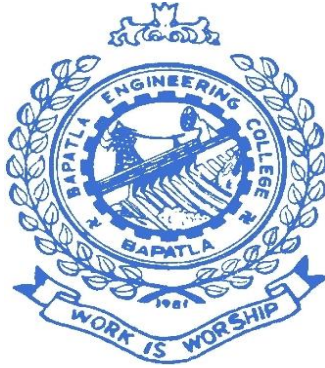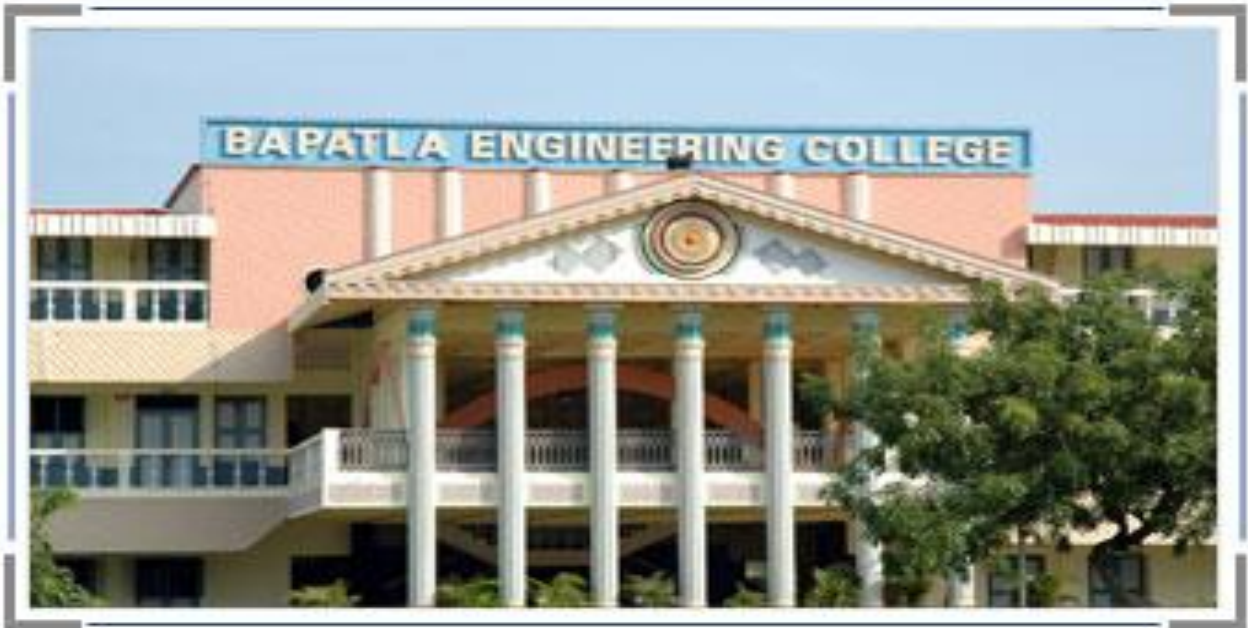# BAPATLA ENGINEERING COLLEGE
(*Autonomous*)
BAPATLA - 522 101.

SCHEME OF INSTRUCTIONS & EXAMINATION
4 Year B.Tech Program
2014-2015

DEPARTMENT OF MECHANICAL ENGINEERING

BAPATLA ENGINEERING COLLEGE : BAPATLA
(Autonomous)
SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Mechanical Engineering
With Effective From 2014-2015 Academic Year
First Year B.Tech., (SEMESTER – I)

Code No.	Subject	Scheme of Instruction (Periods per week)					Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	S	Total	CIE	SEE	Total Marks	
14MA101	Engineering Mathematics – I	4	1	0	0	5	40	60	100	4
14PH102	Engineering Physics – I	4	0	0	0	4	40	60	100	3
14CH103	Engineering Chemistry – I	4	0	0	0	4	40	60	100	3
14EL104	English Language and Communication	4	0	0	0	4	40	60	100	3
14ES105	Environmental Studies	4	0	0	0	4	40	60	100	3
14EG106	Engineering Graphics	4	0	2		6	40	60	100	4
14CHL101	Chemistry Lab	0	0	3	0	3	40	60	100	2
14ELL102	English Language Laboratory	0	0	3	0	3	40	60	100	2
14WSL103	Workshop	0	0	3	0	3	40	60	100	2
	TOTAL	24	1	11	0	36	**360**	**540**	**900**	**26**

CIE: Continuous Internal Evaluation   SEE: Semester End Examination
L: Lecture   S: Self Study   T: Tutorial   P: Practical

BAPATLA ENGINEERING COLLEGE : BAPATLA
(Autonomous)
SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Mechanical Engineering
With Effective From 2014-2015 Academic Year
First Year B.Tech., (SEMESTER – II)

Code No.	Subject	Scheme of Instruction (Periods per week)					Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	S	Total	CIE	SEE	Total Marks	
14MA201	Engineering Mathematics – II	4	1	0	0	5	40	60	100	4
14PH202	Engineering Physics – II	4	0	0	0	4	40	60	100	3
14CH203	Engineering Chemistry – II	4	0	0	0	4	40	60	100	3
14EE204	Basic Electrical and Electronics Engineering	4	0	0	0	4	40	60	100	3
14EM205	Engineering Mechanics	4	1	0	0	5	40	60	100	4
14CP206	Computer Programming with C	4	0	0	1	5	40	60	100	3
14PHL201	Physics lab	0	0	3	0	3	40	60	100	2
14HWL202	Hardware Lab	0	0	3	0	3	40	60	100	2
14CPL203	Computer Programming Lab.	0	0	3	0	3	40	60	100	2
	TOTAL	24	2	9	1	36	360	540	900	26

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BAPATLA ENGINEERING COLLEGE : BAPATLA
(Autonomous)
SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Mechanical Engineering
With Effective From 2014-2015 Academic Year
Second Year B.Tech., (SEMESTER – III)

Code No.	Subject	Scheme of Instruction (Periods per week)					Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	S	Total	CIE	SEE	Total Marks	
14MA301	Engineering Mathematics-III	4				4	40	60	100	3
14ME302	Mechanics of Materials-I	4	1			5	40	60	100	4
14ME303	Basic Thermodynamics	4	1			5	40	60	100	4
14ME304	Fluid Mechanics	4				4	40	60	100	3
14ME305	Kinematics of Machines	4	1			5	40	60	100	4
14ME306	Machine Drawing	1		3		4	40	60	100	2
14MEL301	Fuels & Oils Lab			3		3	40	60	100	2
14MEL302	Basic CAD Lab			3		3	40	60	100	2
14CEL303	Strength of Materials Lab			3		3	40	60	100	2
	TOTAL	21	3	12		36	360	540	900	26

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BAPATLA ENGINEERING COLLEGE : BAPATLA
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SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Mechanical Engineering
With Effective From 2014-2015 Academic Year
Second Year B.Tech., (SEMESTER – IV)

Code No.	Subject	Scheme of Instruction (Periods per week)					Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	S	Total	CIE	SEE	Total Marks	
14MA401	Engineering Mathematics-IV	4				4	40	60	100	3
14ME402	Mechanics of Materials-II	4	1			5	40	60	100	4
14ME403	Applied Thermodynamics	4	1			5	40	60	100	4
14ME404	Hydraulic Machines	4			1	5	40	60	100	3
14ME405	Casting, Forming and Welding Technology	4				4	40	60	100	3
14ME406	Material Science &Metallurgy	4				4	40	60	100	3
14CEL401	Fluid Mechanics & Hydraulic Machines Lab			3		3	40	60	100	2
14MEL402	Computer Applications In Mechanical Engineering Lab			3		3	40	60	100	2
14MEL403	Basic Manufacturing Processes Lab			3		3	40	60	100	2
	TOTAL	24	2	9	1	36	360	540	900	26

CIE: Continuous Internal Evaluation   SEE: Semester End Examination
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BAPATLA ENGINEERING COLLEGE : BAPATLA
(Autonomous)
SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Mechanical Engineering
With Effective From 2014-2015 Academic Year
Third Year B.Tech., (SEMESTER – V)

Code No.	Subject	Scheme of Instruction (Periods per week)					Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	S	Total	CIE	SEE	Total Marks	
14ME501	Machine Dynamics	4	1			5	40	60	100	4
14ME502	Design of Machine Elements-I	4	1			5	40	60	100	4
14ME503	I.C.engines & Gas Turbines	4				4	40	60	100	3
14ME504	Metal Cutting and Machine Tools	4				4	40	60	100	3
14ME505	Operations Research	4			1	5	40	60	100	3
14ME506	Elective-I	4				4	40	60	100	3
14MEL501	I.C.Engines lab			3		3	40	60	100	2
14MEL502	Machine shop practice			3		3	40	60	100	2
14ELL503	Soft skills lab			3		3	40	60	100	2
	TOTAL	24	2	9	1	36	360	540	900	26

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Elective-I
A. Engineering Economics and Accountancy
B. Computer Graphics
C. Mechanics of Composite materials

BAPATLA ENGINEERING COLLEGE : BAPATLA
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SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Mechanical Engineering
With Effective From 2014-2015 Academic Year
Third Year B.Tech., (SEMESTER – VI)

Code No.	Subject	Scheme of Instruction (Periods per week)					Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	S	Total	CIE	SEE	Total Marks	
14ME601	Automation Technology	4				4	40	60	100	3
14ME602	Design of Machine Elements-II	4	1			5	40	60	100	4
14ME603	Heat transfer	4	1			5	40	60	100	4
14ME604	Finite Element Analysis	4			1	5	40	60	100	3
14ME605	Electronics& Micro processors	4				4	40	60	100	3
14ME606	Elective –II	4				4	40	60	100	3
14MEL601	H.T. lab			3		3	40	60	100	2
14MEL602	Automation lab			3		3	40	60	100	2
14ECL603	Electronics lab			3		3	40	60	100	2
	TOTAL	24	2	9	1	36	360	540	900	26

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Elective-II
  A. Manufacturing Engineering
  B. R&AC
  C. Solar energy and Utilization

BAPATLA ENGINEERING COLLEGE : BAPATLA
(Autonomous)
SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Mechanical Engineering
With Effective From 2014-2015 Academic Year
Final Year B.Tech., (SEMESTER – VII)

Code No.	Subject	Scheme of Instruction (Periods per week)					Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	S	Total	CIE	SEE	Total Marks	
14ME701	Industrial Engineering and Enterpreneurship Development	4				4	40	60	100	3
14ME702	Design of Machine Elements-III	4	1			5	40	60	100	4
14ME703	Engineering metrology and Mechanical Measurements	4	1			5	40	60	100	4
14ME704	CAD/CAM	4				4	40	60	100	3
14ME705	Elective-III	4				4	40	60	100	3
14ME706	Open Elective	4				4	40	60	100	3
14ELL701	Business Communication & Presentation Skills Lab			2		2	20	30	50	1
14MEL702	CAD&CAE Lab			3		3	40	60	100	2
14MEL703	Design and Metrology Lab			3		3	40	60	100	2
14MEL704	Term Paper			2		2	20	30	50	1
	TOTAL	24	2	10		36	360	540	900	26

CIE: Continuous Internal Evaluation   SEE: Semester End Examination
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Elective-III   **Open Elective**
    A. Operations Management
    B. Computational Fluid dynamics
    C. Mechatronics

SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Mechanical Engineering
With Effective From 2014-2015 Academic Year
Final Year B.Tech., (SEMESTER – VIII)

Code No.	Subject	Scheme of Instruction (Periods per week)					Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	S	Total	CIE	SEE	Total Marks	
14ME801	Professional Ethics & Human values	4				4	40	60	100	3
14ME802	Automobile Engineering	4	1			5	40	60	100	4
14ME803	Elective-IV	4				4	40	60	100	3
14ME804	Elective-V	4				4	40	60	100	3
14MEPR801	Project Work			12		12	50	100	150	10
14MEL802	CAM Lab			3		3	40	60	100	2
	TOTAL	16	1	15		32	250	400	650	25

CIE: Continuous Internal Evaluation   SEE: Semester End Examination
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Elective-IV
   A. Power plant Engineering
   B. Optimization Techniques
   C. Computer Integrated Manufacturing

Elective-V
   A. Robotics
   B. Computer aided Process Planning
   C. Enterprise Resource Planning

Annexure-1

LIST OF OPEN ELECTIVES

DEPARTMENT	SUBJECT NAME	SUBJECT CODE
Chemical Engineering.	Industrial Pollution & Control	CH 01
	Energy Engineering	CH 02
Civil Engineering.	Air Pollution & Control	CE 01
	Remote Sensing & GIS	CE 02
Computer Science & Engineering.	Database Management Systems	CS 01
	Java Programming	CS 02
Electrical & Electronics Engineering.	Optimization Techniques	EE 01
	Non-Conventional Energy Sources	EE 02
Electronics & Communication Engineering.	Consumer Electronics	EC 01
	Embedded Systems	EC 02
Electronics & Instrumentation Engineering.	Virtual Instrumentation Using LABVIEW	EI 01
	Sensors & Transducers	EI 02
Information Technology.	Mobile Application Development	IT 01
	Web Technologies	IT 02
Mechanical Engineering.	Automobile Engineering	ME 01
	Refrigeration & Air Conditioning	ME 02
BOSCH REXROTH Centre	Automation Technology	BR 01