

# Assignment 04

Total Points: 40

**Submission Deadline: 4th December, 2025, 11:59 PM**

## Late Submissions

Late submissions will lead to a deduction from the obtained marks. The following rules will apply:

Criteria	Penalty
0–10 mins late	10% deduction
11–30 mins late	20% deduction
31–60 mins late	30% deduction
Beyond 1st hour (same day)	40% deduction
Up to 2 days late	50% deduction (max)
After 2 days	Zero marks
Missing cover page, member details, and section details	Up to 2 marks deduction

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You are working in a project team of 3–4 members. You have already submitted the WBS and project schedule. This assignment extends that work by focusing on resource assignment, resource loading, resource leveling, and schedule adjustment under resource constraints.

## Tasks

### 1. [10 Points] Resource Assignment Matrix (RAM)

Assign each work package/activity from your WBS to individual team members.

Create a **Responsibility Assignment Matrix (e.g., RACI or RAM)** showing who is responsible for each work item.

### 2. [10 Points] Resource Loading

For each team member:

- Prepare a resource histogram showing week-by-week variations in workload.
- Clearly indicate periods of under-allocation and over-allocation.

### 3. [10 Points] Resource Leveling

- Create an initial distribution of resource usage in the form of a histogram. Identify resource conflicts.
- Apply **resource-leveling techniques** to resolve the identified resource conflicts and create a smoother distribution of resource usage.
- Present the **before** and **after** histograms showing the effect of leveling.

### 4. [10 Points] Network Diagram & Schedule Update (with Resource Constraints)

Update your project schedule by removing overallocations and other resource conflicts identified in tasks 2 and 3. Adjust activity start/finish dates to eliminate resource over-allocations. Update the Activity-on-Arrow (AOA) network diagram of your project.

## Submission Guidelines

- One submission per group is required. Include a cover page with details of all group members.
- Deliverables
  - Resource Assignment Matrix
  - Resource Loading Histograms (initial) for each team member
  - Initial resource usage histogram (project-level)
  - Levelled resource usage histogram (project-level)
  - Initial project schedule
  - Updated project schedule
  - Updated resource loading histograms for each team member (post-leveling)