

Walchand College of Engineering

(Government Aided Autonomous Institute)

Vishrambag, Sangli. 416415



***** Platinum Jubilee Year *****

**Credit System for
S.Y. M.Tech. (Computer Science and Information Technology)
Sem-III and IV**

2021-22



Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Credit System for S.Y. M.Tech. (CS and IT) Sem-III 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	5IT601	Legal, Financial aspects of Industrial Project	2	0	0	0	2	2	20	20	60
Professional Core (Lab)												
2	PR	5IT690	Dissertation Phase 1	0	0	20	0	20	10	30	30	40
3	PC	5IT602	Industry Orientation Course	0	0	0	1	1	1	30	30	40
Professional Elective (Theory)												
4	PE	Refer list	Elective 5	2	0	0	0	2	2	20	20	60
Professional Elective (Lab)												
5	PR	Refer list	Activity Based Lab for Elective 5	0	0	2	0	2	1	30	30	40
Value Added Professional Courses #												
--												
Value Added Life-Skill Courses #												
--												
Total				4	0	22	1	27	16			



Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Elective Course List for S.Y. M.Tech. (CS and IT) Sem-III AY 2021-22

Sr.No.	Track	Course Code	Course Name
Activity Based Lab for Elective 5			
1	Distributed Systems	5IT651	Parallel Algorithms Lab
2	Programming and Internet Technology	5IT652	Software Reliability and Testing Lab
3	Data Science	5IT653	Visual Computing Lab
Elective 5			
1	Distributed Systems	5IT611	Parallel Algorithms
2	Programming and Internet Technology	5IT612	Software Reliability and Testing
3	Data Science	5IT613	Visual Computing

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.

The contact hours of each dissertation with the guide (research supervisor) shall be of one hour per week.

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



Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Credit System for S.Y. M.Tech. (CS and IT) Sem-IV AY 2021-22

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	T1/LA1	T2/LA2	ESE
Professional Core (Theory)												
--												
Professional Core (Lab)												
1	PR	5IT691	Dissertation Phase 2	0	0	24	0	24	12	30	30	40
2	PR	5IT671	Techno-Socio Activity	0	0	0	1	1	1	30	30	40
Professional Elective (Theory)												
3	PE	Refer list	Elective 6	3	0	0	0	3	3	20	20	60
Value Added Professional Courses #												
--												
Value Added Life-Skill Courses #												
--												
Total				3	0	24	1	28	16			



Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Elective Course List for S.Y. M.Tech. (CS and IT) Sem-IV AY 2021-22

Sr.No.	Track	Course Code	Course Name
Elective 6			
1	Distributed Systems	5IT621	Modern Data Centre
2	Programming and Internet Technology	5IT622	Advanced Internet Programming
3	Data Science	5IT623	Social Media analytics

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.

The contact hours of each dissertation with the guide (research supervisor) shall be of one hour per week.

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



Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Tracks and Semester-wise Elective Courses for M.Tech. (CS and IT) AY 2021-22

Sr.No.	Sem	Elective	Course Code	Course Name
Data Science				
1	1	Elective 1	5IT513	Artificial Intelligence
2	1	Elective 2	5IT516	Image Processing and Pattern Recognition
3	2	Elective 3	5IT525	Mathematic for Machine Learning
4	2	Elective 4	5IT528	Deep Learning
5	2	Activity Based Lab for Ele	5IT577	Deep Learning Lab
6	3	Elective 5	5IT613	Visual Computing
7	3	Activity Based Lab for Ele	5IT653	Visual Computing Lab
8	4	Elective 6	5IT623	Social Media analytics
Distributed Systems				
1	1	Elective 1	5IT511	Cloud and Virtualization Techniques
2	1	Elective 2	5IT514	Advanced Distributed Computing
3	2	Elective 3	5IT523	Distributed Operating Systems
4	2	Elective 4	5IT526	Big Data Computing
5	2	Activity Based Lab for Ele	5IT575	Big Data Computing Lab
6	3	Elective 5	5IT611	Parallel Algorithms
7	3	Activity Based Lab for Ele	5IT651	Parallel Algorithms Lab
8	4	Elective 6	5IT621	Modern Data Centre

(Continued..)



Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Tracks and Semester-wise Elective Courses for M.Tech. (CS and IT) AY 2021-22

Sr.No.	Sem	Elective	Course Code	Course Name
Programming and Internet Technology				
1	1	Elective 1	5IT512	Ruby & Go Programming Language
2	1	Elective 2	5IT515	Modern Application Development
3	2	Elective 3	5IT524	System Programming
4	2	Elective 4	5IT527	High Performance Computing
5	2	Activity Based Lab for Elective 4	5IT576	High Performance Computing Lab
6	3	Elective 5	5IT612	Software Reliability and Testing
7	3	Activity Based Lab for Elective 5	5IT652	Software Reliability and Testing Lab
8	4	Elective 6	5IT622	Advanced Internet Programming



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

List of Professional Core (Theory) Courses for M.Tech. (CS and IT) AY 2021-22

Sr.No.	Sem	Course Code	Course Name
Professional Core (Theory) Courses			
1	1	5IT501	Advanced Algorithms
2	1	5IT502	Unix Internal
3	2	5IT521	Data Mining Methods and Applications
4	2	5IT522	Scientific Computing
5	3	5IT601	Legal, Financial aspects of Industrial Project



Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

List of Professional Core (Lab) Courses for M.Tech. (CS and IT) AY 2021-22

Sr.No.	Sem	Course Code	Course Name
Professional Core (Lab) Courses			
1	1	5IT560	Research Methodology
2	1	5IT551	Activity Based Lab for Advanced Algorithms
3	1	5IT552	Activity Based Lab for Unix Internal
4	1	5IT553	Presentation and Technical Report Writing
5	1	5IT554	Professional Skills 1
6	2	5IT571	Activity Based Lab for Data Mining Methods and Applications
7	2	5IT572	Activity Based Lab for Scientific Computing
8	2	5IT573	Industrial Project
9	2	5IT574	Professional Skills 2
10	3	5IT690	Dissertation Phase 1
11	3	5IT602	Industry Orientation Course
12	4	5IT691	Dissertation Phase 2
13	4	5IT671	Techno-Socio Activity



Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Open Electives offered by M.Tech. (CS and IT) to other programmes AY 2021-22

Sr.No.	Offering Dept	Sem	Course Code	Course Name
Open Electives Offered				
1	IT	2	5OE110	Machine Learning & Applications



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

Open Electives available from other programmes to M.Tech. (CS and IT) AY 2021-22

Sr.No.	Offering Dept	Sem	Course Code	Course Name
Open Electives Available				
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_Power	2	5OE106	Control Techniques for Electrical Drives
7	Elect_Control	2	5OE106	Control Techniques for Electrical Drives
8	Eln	2	5OE108	Introduction to Embedded Systems