

**medical architecture planning systems**

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hospital planners & medical technology consultants

Principles of

**Hospital Planning**

For Health Services Managers

# Principles of Hospital Planning

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medical architecture planning systems  
P.O Box 910313 Amman • Jordan

Telephone: 00 962 6 4646 365  
Fax: 00 962 6 4646 364  
Email: [maps@maps-jo.com](mailto:maps@maps-jo.com)

[www . maps - jo . com](http://www.maps-jo.com)

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**A training course by  
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# Course outline

## Role of Health Services Managers in Planning Hospital Projects

**1** In the course of their careers, health services managers may more than once become involved in the planning of a new-build or a major renovation healthcare project. During the early planning stages they will need to set forth the project's brief or program including its size in terms of the number of beds, clinics, operating rooms, etc, its functional and space requirements, and its operating policy statements. During design stages, health services managers may get

**A basic knowledge & understanding of the morphology of hospital buildings and their planning & design process has become a useful asset for the health service managers.**

involved in reviewing the design drawings submitted by the architect. It is only logical that the parties who prepared the original project's program are themselves who shall review the design submittals which are based on the requirements of the program. But regardless of their specific project involvement, health services managers will find that a basic knowledge and understanding of the hospital as a facility, and of the basic concepts and principles of how hospital projects are planned, designed and constructed, is both useful and valuable to their careers.

## Morphology , Planning, & Design of Modern Hospital Projects

**2** In this part of the course the zones, departments and functional entities comprising the hospital, and their functional relationships to each other are examined.. The basic principles of hospital planning and design will be scanned including segregation of the hospital's traffic flow of patients, visitors, staff and materials, horizontal and vertical planning, the hospital street, along the latest trends of healthcare facilities planning. Sketches and layouts of different regional and international hospitals will illustrate the basic concepts of hospital planning and design and how all that relate to the operation of the hospital from the manager's perspective.

**Morphology, planning and design of the hospital are illustrated from the perspective of the health service manager.**

## Hospitals in the Context of the Healthcare System Organization & Health Policy

**3** Hospitals operate within a healthcare organization system and a health policy that influence both their physical and operational structure.

In this part, the impact of these contextual environments on the morphology, planning, and operation of the hospital will be examined with contrasting examples of health organization systems from different regional and western countries. Links between health status indicators and the health sector planning requirements in terms of numbers of beds, clinics and other physical resources will be discussed.

## Hospital Projects: Sizing, Pricing, & Staffing

**4** Part 4 illustrates methods for determining the size and capacity of a hospital project based on the expected workload volume projections and an analysis of the activity indicators including annual admissions, occupancy rate, and average length of stay (L.o.S). The standard norms and ratios used in estimating the gross area requirements for different hospital departments will be presented along with methodologies for arriving at a cost estimate for the hospital itemized by cost center, and the hospital's staff requirements.

**Oversized hospital incur unnecessary expenses, both capital and running. Undersized ones are operationally deficient. Right-sizing hospital projects require detailed functional and space programming and an analysis of the statistical and projected workload volumes. Currently, there are software applications which automates the process of sizing & pricing hospital projects.**

## Impact of Operational Policies on Hospital Design

**5** Links between operational policies and design will be illustrated with departmental examples. Suggested methodology and format for documenting the client's policies prior to design will be illustrated. Various examples will show how mismatches between policy and design can lead to operational deficiencies.