

- Lecture 1

- Cost Management is the cycle of cost planning and cost controlling
- Estimating is not an exact science: it is an art more than a science, and involves intuition and expert judgement
- The purpose of estimating is to help client decide whether the work can be undertaken and for the contractor to place a bid
- Estimates are needed from the inception of a project through all the design stages up to the receipt of tenders
- Feasibility (unit of accommodation) – Outline proposals (Floor area cost) – Sketch design (refined elemental cost plan) – Detailed design (approximate bill of quantities) – tender documentation (priced bill of quantities)
- Estimating accuracy increases during the life of the project as more knowledge is gained about the project
- Under-estimating may result in not having enough money at the back-end of the project and therefore abandoning the work
- Over-estimating may lose the client's confidence
- Uncertainty decreases for a typical construction as the project progresses
- Measured cost items are items measured by unit price
- Prime cost sums are allocated for works or services by a contractor or materials by a supplier
- Provisional sums are for unforeseen works, defined or detailed
- Direct costs
 - Material
 - Labour
 - Plant
- Indirect costs
 - Preliminaries
 - Overheads
 - Profit
- A good estimator understands construction materials, methods and systems, as well as the labour and equipment required to complete all tasks

- Lecture 2

- Significant cost effects are grouped as internal controllable factors and external factors
- Internal factors are the size, shape, groupings, types, quality and height of the buildings morphology
- External factors are the site location and conditions, and, the economic, industrial and political climate
- Internal factors
 - Size of the building – when quantity increases material, labour, plant increases – increasing the total cost
 - BUT – some costs are common to a building irrespective of size
 - The plane shape: the simpler the shape of the building, the lower its unit cost

- The more a building departs from a square, the more expensive its external envelope will be
- Storey height: the main cost item affected by no. of storey's are the walls and its finishes. But also length in services, staircases, structural costs and hoisting of materials and plant
- Quality costs money
- Technology and finishes used for construction influence the quality and costs
- Types of construction:
 - Type of sub-structure
 - Type of wall
 - Type of structural frame
 - Quality and type of finishes
 - Quality of fittings and fixtures
 - Quality and type of services
- External factors
 - Availability of resources: city to countryside: city labour costs are expensive, while countryside specialities are expensive
 - Construction designs depend on the climate and environment
 - Site conditions: sloped sites, low lying land, poor soils, groundwater levels, site restrictions, access to the site
 - Market conditions: boom and lean times
 - Industrial relations: labour disputes and uncertain political climates affect pricing and profit margins
 - LEGISLATION
- Be aware of global trends
- Unit rate pricing, using the first principles, is when current cost data directly from industry sources are used to build up accurate estimates