

## Scheduling 1 Day Structure

### Session 1: Design and Structure your Schedule

1. The need for planning and scheduling
  - a. Purpose = communication not control
  - b. Understand audience
2. Simple -v- complex projects
3. Planning -v- scheduling
4. The project scheduler
5. Planning the project
6. Planning the schedule management
  - a. Scheduling Heuristics & Templates
  - b. Optimum update cycle
7. PDM Network building blocks Basic framework of a schedule
  - a. Activities & Milestones
    - i. Milestones
    - ii. Attributes of an activity
    - iii. Durations
  - b. Logic Links
    - i. Rules of logic
    - ii. Link types
      1. FS/SS/FF/SF
      2. Mandatory/discretionary/external
    - iii. Leads and Lags
  - c. Building the project 'Road Map'
8. **Exercise #1 – Construct Schedule.**

### Session 2: Schedule Analysis

1. Schedule types, techniques and levels
  - a. Schedule Levels
  - b. Rolling Wave planning and Schedule Density
2. Schedule calculations (Time Analysis)
  - a. Integers -v- elapsed time
  - b. Forward Pass
  - c. Back Pass
3. **Exercise #2 – Analyse Schedule.**
4. Free Float, Total Float & the Critical Path
  - a. Defining the Critical Path
  - b. Float calculations and definitions
  - c. Using float wisely
5. Link calculation problems
6. Calculating Durations
  - a. Options: Analogous -v- Parametric
  - b. Problems with production rates
  - c. Problems with effort driven durations

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### Session 3: Resource Analysis and Costs

1. Constraints & Calendars
2. Resources: Types of resource
  - a. People and equipment
  - b. Materials and consumables
  - c. Money and work space
3. Resource allocation and constraints
  - a. Availability / calendars / limitations
  - b. Allocation Per day (time based) or Total (distributed or flexible)
4. Resource levelling options
  - a. Aggregation
  - b. Smoothing
  - c. Levelling
5. **Exercise 3 – Resource level Schedule.**
6. Resource problems
  - a. Resource schedule
    - i. No float – balanced by resource allocation
    - ii. Critical resources & resource float
  - b. Productivity
    - i. Multi-tasking
7. Cost Management
8. Cash flow analysis
  - a. Developing the baseline budget
  - b. Types of cash flow
  - c. The Funding gap
9. Earned Value & Earned Schedule
10. Uncertainty and contingencies What is a resource
  - a. Cost – using resources incurs costs
  - b. Capability – resources do the work
  - c. Stakeholder / team member – need communication and motivation

### Session 4: Updating the Schedule & Reporting

1. Schedule review and revision
2. Schedule baselines
  - a. Contract Programs (old and new views)
  - b. Schedule Baselines
3. Statusing the schedule - Gathering and recording actuals
  - a. Who to ask
  - b. Data to collect
    - i. Start and Finish dates
    - ii. Time to finish and % work complete
    - iii. Resources used and Costs incurred
  - c. Statusing and editing for accuracy

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4. Updating the schedule
    - a. Review status
    - b. Management action to
      - i. Lock in gains
      - ii. Mitigate losses
  5. **Exercise #4 – Update the Schedule.**
  6. Dealing with ‘Bad News’
  7. Schedule compression
    - a. Crashing (Mythical Man Month)
    - b. Fast tracking
  8. Record keeping and progress information
  9. Change Control
  10. Reporting options and communication
    - a. Focusing the information
    - b. Coding structures
    - c. Standardising report formats
  11. Types of Report
    - a. Management Reports – Milestone and Dashboards
    - b. Team reports – Bar charts
    - c. Variance and trend reports
  12. Feedback & Benchmarking Managing for success
  13. Summary & Course wrap Up.
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### Scheduling Core Papers

#1	A Guide to Scheduling Good Practice	<a href="http://www.mosaicprojects.com.au/PDF/Good_Scheduling_Practice.pdf">http://www.mosaicprojects.com.au/PDF/Good_Scheduling_Practice.pdf</a>
#2	Attributes of a Scheduler	<a href="http://www.mosaicprojects.com.au/PDF/Attributes_of_a_Scheduler.pdf">http://www.mosaicprojects.com.au/PDF/Attributes_of_a_Scheduler.pdf</a>
#3	Dynamic Scheduling	<a href="http://www.mosaicprojects.com.au/PDF/dynamic_scheduling.pdf">http://www.mosaicprojects.com.au/PDF/dynamic_scheduling.pdf</a>
#4	Links, Lags & Ladders	<a href="http://www.mosaicprojects.com.au/PDF/Links_Lags_Ladders.pdf">http://www.mosaicprojects.com.au/PDF/Links_Lags_Ladders.pdf</a>
#5	Schedule Float	<a href="http://www.mosaicprojects.com.au/PDF/Schedule_Float.pdf">http://www.mosaicprojects.com.au/PDF/Schedule_Float.pdf</a>
#6	Schedule Levels	<a href="http://www.mosaicprojects.com.au/PDF/Schedule_Levels.pdf">http://www.mosaicprojects.com.au/PDF/Schedule_Levels.pdf</a>

Mosaic’s Scheduling Home Page is at : <http://www.mosaicprojects.com.au/Planning.html>