Dynamics - I

Tire Characteristics - Tire – types, axis system, mechanics of pneumatic tires - tire forces and moments, rolling resistance of tires, tractive (braking) effort and longitudinal slip (skid), cornering properties of tires, slip angle and cornering force, slip angle and aligning torque, camber and camber thrust, characterization of cornering behaviour of tires, performance of tires on wet surfaces, ride properties of tires

Performance characteristics of road vehicles - Equation of motion and maximum tractive effort, aerodynamic forces and moments, vehicle power plant and transmission characteristics, acceleration time and distance, gradability, engine and transmission matching, Electronic Stability Control (ESC), Braking characteristics of a two-axle vehicle, braking efficiency and stopping distance, antilock brake systems, traction control systems, Electronic Brakeforce Distribution (EBD), Electronic Brake assist System (EBS)

Suspension Kinematics - Terminology, definitions – reference frame, toe-in, toe-out, wheel camber, caster and kingpin angle, steering offset, types of dependent and independent suspensions, equivalent mechanisms (front view / side view), anti-dive and squat geometry, roll center analysis, steering geometry, error, steering force and moments

Ref. Books: 1) Road Vehicle Dynamics – Problems & Solutions, Rao & Dukkipati, SAE, 2) Theory of Ground Vehicles, J.Y. Wong, John Wiley & Sons, 3) Fundamentals of Vehicle Dynamics, T.D. Gillespie, SAE

DE2II-M2 Vehicle Dynamics - II

Handling characteristics of vehicle - Steady-state handling characteristics of a two-axle vehicle, steady-state response to steering input, testing of handling characteristics, transient response characteristics, directional stability, steering of tracked vehicles

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422102

SEMESTER III

CODE	SUBJECT	TEACHING SCHEME	EXAMINATION SCHEME					CREDITS
		Lect./ Pr	Paper		TW	Oral/ Presentation	Total	
			In Semester Assessment	End Semester Assessment				
602213	Optimization Techniques	4	50	50	-	-	100	4
602214	Mechanical Measurements and Controls	4	50	50	-	-	100	4
602215	Elective III	5	50	50	-	-	100	5
602216	Seminar II	4	-	-	50	50	100	4
602217	Project Stage I	08	-	-	50	50	100	8
Total		25	150	150	100	100	500	25

SEMESTER IV

CODE	SUBJECT	TEACHING SCHEME	EXAMINATION SCHEME				CREDITS
		Lect./ Pr	Paper	TW	Oral/ presentation	Total	
602218	Seminar III	5	-	50	50	100	5
602219	Project Work Stage II	20	-	150	50	200	20
Total		25	-	200	100	300	25

Lab Practice I & II:
The laboratory work will be based on completion of assignments confined to the courses of that semester.

SEMINAR:
The student shall deliver the seminar on a topic approved by authorities.

Seminar I : shall be on state of the art topic of student's own choice approved by authority. The student shall submit the seminar report in standard format, duly certified for satisfactory completion of the work by the concerned Guide and head of the department/institute.

Seminar II : shall be on the topic relevant to latest trends in the field of concerned branch, preferably on the topic of specialization based on the electives selected by him/her approved by authority. The student shall submit the seminar report in standard format, duly certified for satisfactory completion of the work by the concerned Guide and head of the department/institute.

Seminar III: shall be extension of **seminar II.** The student shall submit the seminar report in standard format, duly certified for satisfactory completion of the work by the concerned Guide and head of the department/institute.

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422102

Semester – III
Elective – III [602215]

CODE	TEACHING SCHEME	EXAMINATION SCHEME					CREDITS
	Lect. /Week	Paper		TW	Oral/ Presentation	Total	
		In Semester Assessment	End Semester Assessment				
602215	5	50	50	-	-	100	5

Modules of 2 Credits (Select any Two)			
Code No.	Title	Code No.	Title
DE2III-M1	Fatigue	DE2III-M5	Condition Monitoring – I
DE2III-M2	Fracture Mechanics	DE2III-M6	Condition Monitoring – II
DE2III-M3	CAE – I	DE2III-M7	Industrial Tribology – I
DE2III-M4	CAE – II	DE2III-M8	Industrial Tribology – II
Modules of 1 Credit (Select any One)			
Code No.	Title	Code No.	Title
DE1III-M9	Reliability Engineering	DE1III-M11	Fatigue Analysis using FEM
DE1III-M10	Design for X	DE1III-M12	Product Life Cycle Management

DE2III-M1 Fatigue

Fatigue Mechanics

Time varying uniaxial, biaxial and multiaxial loading of components, load spectra, cycle counting, fatigue damage theories of crack initiation, stress based and strain based approach

Fatigue Testing

Data acquisition and instrumentation, classical methods of fatigue testing, ASTM standards - specimen preparation, procedure

Advanced Topics in Fatigue

Fatigue analysis in frequency domain, vibration fatigue, fatigue of welded structure, corrosion fatigue, high temperature and low temperature fatigue

Ref. Books: 1) Metal Fatigue Analysis Handbook, YUNG-LI LEE, Elsevier 2) Design & Analysis of Fatigue Resistant Welded Structure, Dieter Radaj, Woodhead Publishing 3) Fatigue of Structures and Materials, Japp Schijve, Kluwer Academic. 4) Fatigue Testing and Analysis – Theory and Practice, YUNG-LI LEE, Elsevier 5) Metal Fatigue in Engineering, Ali Fatemi, Wiley-Interscience

DE2III-M2 Fracture Mechanics

Linear Elastic Fracture Mechanics

Mechanisms of fracture, initiation of fracture and crack propagation, stress and energy criteria and fracture - effects of geometry, Inglis theory of stress, energy concept – Griffith theory of fracture, energy balance during crack growth, modes of loading, calculation of stress intensity – center crack, single edge crack, double edge crack, round hole with crack, superposition of stress intensity factors, leak before break criterion, experimental determination of stress intensity factor – strain gauge method, optical method of photo elasticity

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422102