Lovely Professional University, Punjab

Course Code	Course Title	Course Planner	Lectures	Tutorials	Practicals	Credits
INT416	SOFTWARE PROJECT MANAGEMENT LABORATORY	11265::Dalwinder Singh	0	0	2	1
Course Weightage	ATT: 5 CAP: 45 ETP: 50	**Exam Category: X6: Mid Term Exam: Not Applicable – End Term Exam: Practical**				
Course Orientation	NA					

Course Outcomes :Through this course students should be able to

CO1 :: describe various features of MS-Project tool and create a project plan incorporating various tasks.

CO2 :: define project resources and resolve over-allocation of resources

CO3 :: demonstrate projects in various views like Gantt chart and network diagram view.

	TextBooks (T)		
Sr No	**Title**	**Author**	**Publisher Name**
T-1	MICROSOFT PROJECT 2016 FOR DUMMIES	CYNTHIA SNYDER	WILEY

	Reference Books (R)		
Sr No	**Title**	**Author**	**Publisher Name**
R-1	MICROSOFT PROJECT 2019 STEP BY STEP	CINDY LEWIS, CARL CHATFIELD, TIMOTHY JOHNSON	MICROSOFT PRESS

Other Reading (OR)	
Sr No	**Journals articles as Compulsary reading (specific articles, complete reference)**
OR-1	faculty.up.edu/lulay/MEStudentPage/MSProjectBasicHowTo.pdf ,
OR-2	https://mitseu.files.wordpress.com/2014/08/microsoft-project-2013-step-by-step.pdf ,

Relevant Websites (RW)		
Sr No	**(Web address) (only if relevant to the course)**	**Salient Features**
RW-1	http://office.microsoft.com/en-us/project-help/howprojectschedulestasksbehindthescenes- HA102749287.aspx?CTT=1	Task scheduling
RW-2	https://support.office.com/en-us/article/Set-task-priorities-for-resource-leveling-ca3442bc-8dfb-4c08-aba8-4adb5b9fbc32?ui=en-US&rs=en-US&ad=US	Resolve overallocations
RW-3	http://www.dummies.com/how-to/computers-software/ms-office/project.html	Microsoft project

RW-4	http://www.profsr.com/msproject/msproj00.htm	Getting started with MS Project

Audio Visual Aids (AV)

Sr No	(AV aids) (only if relevant to the course)	Salient Features
AV-1	https://nptel.ac.in/courses/106101061/29	Introduction to Project Management

*Each experiment of the lab will be evaluated using following relative scheme:

Component	Weightage (%)
Performance/Job evaluation/conduct/skill execution/demonstration	50
Viva	50

Detailed Plan For Practicals

Practical No	Broad topic	Subtopic	Other Readings	Learning Outcomes
Practical 1	Getting To Know Microsoft Project	Using The Toolbars		Familiarising With Microsoft Project and toolbars.
	Getting To Know Microsoft Project	Starting Microsoft Project		Familiarising With Microsoft Project and toolbars.
Practical 2	Getting To Know Microsoft Project	Using The Gantt Chart View		Learning About the Available Toolbars, Calendar View, Gantt Chart View, timeline view and Project Calendar.
	Getting To Know Microsoft Project	Using the timeline view for better plans		Learning About the Available Toolbars, Calendar View, Gantt Chart View, timeline view and Project Calendar.
	Getting To Know Microsoft Project	Using timescale and gridlines		Learning About the Available Toolbars, Calendar View, Gantt Chart View, timeline view and Project Calendar.
	Getting To Know Microsoft Project	Using The Calendar View		Learning About the Available Toolbars, Calendar View, Gantt Chart View, timeline view and Project Calendar.
Practical 3	Defining The Project	Understanding The Project Calendar		Students will learn about calendar creation and application
	Defining The Project	Applying calender on Gantt chart		Students will learn about calendar creation and application
	Defining The Project	Creating new calender and setting working and non-working days		Students will learn about calendar creation and application

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Practical 3	Defining The Project	Choosing Your Calendar For The Project		Students will learn about calendar creation and application
	Defining The Project	Understanding File Properties		Students will learn about calendar creation and application
	Defining The Project	Understanding Project Information		Initial hour utilized for evaluation and then students will learn about calendar creation and application
Practical 4	Defining The Project	Understanding Project Information		Initial hour utilized for evaluation and then students will learn about calendar creation and application
	Defining The Project	Understanding File Properties		Students will learn about calendar creation and application
	Defining The Project	Choosing Your Calendar For The Project		Students will learn about calendar creation and application
	Defining The Project	Creating new calender and setting working and non-working days		Students will learn about calendar creation and application
	Defining The Project	Applying calender on Gantt chart		Students will learn about calendar creation and application
	Defining The Project	Understanding The Project Calendar		Students will learn about calendar creation and application
Practical 5	Tasks	Using Recurring Tasks Continued		Students will learn how to operate with tasks.
	Tasks	Switch task modes		Students will learn how to operate with tasks.
	Tasks	Arranging tasks using priority		Students will learn how to operate with tasks.
	Tasks	Entering A Task Duration		Students will learn how to operate with tasks.
	Tasks	Understanding Milestones And Phases		Students will learn how to operate with tasks.
	Tasks	Changing Task Priority		Students will learn how to operate with tasks.
	Tasks	Moving Tasks		Students will learn how to operate with tasks.
	Tasks	Using Recurring Tasks		Students will learn how to operate with tasks.
	Tasks	Editing Tasks		Students will learn how to operate with tasks.
	Tasks	Automatically scheduled tasks		Students will learn how to operate with tasks.
	Tasks	Estimating Durations		Students will learn how to operate with tasks.
	Tasks	Inserting A Task		Students will learn how to operate with tasks.

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Practical 5	Tasks	Entering Tasks		Students will learn how to operate with tasks.
	Tasks	Deleting Tasks		Students will learn how to operate with tasks.
	Tasks	Manually scheduled tasks		Students will learn how to operate with tasks.
	Tasks	Simplified planning with inactive tasks		Students will learn how to operate with tasks.
Practical 6	Task Linkages	Understanding Task Constraints		Students will learn about task constraints and resources.
	Task Linkages	Understanding Advanced Task Options		Students will learn about task constraints and resources.
	Task Linkages	Understanding Task Types		Students will learn about task constraints and resources.
	Task Linkages	Using Task Notes		Students will learn about task constraints and resources.
	Task Linkages	Creating A Logical Sequence		Initial hour utilized for evaluation and then students will learn about task constraints and resources.
	Task Linkages	Understanding Task Predecessors		Students will learn about task constraints and resources.
	Task Linkages	Outlining A Task		Students will learn about task constraints and resources.
	Task Linkages	Understanding Summary Tasks		Students will learn about task constraints and resources.
	Task Linkages	Using The General Tab		Students will learn about task constraints and resources.
	Task Linkages	Understanding Task Resources		Students will learn about task constraints and resources.
Practical 7	Task Linkages	Understanding Task Resources		Students will learn about task constraints and resources.
	Task Linkages	Using The General Tab		Students will learn about task constraints and resources.
	Task Linkages	Understanding Summary Tasks		Students will learn about task constraints and resources.
	Task Linkages	Outlining A Task		Students will learn about task constraints and resources.
	Task Linkages	Understanding Task Predecessors		Students will learn about task constraints and resources.
	Task Linkages	Creating A Logical Sequence		Initial hour utilized for evaluation and then students will learn about task constraints and resources.
	Task Linkages	Using Task Notes		Students will learn about task constraints and resources.
	Task Linkages	Understanding Task Types		Students will learn about task constraints and resources.

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Practical 7	Task Linkages	Understanding Advanced Task Options		Students will learn about task constraints and resources.
	Task Linkages	Understanding Task Constraints		Students will learn about task constraints and resources.
Practical 8	Task Linkages	Using A Start To Start Relationship		Students will learn about linkages, lead and lag times
	Task Linkages	Using A Finish To Finish Relationship		Students will learn about linkages, lead and lag times
	Task Linkages	Understanding Lead Time On The Gantt Chart		Students will learn about linkages, lead and lag times
	Task Linkages	Understanding Simple Linkage		Students will learn about linkages, lead and lag times
	Task Linkages	Using A Start To Finish Relationship		Students will learn about linkages, lead and lag times
	Task Linkages	Understanding The Types Of Constraints		Students will learn about linkages, lead and lag times
	Task Linkages	Using A Finish To Start Relationship		Students will learn about linkages, lead and lag times
	Task Linkages	Spotting Linkages On A Gantt Chart		Students will learn about linkages, lead and lag times
	Task Linkages	Understanding Linkage Types		Students will learn about linkages, lead and lag times
	Task Linkages	Understanding Lag And Lead Time		Students will learn about linkages, lead and lag times
	Task Linkages	Outline tasks into subtasks and summary tasks		Students will learn about linkages, lead and lag times
Practical 9	Use a PERT analysis to estimate task durations	About the PERT analysis		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Group resources who are over allocated		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Understanding Units		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Use a PERT analysis to estimate task durations	Perform a PERT analysis by using the default weights for duration estimates		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Understanding Accrue At		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Overallocations	Using The Resource Allocation View		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.

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Practical 9	Overallocations	Using The Resource Allocation Graph		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Overallocations	Using The Resource Usage View		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Overallocations	Using The Resource Management Toolbar		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Assigning Resources (Continued)		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Entering Resources		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Understanding Rates		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Use a PERT analysis to estimate task durations	Perform a PERT analysis by changing the way Project weights duration estimates		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Find resources that have available time		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Dynamic scheduling with team planner		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Using The Resource Sheet View		Initial hour utilized for evaluation and then students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Assigning a Calendar To a Group Of Resources		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Assigning A Resource Calendar		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
Practical 10	Resources	Assigning A Resource Calendar		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Assigning a Calendar To a Group Of Resources		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.

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Practical 10	Resources	Using The Resource Sheet View		Initial hour utilized for evaluation and then students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Dynamic scheduling with team planner		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Find resources that have available time		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Use a PERT analysis to estimate task durations	Perform a PERT analysis by changing the way Project weights duration estimates		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Understanding Rates		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Entering Resources		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Assigning Resources (Continued)		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Overallocations	Using The Resource Management Toolbar		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Overallocations	Using The Resource Usage View		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Overallocations	Using The Resource Allocation Graph		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Overallocations	Using The Resource Allocation View		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Understanding Accrue At		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Use a PERT analysis to estimate task durations	Perform a PERT analysis by using the default weights for duration estimates		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Understanding Units		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
	Resources	Group resources who are over allocated		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.

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Practical 10	Use a PERT analysis to estimate task durations	About the PERT analysis		Students will learn to create resource sheet, doing PERT analysis and identifying over allocation to resources.
Practical 11	Resolving Overallocations	Leveling Resources Continued		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Decreasing Work Time		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Shortening Your Project	Filtering For Critical Tasks Only		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Shortening Your Project	Shortening The Project		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Managing Costs	Managing total costs for tasks and resources		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Managing Costs	Managing cost variances for tasks, resources, and assignments		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Viewing Slack In A Table View		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Reassigning Resources		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Network Diagram View	Understanding The Network Diagram View		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Using The Leveling Gantt View		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Splitting Tasks		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Assigning Overtime To A Task		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Contouring Resources		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Shortening Your Project	Using The Critical Path View		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.

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Practical 11	Resolving Overallocations	Leveling Resources		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Network Diagram View	Understanding Summary Tasks In Network Design view		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Shortening Your Project	Setting The Critical Path		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Increasing Working Hours		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Network Diagram View	Changing Task Linkage		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Delaying Tasks Manually		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Managing Costs	Managing timephased baseline (budgeted) costs and actual costs		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Network Diagram View	Examining A Network Diagram		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Viewing Slack In A Gantt View		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Managing Costs	Update costs		Initial hour of 12th practical utilized for evaluation and then students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Managing Costs	Managing total costs for the entire project		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Managing Costs	Calculate overtime costs		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
Practical 12	Managing Costs	Calculate overtime costs		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Managing Costs	Managing total costs for the entire project		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.

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Practical 12	Managing Costs	Update costs		Initial hour of 12th practical utilized for evaluation and then students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Viewing Slack In A Gantt View		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Network Diagram View	Examining A Network Diagram		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Managing Costs	Managing timephased baseline (budgeted) costs and actual costs		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Delaying Tasks Manually		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Network Diagram View	Changing Task Linkage		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Increasing Working Hours		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Shortening Your Project	Setting The Critical Path		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Network Diagram View	Understanding Summary Tasks In Network Design view		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Leveling Resources		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Shortening Your Project	Using The Critical Path View		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Contouring Resources		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Assigning Overtime To A Task		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Splitting Tasks		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Using The Leveling Gantt View		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.

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Practical 12	Network Diagram View	Understanding The Network Diagram View		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Reassigning Resources		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Viewing Slack In A Table View		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Managing Costs	Managing cost variances for tasks, resources, and assignments		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Managing Costs	Managing total costs for tasks and resources		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Shortening Your Project	Shortening The Project		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Shortening Your Project	Filtering For Critical Tasks Only		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Decreasing Work Time		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
	Resolving Overallocations	Leveling Resources Continued		Students will learn how to resolve the over allocations of resources by different techniques and managing project costs.
Practical 13	Printing Project Reports	Using The Project Summary Report		Students will learn how to print the report using print preview.
	Printing Project Reports	Using Print Preview		Students will learn how to print the report using print preview.
Practical 14	Tracking Progress	Customizing toolbars and fields		Students will learn how to set baseline from project.
	Tracking Progress	Updating the project schdeule		Students will learn how to set baseline from project.
	Tracking Progress	Saving a baseline		Students will learn how to set baseline from project.
	Tracking Progress	Compare actual values to the baseline estimates		Students will learn how to set baseline from project.
	Tracking Progress	Update task and project		Students will learn how to set baseline from project.
SPILL OVER				
Practical 15	Spill Over			

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