Walchand College of Engineering

(Government Aided Autonomous Institute)

Vishrambag, Sangli. 416415

*** Platinum Jubilee Year ***

Credit System for
F.Y. M.Tech. (Control System Engineering)
Sem-I and II

2021-22

Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Credit System for F.Y. M.Tech. (Control System Engineering) Sem-I AY 2021-22

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	T1/LA1	T2/LA2	ESE
Professional Core (Theory)												
1	PC	5CS501	Applied Digital Control	3	0	0	0	3	3	20	20	60
2	PC	5CS502	Advanced Process Control	3	0	0	0	3	3	20	20	60
Professional Core (Lab)												
3	PC	5CS560	Research Methodology	0	0	0	2	2	2	30	30	40
4	PR	5CS551	Activity Based Lab for Applied Digital Control	0	0	2	0	2	1	30	30	40
5	PR	5CS552	Activity Based Lab for Advanced Process Control	0	0	2	0	2	1	30	30	40
6	HS	5CS553	Presentation and Technical Report Writing	0	0	0	1	1	1	30	30	40
7	PC	5CS554	Professional Skills 1	0	0	0	1	1	1	30	30	40
Professional Elective (Theory)												
8	PE	Refer list	Elective 1	3	0	0	0	3	3	20	20	60
9	PE	Refer list	Elective 2	3	0	0	0	3	3	20	20	60
AICTE Mandatory Courses @												
10	MC	5IC502	Constitution of India	2	0	0	0	2	0	20	20	60
Value Added Professional Courses #												
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Value Added Life-Skill Courses #												
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			Total	**14**	**0**	**4**	**4**	**22**	**18**			

Walchand College of Engineering, Sangli
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Elective Course List for F.Y. M.Tech. (Control System Engineering) Sem-I AY 2021-22

Sr.No.	Track	Course Code	Course Name
Elective 1			
1	Advanced Control Algorithms	5CS511	Optimal Control
2	Process Modelling and Dynamics	5CS512	System Identification
Elective 2			
1	Advanced Control Algorithms	5CS513	Multivariable Control
2	Process Modelling and Dynamics	5CS514	Advanced Digital Signal Processing

Notes:

For Lab courses: There shall be only internal continuous assessment (LA1, LA2, ESE). LA1 and LA2 together shall be Lab ISE. The ESE is a separate head of passing.
For Theory courses: There shall be two tests (T1 and T2) and one ESE. The ESE is a separate head of passing.

\# The Value Added Courses are Optional Courses. The mode of teaching (LTPI) is decided by the resource person.
   The credits earned from these courses will be shown on grade card. For SGPA and CGPA calculation, these courses will be excluded.
   The list of Value added courses will be updated from time to time. The courses may be on paid basis. These courses will be offered as per availability of faculty.

@ Minimum two AICTE mandatory courses need to be completed for award of degree.

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

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Credit System for F.Y. M.Tech. (Control System Engineering) Sem-II AY 2021-22

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	T1/LA1	T2/LA2	ESE
Professional Core (Theory)												
1	PC	5CS521	Non-Linear Dynamical Systems	3	0	0	0	3	3	20	20	60
2	PC	5CS522	PLC and Embedded Control	3	0	0	0	3	3	20	20	60
Professional Core (Lab)												
3	PR	5CS571	Activity Based Lab for Non-Linear Dynamical Systems	0	0	2	0	2	1	30	30	40
4	PR	5CS572	Activity Based Lab for PLC and Embedded Control	0	0	2	0	2	1	30	30	40
5	PR	5CS573	Industrial Project	0	0	0	2	2	2	30	30	40
6	PC	5CS574	Professional Skills 2	0	0	0	1	1	1	30	30	40
Professional Elective (Theory)												
7	PE	Refer list	Elective 3	2	0	0	0	2	2	20	20	60
8	PE	Refer list	Elective 4	2	0	0	0	2	2	20	20	60
Professional Elective (Lab)												
9	PR	Refer list	Activity Based Elective Lab 1	0	0	2	0	2	1	30	30	40
Open Elective												
10	OE	Refer list	Open Elective	2	0	0	0	2	2	20	20	60
AICTE Mandatory Courses @												
11	MC	5IC501	Value Education	2	0	0	0	2	0	20	20	60
Value Added Professional Courses #												
--												
Value Added Life-Skill Courses #												
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			Total	14	0	6	3	23	18			

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Elective Course List for F.Y. M.Tech. (Control System Engineering) Sem-II AY 2021-22

Sr.No.	Track	Course Code	Course Name
	Activity Based Elective Lab 1		
1	Advanced Control Algorithms	5CS575	Neural Network and Fuzzy Control Lab
2	Process Modelling and Dynamics	5CS576	Modern Signal Processing Lab
	Elective 3		
1	Advanced Control Algorithms	5CS523	Adaptive Control
2	Process Modelling and Dynamics	5CS524	Computational Methods
	Elective 4		
1	Advanced Control Algorithms	5CS525	Neural Network and Fuzzy Control
2	Process Modelling and Dynamics	5CS526	Modern Signal Processing

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Open Elective Course List for F.Y. M.Tech. (Control System Engineering) Sem-II AY 2021-22

Sr.No.	Offering Dept	Sem	Course Code	Course Name
Open Elective 1				
1	Civil_Env	2	5OE101	Solid Waste Management
2	Civil_Struct	2	5OE102	Structural Health Monitoring
3	Mech_Prod	2	5OE103	Advanced Production systems
4	Mech_Heat	2	5OE104	Waste to Energy
5	Mech_Design	2	5OE105	Industrial Product Design
6	Elect_Control	2	5OE106	Control Techniques for Electrical Drives
7	Eln	2	5OE108	Introduction to Embedded Systems
8	CSE	2	5OE109	Machine Learning in Practice
9	IT	2	5OE110	Machine Learning & Applications

Notes:

For Lab courses: There shall be only internal continuous assessment (LA1, LA2, ESE). LA1 and LA2 together shall be Lab ISE. The ESE is a separate head of passing.
For Theory courses: There shall be two tests (T1 and T2) and one ESE. The ESE is a separate head of passing.

The Value Added Courses are Optional Courses. The mode of teaching (LTPI) is decided by the resource person.
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PG Coordinator Dean academics

Date: 12/10/2021