

M.T.E. Society's
Walchand College of Engineering, Sangli
(An Autonomous Institute)



First & Second Year Engineering P.G. Program

Teaching and Evaluation Scheme (Structures)

(Senate, WCES, reserves the right to modify the structures and the contents of curricula as and when necessary)

Presented and approved in senate standing meeting
On 23rd December 2010
And subsequently
Resolved and Ratified in Senate meeting dated 27th December 2010

(Ver. 1.2)



Walchand College of Engineering, Sangli

(An Autonomous Institute)

Teaching and Evaluation Scheme for

M. Tech. Program in Civil Engineering (Specialization: Environmental Engineering)

I Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 501	Research Methodology (Audit)	2	--	--	--	ISE	100	40	--	--
CE 601	Physico-Chemical Processes for Water and Wastewater Treatment	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CE 602	Air Pollution and Control	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CE603	Numerical Methods and Statistics	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CE 604	Environmental Chemistry and Microbiology	3	--	--	3	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CE 60*	Elective I	4	--	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CE 651	Water Quality Analysis Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
CE 652	Air Quality Monitoring Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
CE 686	Seminar I			2**	2	ISE	--	--	100	40
Total		18	5	8	25	--	--	--	--	--

Total Credits: 25

Total Contact Hours: 31 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Course Code	Elective I
CE 605	Environmental hydraulics and Geotechnics
CE 606	Disaster Management and Risk Analysis

**M. Tech. Program in Civil Engineering
(Specialization: Environmental Engineering)**

II Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 503	Project Management	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CE 611	Biological Wastewater Treatment	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CE 612	Solid Waste Management	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CE 61*	Elective II	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CE 61*	Elective III	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CE 661	Wastewater Characterization Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
CE 662	Specific Treatment Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
CE 687	Seminar II		2**		2	ISE	--	--	100	40
Total		15	7	8	26	--	--	--	--	--

Total Credits: 26

Total Contact Hours: 30 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Course Code	Elective II
CE 613	Industrial & Hazardous Waste Management
CE 614	Remote Sensing and GIS Applications in Env. Engg.
Course Code	Elective III
CE 615	Environmental Management System
CE 616/IN502	Optimization Techniques
CE 617	Operation and Maintenance of Environmental Facilities

**M. Tech. Program in Civil Engineering
(Specialization: Environmental Engineering)**

III Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
CE 681	Dissertation Phase I	--	--	5**	4	ISE	4	100	40
CE 682	Dissertation Phase II	--	--		10	ISE	4	100	40
						ESE	6	100	40
Total		--	--	--	14	--	14	--	--

Total Credits: 14

Note:

** : Average contact hours/week/student.

IV Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
CE 683	Dissertation Phase III	--	--	5**	8	ISE	8	100	40
CE 684	Dissertation IV	--	--		12	ISE	6	100	40
						ESE	6	100	40
Total		--	--	--	20	--	20	--	--

Total Credits: 20

Note:

** : Average contact hours/week/student.



Walchand College of Engineering, Sangli

(An Autonomous Institute)

Teaching and Evaluation Scheme for

Department: Applied Mechanics

**P.G. Program in Civil Engineering
(Specialization: Structural Engineering)
I Semester**

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 501	Research Methodology (Audit)	2	--	--	--	ISE	100	40	--	--
AM 701	Advanced Design of R.C. Structures	3	--	--	3	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
AM 702	Dynamics of Structures	3	--	--	3	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
AM 703 (Open)	Theory of Elasticity and Plasticity	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
AM 704	Mechanics of Structures	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
AM 70*	Elective I	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
AM 751	Design of R.C. Structures Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
AM 759	Analysis of Structures Lab-I	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
AM 786	Seminar I	--	2**	--	2	ISE	--	--	100	40
Total		17	3	8	26	--	--	--	--	--

Total Credits: 26

Total Contact Hours: 28 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Elective I	
AM 705	Design of Foundation
AM 706	Advances in Concrete Composites
AM 707	Structural Reliability

Department: Applied Mechanics
P.G. Program in Civil Engineering
(Specialization: Structural Engineering)

II Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 503	Project Management	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
AM 711	Theory of Plates & Shells	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
AM 712	Earthquake Engineering	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
AM 713 (Open)	Finite Element Method	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
AM 71*	Elective II	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
AM 762	Earthquake Engineering Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
AM 769	Finite Element Method Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
AM 787	Seminar II	2**			2	ISE	--	--	100	40
Total		15	5	8	26	--	--	--	--	--

Total Credits: 26

Total Contact Hours: 28 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

****:** Average contact hours/week/student.

*** Electives**

Elective II	
AM 714	Advanced Design of Steel Structures
AM 715	Design of R.C.C. Bridges
AM 716	Stability of Structures

**P.G. Program in Applied Mechanics
(Specialization: Structural Engineering)**

III Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
AM 781	Dissertation Phase I	--	--	5**	4	ISE	4	100	40
AM 782	Dissertation Phase II	--	--		10	ISE	4	100	40
						ESE	6	100	40
Total		--	--	--	14	--	14	--	--

Total Credits: 14

Note:

** : Average contact hours/week/student.

IV Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
AM 783	Dissertation Phase III	--	--	5**	8	ISE	8	100	40
AM 784	Dissertation IV	--	--		12	ISE	6	100	40
						ESE	6	100	40
Total		--	--	--	20	--	20	--	--

Total Credits: 20

Note:

** : Average contact hours/week/student.



Walchand College of Engineering, Sangli

(An Autonomous Institute)

Teaching and Evaluation Scheme for

P.G. Program in Mechanical Engineering (Specialization: Design Engineering)

I Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 501	Research Methodology (Audit)	2	-	--	-	ISE	100	40	--	--
ME 601	Industrial Instrumentation	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 602	Experimental Stress Analysis	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 603	Solid Mechanics	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 60*	Elective I	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 60*	Elective II	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 651	Industrial Instrumentation Lab	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
ME 652	Experimental Stress Analysis Lab	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
ME 686	Seminar I			2**	2	ISE	--	--	100	40
Total		17	5	4	24	--	--	--	--	--

Total Credits: 24

Total Contact Hours: 26 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Course Code	Elective I
ME 604	Finite Element Method
ME 605	Material Handling Equipment Design
ME 606	Synthesis and Analysis of Mechanisms and Machines
Course Code	Elective II
ME 607	Computational Techniques in Design Engineering
ME 608	Tribology

**P.G. Program in Mechanical Engineering
(Specialization: Design Engineering)**

II Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 503	Project Management	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 611	M/c Dynamics	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 612	Design Engineering	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 61*	Elective III	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 61*	Elective IV	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 661	M/c Dynamics	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
ME 66*	Elective IV Lab	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
ME 687	Seminar II		2**		2	ISE	--	--	100	40
Total		15	5	4	24	--	--	--	--	--

Total Credits: 24

Total Contact Hours: 24 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Course Code	Elective III
ME 613	Process Equipment Design
ME 614	Robotics
ME 615	Machine Tool Design

Course Code		Elective IV
Theory	Lab	
ME 616	ME 666	Mechatronics
ME 617	ME 667	Industrial Product Design
ME 618	ME 668	Design of Pumps, Blowers and Compressors
ME 619	ME 669	Reliability Engineering

**P.G. Program in Mechanical Engineering
(Specialization: Design Engineering)**

III Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
ME 681	Dissertation Phase I	--	--	5**	4	ISE	4	100	40
ME 682	Dissertation Phase II	--	--		10	ISE	4	100	40
						ESE	6	100	40
Total		--	--	--	14	--	14	--	--

Total Credits: 14

Note:

** : Average contact hours/week/student.

IV Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
ME 683	Dissertation Phase III	--	--	5**	8	ISE	8	100	40
ME 684	Dissertation IV	--	--		12	ISE	6	100	40
						ESE	6	100	40
Total		--	--	--	20	--	20	--	--

Total Credits: 20

Note:

** : Average contact hours/week/student.



Walchand College of Engineering, Sangli

(An Autonomous Institute)

Teaching and Evaluation Scheme for

P.G. Program in Mechanical Engineering (Specialization: Heat & Power Engineering)

I Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 501	Research Methodology (Audit)	2	--	--	--	ISE	100	40	--	--
ME 701	Industrial Instrumentation	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 702	Advanced Heat & Mass Transfer	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 703	Advanced Thermodynamics	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 704	Advanced Fluid Mechanics and CFD	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 705	Computational Techniques in Thermal Engineering	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 751	Industrial Instrumentation Lab	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
ME 756	Computational Techniques in Thermal Engineering Lab	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
ME 786	Seminar I	2**			2	ISE	--	--	100	40
Total		17	5	4	24	--	--	--	--	--

Total Credits: 24

Total Contact Hours: 26 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

****:** Average contact hours/week/student.

**P.G. Program in Mechanical Engineering
(Specialization: Heat & Power Engineering)**

II Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 503	Project Management	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 711	Design of Thermal System	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 71*	Elective I	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 71*	Elective II	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 71*	Elective III	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 761	Design of Thermal System Lab	--	--	2	1	ISE	--	--	60	40
ME 76*	Elective I Lab	--	--	2	1	ESE	--	--	40	40
ME 787	Seminar II		2**		2	ISE	--	--	60	40
						ESE	--	--	40	40
						ISE	--	--	100	40
	Total	15	5	4	24	--	--	--	--	--

Total Credits: 24
Total Contact Hours: 24 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Course Code		Elective I
Theory	Lab	
ME 712	ME 762	I.C. Engine –I
ME 713	ME 763	Refrigeration

Course Code	Elective II
ME 714	I.C. Engine – II
ME 715	Air Conditioning
Course Code	Elective III
ME 716	Cryogenics
ME 717	Gas Turbine

**P.G. Program in Mechanical Engineering
(Specialization: Heat & Power Engineering)**

III Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
ME 781	Dissertation Phase I	--	--	5**	4	ISE	4	100	40
ME 782	Dissertation Phase II	--	--		10	ISE	4	100	40
						ESE	6	100	40
Total		--	--	--	14	--	14	--	--

Total Credits: 14

Note:

** : Average contact hours/week/student.

IV Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
ME 783	Dissertation Phase III	--	--	5**	8	ISE	8	100	40
ME 784	Dissertation IV	--	--		12	ISE	6	100	40
						ESE	6	100	40
Total		--	--	--	20	--	20	--	--

Total Credits: 20

Note:

** : Average contact hours/week/student.



Walchand College of Engineering, Sangli

(An Autonomous Institute)

Teaching and Evaluation Scheme for

P.G. Program in Mechanical Engineering (Specialization: Production Engineering)

I Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 501	Research Methodology (Audit)	2	-	--	-	ISE	100	40	--	--
ME 801	Industrial Instrumentation	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 802	Design of Experiments	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 803	Advanced Manufacturing Techniques-I	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 80*	Elective I	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 80*	Elective II	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 853	Advanced Manufacturing Techniques-I Lab	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
ME 85*	Elective I Lab	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
ME 886	Seminar I	2**		2		ISE	--	--	100	40
Total		17	5	4	24	--	--	--	--	--

Total Credits: 24

Total Contact Hours: 26 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Course Code		Elective I
Theory	Lab	
ME 804	ME 854	Production Management
ME 805	ME 855	Industrial Hydraulics & Pneumatics
ME 806	ME 856	Programmable Logic Controls

Course Code	Elective II
ME 807	Total Quality Management
ME 808	Material Handling Systems
ME 809	Unconventional Machining Systems

**P.G. Program in Mechanical Engineering
(Specialization: Production Engineering)**

II Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 503	Project Management	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 811	Advanced Manufacturing Techniques-II	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 812	Quantitative Techniques	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 81*	Elective III	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 81*	Elective IV	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
ME 861	Advanced Manufacturing Techniques-II Lab	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
ME 86*	Elective III Lab	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
ME 887	Seminar II		2**		2	ISE	--	--	100	40
Total		15	5	4	24	--	--	--	--	--

Total Credits: 24

Total Contact Hours: 25 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Course Code		Elective III
Theory	Lab	
ME 813	ME 863	Robotics
ME 814	ME 864	HR Management
ME 815	ME 865	Machine Tool Design

Course Code	Elective IV
ME 816	Mechatronics
ME 817	Special Purpose Machines

**P.G. Program in Mechanical Engineering
(Specialization: Production Engineering)**

III Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
ME 881	Dissertation Phase I	--	--	5**	4	ISE	4	100	40
ME 882	Dissertation Phase II	--	--		10	ISE	4	100	40
						ESE	6	100	40
Total		--	--	--	14	--	14	--	--

Total Credits: 14

Note:

** : Average contact hours/week/student.

IV Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
ME 883	Dissertation Phase III	--	--	5**	8	ISE	8	100	40
ME 884	Dissertation IV	--	--		12	ISE	6	100	40
						ESE	6	100	40
Total		--	--	--	20	--	20	--	--

Total Credits: 20

Note:

** : Average contact hours/week/student.



Walchand College of Engineering, Sangli

(An Autonomous Institute)

Teaching and Evaluation Scheme for

P.G. Program in Electrical Engineering (Specialization: Control Systems)

I Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 501	Research Methodology (Audit)	2	--	--	--	ISE	100	40	--	--
EE 608	Advanced Control Systems	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EE 602	Advanced Process Control	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EE 603	Digital Signal Processing	3	--	--	3	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EE 60*	Elective I	3	--	--	3	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EE 658	Advanced Control Systems Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
EE 65*	Digital Signal Processing & Elective I Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
EE 686	Seminar I	2**			2	ISE	--	--	100	40
Total		14	2	8	20	--	--	--	--	--

Total Credits: 20
Total Contact Hours: 24 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Subject Code	Lab Code	Elective I
EE 604	EE 654	Neural Network and Fuzzy Control
EE 605	EE 655	Embedded System and VLSI Design
EE 606	EE 656	PLC, Numeric Control & DCS
EE 607	EE 657	MEMS and Micro Sensors

**P.G. Program in Electrical Engineering
(Specialization: Control Systems)**

II Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 504	Optimization Techniques	3	1	--	4	ISE	20	40	--	--
					MSE	30	--		--	
					ESE	50	--		--	
EE 622	Adaptive Control System	3	1	--	4	ISE	20	40	--	--
					MSE	30	--		--	
					ESE	50	--		--	
EE 612	Non-Linear Control System	3	1	--	4	ISE	20	40	--	--
					MSE	30	--		--	
					ESE	50	--		--	
EE 623	Advanced Signal Processing	3	--	--	3	ISE	20	40	--	--
					MSE	30	--		--	
					ESE	50	--		--	
EE 61*	Elective II	3	--	--	3	ISE	20	40	--	--
					MSE	30	--		--	
					ESE	50	--		--	
EE 671	Adaptive & nonlinear control Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
EE 66*	Advanced Signal Processing & Elective Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
EE 687	Seminar II		2**		2	ISE	--	--	100	40
Total		15	3	8	24	--	--	--	--	--

Total Credits: 24

Total Contact Hours: 26 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Subject Code	Lab Code	Elective II
EE 614	EE 664	Estimation and Parameter Identification
EE 615	EE 665	DSP and VLSI DSP
EE 616	EE 666	Digital Image Processing
EE 621	EE 667	Advance Control of Electric Drives
EE 618	EE 668	System Identification
EE 619	EE 669	Robotics and Machine Vision
EE 620		Optimal Control

**P.G. Program in Electrical Engineering
(Specialization: Control Systems)**

III Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
EE 681	Dissertation Phase I	--	--	5**	4	ISE	4	100	40
EE 682	Dissertation Phase II	--	--		10	ISE	4	100	40
						ESE	6	100	40
Total		--	--	--	14	--	14	--	--

Total Credits: 14

Note:

** : Average contact hours/week/student.

IV Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
EE 683	Dissertation Phase III	--	--	5**	8	ISE	8	100	40
EE 684	Dissertation IV	--	--		12	ISE	6	100	40
						ESE	6	100	40
Total		--	--	--	20	--	20	--	--

Total Credits: 20

Note:

** : Average contact hours/week/student.



Walchand College of Engineering, Sangli

(An Autonomous Institute)

Teaching and Evaluation Scheme for

P.G. Program in Electrical Engineering (Specialization: Power Systems)

I Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 501	Research Methodology (Audit)	2	--	--	--	ISE	100	40	--	--
EE 701	Power Apparatus Modeling & Simulation	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EE 702	Digital Protection of Power Systems	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EE 703	Power System Harmonics	3	--	--	3	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EE 70*	Elective I	3	--	--	3	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EE 751	Power Apparatus Modeling & Protection Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
EE 75*	Power System Harmonics & Elective I Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
EE 786	Seminar I	2**			2	ISE	--	--	100	40
Total		14	2	8	20	--	--	--	--	--

Total Credits: 20
Total Contact Hours: 24 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Course Code		Elective I
Theory	Lab	
EE 704	EE 754	Power System Planning & Reliability
EE 705	EE 755	EHVAC Transmission

**P.G. Program in Electrical Engineering
(Specialization: Power Systems)**

II Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 504	Optimization Techniques	3	1	--	4	ISE	20	40	--	--
					MSE	30	--		--	
					ESE	50	--		--	
EE 711	Power System Dynamics	3	1	--	4	ISE	20	40	--	--
					MSE	30	--		--	
					ESE	50	--		--	
EE 712	Computer Aided Power System Analysis, Operation & Control	3	1	--	4	ISE	20	40	--	--
					MSE	30	--		--	
					ESE	50	--		--	
EE 713	Electrical Power Quality	3	--	--	3	ISE	20	40	--	--
					MSE	30	--		--	
					ESE	50	--		--	
EE 71*	Elective II	3	--	--	3	ISE	20	40	--	--
					MSE	30	--		--	
					ESE	50	--		--	
EE 761	Power System Dynamics & Analysis Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
EE 76*	Electric Power Quality & Elective-II Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
EE 787	Seminar II		2**		2	ISE	--	--	100	40
Total		15	3	8	24	--	--	--	--	--

Total Credits: 24

Total Contact Hours: 26 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Course Code		Elective II
Theory	Lab	
EE 714	EE 764	HVDC Transmission
EE 715	EE 765	Generation & Measurement of High Voltages
EE 716	EE 766	Advanced Strategies in Modern Power System
EE 621	EE 667	Advanced Control of Electric Drives

**P.G. Program in Electrical Engineering
(Specialization: Power Systems)**

III Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
EE 781	Dissertation Phase I	--	--	5**	4	ISE	4	100	40
EE 782	Dissertation Phase II	--	--		10	ISE	4	100	40
						ESE	6	100	40
Total		--	--	--	14	--	14	--	--

Total Credits: 14

Note:

** : Average contact hours/week/student.

IV Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
EE 783	Dissertation Phase III	--	--	5**	8	ISE	8	100	40
EE 784	Dissertation IV	--	--		12	ISE	6	100	40
						ESE	6	100	40
Total		--	--	--	20	--	20	--	--

Total Credits: 20

Note:

** : Average contact hours/week/student.



Walchand College of Engineering, Sangli

(An Autonomous Institute)

Teaching and Evaluation Scheme for

P.G. Program in Electronics Engineering (Specialization: Computer Applications / Telecommunication)

I Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing\$	Max	Min for Passing
IN 501	Research Methodology (Audit)	2	--	--	--	ISE	100	40	--	--
EN 501	Probability and Random Processes	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EN 521	Advanced Digital Signal Processing	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EN 503	CMOS VLSI Design	3	--	--	3	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EN 504	Embedded System Design	3	--	--	3	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EN 505	Design Analysis of Algorithm	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EN 553	VLSI Design Lab	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
EN 554	Embedded System Design Lab	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
EN 586	Seminar I	2**			2	ISE	--	--	100	40
Total		17	3	4	22	--	--	--	--	--

(Student is expected to submit seminar report in Latex/Microsoft word in the standard format style file available in the department)

Total Credits: 22

Total Contact Hours: 24 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

**P.G. Program in Electronics Engineering
(Specialization: Computer Applications / Telecommunication)**

II Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
IN 505	Optimization Techniques	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EN 511	Computer Communication	3	--	--	3	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EN 512	VLSI in Digital Signal Processing	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EN 51*	Elective I	3	--	--	3	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EN 51*	Elective II	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
EN 56*	Computer Communication Lab	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
EN 56*	Elective I Lab	--	--	2	1	ISE	--	--	60	40
						ESE	--	--	40	40
EN 587	Seminar II	2**			2	ISE	--	--	100	40
Total		15	3	4	22	--	--	--	--	--

Total Credits: 22

Total Contact Hours: 22 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Group	Subject Code	Lab Code	Elective I	Subject Code	Elective II
Tele communication	EN 513	EN 563	Wavelet Transform & Applications	EN 517	Digital Image Processing & Pattern Recognition
	EN 514	EN 564	Advanced Digital Communication	EN 518	Mobile Communication
Computer Application	EN 515	EN 565	Image Processing & Pattern Recognition	EN 519	Advanced Computer Architecture
	EN 516	EN 566	Artificial Neural Networks	EN 520	Design of Modern Operating Systems

Note:

- Students should choose group either telecommunication or computer application group.
- Within group they can have horizontal choice.
- Maximum %50 of the admitted students will be considered in one the group.
- Student is expected to submit seminar report in Latex/Microsoft word in the standard format style file available in the department.
- Subjects in the list of Elective I and II may be added as per requirement.

**P.G. Program in Electronics Engineering
(Specialization: Computer Applications / Telecommunication)**

III Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
EN 581	Dissertation Phase I	--	--		4	ISE	4	100	40
EN 582	Dissertation Phase II	--	--	5**	10	ISE	4	100	40
						ESE	6	100	40
Total		--	--	--	14	--	14	--	--

Total Credits: 14

Note:

** : Average contact hours/week/student.

IV Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
EN 583	Dissertation Phase III	--	--		8	ISE	8	100	40
EN 584	Dissertation IV	--	--	5**	12	ISE	6	100	40
						ESE	6	100	40
Total		--	--	--	20	--	20	--	--

Total Credits: 20

Note:

** : Average contact hours/week/student.



Walchand College of Engineering, Sangli

(An Autonomous Institute)

Teaching and Evaluation Scheme for

P.G. Program in Computer Science and Engineering

I Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing\$	Max	Min for Passing
IN 501	Research Methodology (Audit)	2	--	--	--	ISE	100	40	--	--
CS 501	Mathematical Foundation of Computer Science	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CS 502	Design & Analysis of Algorithm	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CS 503	Design of Database System	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CS 50*	Elective I	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CS 553	Database System Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
CS 55*	Elective I Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
CS 586	Seminar I	2**			2	ISE	--	--	100	40
Total		14	4	8	22	--	--	--	--	--

Total Credits: 22

Total Contact Hours: 26 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Course Code		Elective I
Theory	Lab	
CS 504	CS 554	Image Processing and Pattern Recognition
CS 505	CS 555	Real Time Systems

P.G. Program in Computer Science and Engineering

II Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme				
		L	T	P	Credits	Scheme	Theory (Marks %)		Practical (Marks %)	
							Max	Min for Passing \$	Max	Min for Passing
CS 511	Computer Security	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CS 512	Unix Network Programming	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CS 513	Parallel Algorithms & Design	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CS 514	Design of Modern Operating System	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CS 51*	Elective - II	3	1	--	4	ISE	20	40	--	--
						MSE	30		--	--
						ESE	50		--	--
CS 561	Computer Security Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
CS 562	Network Programming Lab	--	--	4	2	ISE	--	--	60	40
						ESE	--	--	40	40
CS 587	Seminar II	2**			2	ISE	--	--	100	40
Total		15	5	8	26	--	--	--	--	--

Total Credits: 26

Total Contact Hours: 28 hrs

Note:

\$: Minimum 40% marks required in ISE to become eligible for ESE.

** : Average contact hours/week/student.

*** Electives**

Course Code	Elective II
CS 515	Soft Computing
CS 516	Geographical Information System

P.G. Program in Computer Science and Engineering

III Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
CS 581	Dissertation Phase I	--	--		4	ISE	4	100	40
CS 582	Dissertation Phase II	--	--	5**	10	ISE	4	100	40
						ESE	6	100	40
Total		--	--	--	14	--	14	--	--

Total Credits: 14

Note:

** : Average contact hours/week/student.

IV Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Scheme	Credits	Practical (Marks %)	
								Max	Min for Passing
CS 583	Dissertation Phase III	--	--		8	ISE	8	100	40
CS 584	Dissertation Phase IV	--	--	5**	12	ISE	6	100	40
						ESE	6	100	40
Total		--	--	--	20	--	20	--	--

Total Credits: 20

Note:

** : Average contact hours/week/student.
