VIKAS COLLEGE OF ENGINEERING AND TECHNOLOGY EXPERIENTIAL LEARNING COURSES

B.TECH-MECHANICAL ENGINEERING

S.NO NAME OF THE COURSE 1 Engineering/Applied Chemistry Laboratory 2 English - Communication Skills Lab - I 3 Computer Programming Lab 4 English - Communication Skills Lab - II 5 Engineering / Applied Physics Lab 6 Engineering / Applied Physics — Virtual Labs - Assignments 7 Engg. Workshop& IT Workshop 8 Computer Aided Engineering Drawing Practice 9 Electrical & Electronics Engg. Lab 10 Mechanics of Solids & Metallurgy Lab 11 Fluid Mechanics & Hydraulic Machines Lab 12 Production Technology Lab 13 Theory of Machines Lab 14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab Project		
2 English - Communication Skills Lab - I 3 Computer Programming Lab 4 English - Communication Skills Lab - II 5 Engineering /Applied Physics Lab 6 Engineering /Applied Physics — Virtual Labs - Assignments 7 Engg. Workshop& IT Workshop 8 Computer Aided Engineering Drawing Practice 9 Electrical & Electronics Engg. Lab 10 Mechanics of Solids & Metallurgy Lab 11 Fluid Mechanics & Hydraulic Machines Lab 12 Production Technology Lab 13 Theory of Machines Lab 14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	S.NO	
3 Computer Programming Lab 4 English - Communication Skills Lab - II 5 Engineering /Applied Physics Lab 6 Engineering /Applied Physics — Virtual Labs - Assignments 7 Engg. Workshop& IT Workshop 8 Computer Aided Engineering Drawing Practice 9 Electrical & Electronics Engg. Lab 10 Mechanics of Solids & Metallurgy Lab 11 Fluid Mechanics & Hydraulic Machines Lab 12 Production Technology Lab 13 Theory of Machines Lab 14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	1	
4 English - Communication Skills Lab - II 5 Engineering /Applied Physics Lab 6 Engineering /Applied Physics — Virtual Labs - Assignments 7 Engg.Workshop& IT Workshop 8 Computer Aided Engineering Drawing Practice 9 Electrical & Electronics Engg. Lab 10 Mechanics of Solids & Metallurgy Lab 11 Fluid Mechanics & Hydraulic Machines Lab 12 Production Technology Lab 13 Theory of Machines Lab 14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab		
5 Engineering /Applied Physics Lab 6 Engineering /Applied Physics – Virtual Labs - Assignments 7 Engg.Workshop& IT Workshop 8 Computer Aided Engineering Drawing Practice 9 Electrical & Electronics Engg. Lab 10 Mechanics of Solids & Metallurgy Lab 11 Fluid Mechanics & Hydraulic Machines Lab 12 Production Technology Lab 13 Theory of Machines Lab 14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	3	
6 Engineering /Applied Physics – Virtual Labs - Assignments 7 Engg.Workshop& IT Workshop 8 Computer Aided Engineering Drawing Practice 9 Electrical & Electronics Engg. Lab 10 Mechanics of Solids & Metallurgy Lab 11 Fluid Mechanics & Hydraulic Machines Lab 12 Production Technology Lab 13 Theory of Machines Lab 14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab		English - Communication Skills Lab - II
7 Engg.Workshop& IT Workshop 8 Computer Aided Engineering Drawing Practice 9 Electrical & Electronics Engg. Lab 10 Mechanics of Solids & Metallurgy Lab 11 Fluid Mechanics & Hydraulic Machines Lab 12 Production Technology Lab 13 Theory of Machines Lab 14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	5	Engineering /Applied Physics Lab
8 Computer Aided Engineering Drawing Practice 9 Electrical & Electronics Engg. Lab 10 Mechanics of Solids & Metallurgy Lab 11 Fluid Mechanics & Hydraulic Machines Lab 12 Production Technology Lab 13 Theory of Machines Lab 14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	6	
9 Electrical & Electronics Engg. Lab 10 Mechanics of Solids & Metallurgy Lab 11 Fluid Mechanics & Hydraulic Machines Lab 12 Production Technology Lab 13 Theory of Machines Lab 14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	7	Engg.Workshop& IT Workshop
10 Mechanics of Solids & Metallurgy Lab 11 Fluid Mechanics & Hydraulic Machines Lab 12 Production Technology Lab 13 Theory of Machines Lab 14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	8	Computer Aided Engineering Drawing Practice
11 Fluid Mechanics & Hydraulic Machines Lab 12 Production Technology Lab 13 Theory of Machines Lab 14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	9	
12 Production Technology Lab 13 Theory of Machines Lab 14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	10	
13 Theory of Machines Lab 14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	11	Fluid Mechanics & Hydraulic Machines Lab
14 Machine Tools Lab 15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	12	Production Technology Lab
15 Thermal Engineering Lab 16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	13	Theory of Machines Lab
16 Heat Transfer Lab 17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	14	Machine Tools Lab
17 Metrology & Instrumentation Lab 18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	15	Thermal Engineering Lab
18 Computational Fluid Dynamics Lab 19 CAD/CAM Lab 20 Mechatronics Lab	16	
19 CAD/CAM Lab 20 Mechatronics Lab	17	Metrology & Instrumentation Lab
20 Mechatronics Lab	18	Computational Fluid Dynamics Lab
	19	CAD/CAM Lab
21 Project	20	Mechatronics Lab
	21	Project

M.TECH-MACHINE DESIGN

S.NO	NAME OF THE COURSE
1	Machine Dynamics Lab
2	Design Practice Lab-I
3	Computational Mathematics Lab
4	Design Practice Lab-II
5	Mini Project with Seminar
6	Dissertation Phase -I
7	Dissertation Phase -II

B.TECH – CIVIL ENGINEERING

S.NO	NAME OF THE COURSE
1	Engineering/Applied Chemistry Laboratory
2	English - Communication Skills Lab - I
3	Computer Programming Lab
4	English - Communication Skills Lab - II
5	Engineering /Applied Physics Lab
6	Engineering / Applied Physics – Virtual Labs- Assignments
7	Engg. Workshop & IT Workshop

8	Survey Field Work - I
9	Strength of Materials Lab
10	FM & HM Lab
11	Survey Field Work - II
12	Concrete Technology Lab
13	Geology Lab
14	Transportation Engineering Lab
15	Geotechnical Engineering Lab
16	Environmental Engineering Lab
17	Computer Aided Engineering Lab
18	GIS & CAD Lab
19	Irrigation Design & Drawing
20	Project

M.TECH-STRUCTURAL ENGINEERING

S.NO	NAME OF THE COURSE
1	Advanced Concrete Technology Laboratory
2	Advanced Structural Engineering Laboratory
3	Computer Aided Design Laboratory
4	Structural Design laboratory
5	Dissertation Phase-I / Project
6	Project / Dissertation Phase II (Continued from III Semester)

B.TECH-COMPUTER SCIENCE ENGINEERING

S.NO	NAME OF THE COURSE
1	English - Communication Skills Lab - 1
2	Applied / Engineering Physics Lab
3	Applied / Engineering Physics – Virtual Labs
4	Computer Programming Lab
5	Applied / Engineering Chemistry Laboratory
6	English - Communication Skills Lab – 2
7	Object Oriented Programming Lab
8	Data Structures through C++Lab
9	Python Programming Lab
10	Advanced Data Structures Lab
11	Java Programming Lab
12	Unified Modeling Lab
13	Operating System & Linux Programming Lab
14	Database Management System Lab
15	Network Programming Lab
16	Software Testing Lab
17	Data Warehousing and Mining Lab
18	Software Architecture& Design Patterns Lab
19	Web Technologies Lab
20	Project

M.TECH-COMPUTER SCIENCE ENGINEERING

S.NO	NAME OF THE COURSE
1	Advanced Data Structures & Algorithms Lab
2	Advanced Computing Lab
3	Machine Learning with python lab
4	MEAN Stack Technologies Lab
5	Dissertation-I/ Industrial Project
6	Dissertation-II

B.TECH-ELECTRONICS AND COMMUNICATION ENGINEERING

S.NO	NAME OF THE COURSE
1	Engineering Drawing
2	English - Communication Skills Lab -1
3	Applied / Engineering Physics Laboratory
4	Applied / Engineering Physics – Virtual Labs - Assignments
5	Engineering Workshop& IT Workshop
6	Applied / Engineering Chemistry Laboratory
7	English - Communication Skills Lab -2
8	Computer Programming Lab
9	Electronic Devices and Circuits Lab
10	Networks & Electrical Technology Lab
11	Electronic Circuit Analysis Lab
12	Analog Communications Lab
13	Pulse and Digital Circuits Lab
14	Linear I C Applications Lab
15	Digital I C Applications Lab
16	VLSI Lab
17	Digital Communications Lab
18	Micro Wave Engineering & Optical Lab
19	Digital Signal Processing Lab
20	Project

M.TECH-EMBEDDED SYSTEM

S.NO	NAME OF THE COURSE
1	Embedded System Design Lab(using Embedded-C)
2	Microcontrollers and Programmable
2	Digital Signal Processors Lab
3	Real Time Operating Systems Lab
4	Digital System Design Lab
5	Mini Project
	Dissertation Phase -I /Industrial Project
6	(to be continued and
	evaluated next semester)
7	Project/ Dissertation Phase-II
,	(continued from III semester)

B.TECH-ELECTRICAL AND ELECTRONICS ENGINEERING

S.NO	NAME OF THE COURSE
1	Engineering/Applied Chemistry Laboratory
2	English - Communication Skills Lab - I
3	Computer Programming Lab
4	English - Communication Skills Lab - II
5	Engineering /Applied Physics Lab
6	Engineering /Applied Physics – Virtual Labs - Assignments
7	Engg.Workshop & IT Workshop
8	Thermal and Hydro Laboratory
9	Electrical Circuits Laboratory
10	Electrical Machines -I Laboratory
11	Electronic Devices & Circuits Laboratory
12	Laboratory
13	Socially Relevant Projects
14	Power Electronics Laboratory
15	Microprocessors & Microcontrollers Laboratory
16	Linear & Digital IC Applications Laboratory
17	Power Systems& Simulation Laboratory
18	Industrial Training /Skill Development Programmes / Research Project
19	Project-I
20	Project-II

M.TECH- POWER ELECTRONICS AND ELECTRICAL DRIVES

S.NO	NAME OF THE COURSE
1	PowerElectronicsSimulationLaboratory
2	PowerConvertersLaboratory
3	ElectricDrivesSimulationLaboratory
4	ElectricDrivesLaboratory
5	MiniProjectwithSeminar
6	DissertationPhase-I
	(to becontinued and evaluated next semester)
7	DissertationPhase-II
	(continued fromIIIsemester)

B.TECH-AGRICULTURAL ENGINEERING

S.NO	NAME OF THE COURSE
1	English - Communication Skills Lab - I
2	Engineering/applied physics laboratory
3	Engineering/applied physics laboratory - virtual labs - assignments
4	Engineering workshop and IT workshop
5	Engineering/applied Chemistry laboratory
6	English - Communication Skills Lab - II
7	C Programming Lab

8	Fluid Mechanics and Open Channel Hydraulics Lab
9	Surveying Lab
10	Soil science and agronomy field lab
11	Machine drawing and computer graphics lab
12	Agricultural Process Engineering lab
13	Advanced english communications skills lab
14	Field operations and maintenance of tractors lab - I
15	Farm machinery lab -I
16	Field operations and maintenance of tractors lab - II
17	Soil and water engineering lab
18	Farm Machinery Lab - 2
19	Dairy and Food Engineering Lab
20	Project work

MBA-MASTER OF BUSINESS ADMINISTRATION

S.NO	NAME OF THE COURSE
1	IT – LAB
2	Mini Project
3	Project
4	Major Project & Comprehensive Viva

PRINCIPAL
PRINCIPAL
VIKAS COLLEGE OF ENGG.&TE(
NUNNA, VIJAYAWADA RURA
Krishna Dt., A.P.