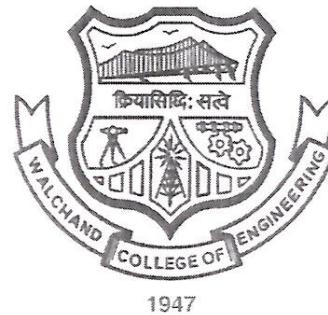# Walchand College of Engineering

(Government Aided Autonomous Institute)

Vishrambag, Sangli. 416415

Credit System for

F.Y. M.Tech. (Control System Engineering)

Sem-I and II

2022-23

Walchand College of Engineering, Sangli
(Government Aided Autonomous Institute)

Credit System for F.Y. M.Tech. (Control System Engineering) Sem-I AY 2022-23

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	MSE/LA1	ISE/LA2	ESE	Remark
Professional Core (Theory)
1	PC	6CS501	Applied Digital Control	3	0	0	0	3	3	30	20	50	
2	PC	6CS502	Advanced Process Control	3	0	0	0	3	3	30	20	50	
Professional Core (Lab)
3	PR	6CS547	Research Methodology for Control System Engineers	0	0	0	2	2	2	30	30	40	
4	PR	6CS545	Applied Digital Control Laboratory	0	0	2	0	2	1	30	30	40	OE
5	PR	6CS546	Advanced Process Control Laboratory	0	0	2	0	2	1	30	30	40	OE
6	HS	6CS551	Presentation and Technical Report Writing	0	0	0	1	1	1	30	30	40	
7	PC	6CS552	Professional Skills 1	0	0	0	1	1	1	30	30	40	
Professional Elective (Theory)
8	PE	Refer list	Professional Elective 1	3	0	0	0	3	3	30	20	50	
9	PE	Refer list	Professional Elective 2	3	0	0	0	3	3	30	20	50	
Professional Elective (Lab)

			Total	12	0	4	4	20	18				

PG Coordinator   HoD   Dean Academics   Date:

Professional Elective Course List for F.Y. M.Tech. (Control System Engineering) Sem-I AY 2022-23

Sr.No.	Track	Course Code	Course Name
Professional Elective 1			
1	Advanced Control Algorithms	6CS511	Optimal Control
2	Process Modelling and Dynamics	6CS512	System Identification
Professional Elective 2			
1	Advanced Control Algorithms	6CS513	Multivariable Control
2	Process Modelling and Dynamics	6CS514	Advanced Digital Signal Processing

Notes:

For Theory courses: There shall be MSE, ISE and ESE. The ESE is a separate head of passing.

For Lab courses: There shall be continuous assessment (LA1, LA2, ESE). The ESE is a separate head of passing. The Y in the PoE indicates external component for ESE. Minimum two AICTE mandatory courses need to be completed for award of degree.

For further details, refer to Academic and Examination rules and regulations.

PG Coordinator   HoD   Dean Academics   Date:

Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Credit System for F.Y. M.Tech. (Control System Engineering) Sem-II AY 2022-23

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	MSE/LA1	ISE/LA2	ESE	Remark
			Professional Core (Theory)										
1	PC	6CS521	Non-Linear Dynamical Systems	3	0	0	0	3	3	30	20	50	
2	PC	6CS522	PLC and Embedded Control	3	0	0	0	3	3	30	20	50	
			Professional Core (Lab)										
3	PR	6CS591	Non-Linear Dynamical Systems Laboratory	0	0	2	0	2	1	30	30	40	OE
4	PR	6CS592	PLC and Embedded Control Laboratory	0	0	2	0	2	1	30	30	40	OE
5	PR	6CS593	Pre-dissertation Work and Seminar	0	0	4	0	4	2	30	30	40	
			Professional Elective (Theory)										
6	PE	Refer list	Professional Elective 3	3	0	0	0	3	3	30	20	50	
			Professional Elective (Lab)										
7	PE	Refer list	Professional Elective 3 Laboratory	0	0	2	0	2	1	30	30	40	
			Open Elective										
8	OE	Refer list	Open Elective	3	0	0	0	3	3	30	20	50	
			Total	12	0	10	0	22	17				

PG Coordinator   HoD   Dean Academics
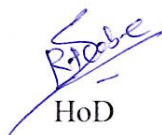
Professional Elective Course List for F.Y. M.Tech. (Control System Engineering) Sem-II AY 2022-23

Sr.No.	Track	Course Code	Course Name
Professional Elective 3			
1	Advanced Control Algorithms	6CS531	Neural Network and Fuzzy Control
2	Process Modelling and Dynamics	6CS532	Modern Signal Processing
Professional Elective 3 Lab			
1	Advanced Control Algorithms	6CS571	Neural Network and Fuzzy Control Laboratory
2	Process Modelling and Dynamics	6CS572	Modern Signal Processing Laboratory

Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Open Elective Course List for F.Y. M.Tech. (Control System Engineering) Sem-II AY 2022-23

Sr.No.	Offering Dept	Sem	Course Code	Course Name
				Open Elective
1	Civil_Env	2	6OE501	Solid Waste Management
2	Civil_Struct	2	6OE502	Structural Health Monitoring
3	Mech_Design	2	6OE503	Industrial Product Design
4	Mech_Prod	2	6OE505	Advanced Production systems
5	Mech_Heat	2	6OE504	Waste to Energy
6	Eln	2	6OE508	Introduction to Embedded Systems
7	CSE	2	6OE509	Machine Learning in Practice
8	IT	2	6OE510	Machine Learning & Applications

Notes:

For Theory courses: There shall be MSE, ISE and ESE. The ESE is a separate head of passing.

For Lab courses: There shall be continuous assessment (LA1, LA2, ESE). The ESE is a separate head of passing. The Y in the PoE indicates external component for ESE. Minimum two AICTE mandatory courses need to be completed for award of degree.

For further details, refer to Academic and Examination rules and regulations.

PG Coordinator   HoD   Dean Academics   Page 6/6   Date: