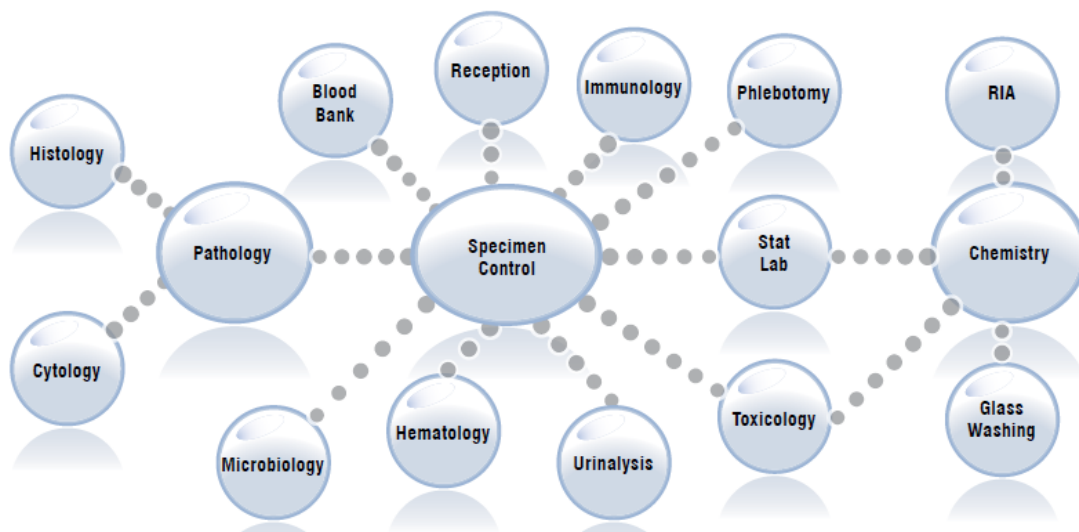


Typical Laboratory Layout

Although individual departments have unique functional requirements the overall layout of a laboratory is generally the same in most hospitals. Certain departments will be required to share specimens and equipment and are represented in close proximity to one another in the diagram down . It is recommended that you complete a preliminary sketch of any lab design before estimating costs to ensure that the size, function, and relationships of each department have been accurately defined.



Specimen Control

The Specimen Control area serves as the communication center for all laboratory departments.

Here both inpatient and outpatient specimens are received and cataloged. Based on the nature of testing required the samples are then expedited to the appropriate laboratory department for analysis. Constant coordination is required between specimen control and personnel from other departments. It is not uncommon to staff the specimen control area 24 hours a day to maintain efficient workflow.

Plan view of a typical Specimen Control Area

The Specimen Control area should consist of a generally open layout made easily by a variety of personnel including outpatients and technicians. An ample amount of counter space should be allocated to make room for

specimen storage, multiple computer workstations, printers, and chart storage. Additional storage space will be required for paper filing, testing supplies, and other equipment.

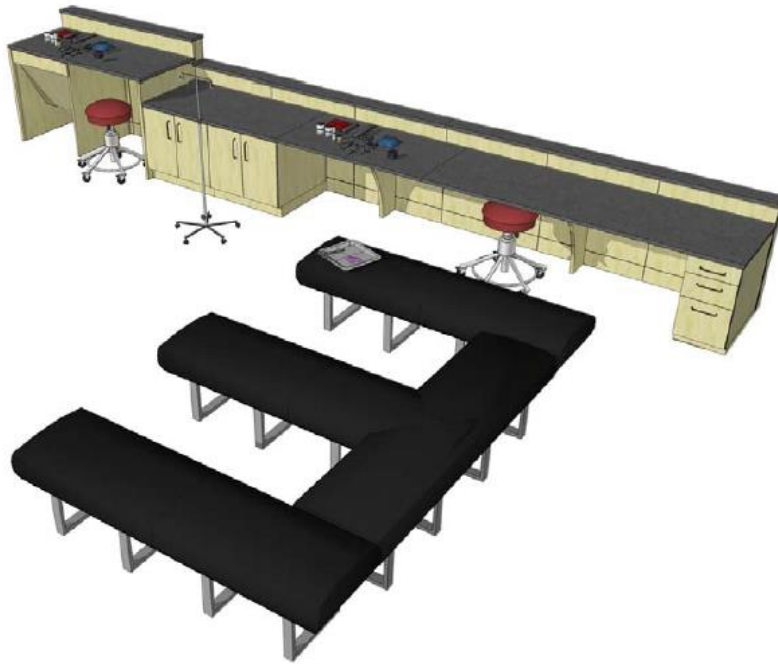


Blood Draw

The Blood Draw area is the common name for the Phlebotomy Department. Here blood samples are drawn from patients in order to conduct various tests. This department will typically be concerned with servicing the outpatient population. Since the Blood Draw department collects and organizes such a high volume of specimens it will often share space and equipment with the Specimen Control area.

Plan View of typical Blood Draw Lab

The Blood Draw/Phlebotomy Department will generally share space with the Specimen Control area. In larger facilities the Blood Draw area may be a separate area complete with outpatient services. The Blood Draw area may also require special beds and chairs for those patients giving blood samples



Chemistry

The Chemistry laboratory is by far the most high-volume, high-output department. The chemistry lab will also require the largest number of personnel. Here specimens including bodily fluids, tissues, and other substances are tested for chemical composition.

The Chemistry lab will also include the most automated technology and may require casework designs that integrate with a variety of technical machinery.

Plan View of a typical Chemistry Lab

The Chemistry Lab will by far be the largest and most complex clinical laboratory department. The Chemistry Lab will also be home to largest number of personnel. The area should include a variety of technical workstations for which individual casework configurations should be designed to suit. Freestanding tables should be used to store large vibrating equipment, such as centrifuges, away from other more sensitive testing equipment.



Toxicology

The Toxicology Department performs diagnostic tests to determine the levels of specific substances found in the body such as prescription medications, illegal or controlled substances, also foreign and toxic chemicals.

Plan View of a typical Toxicology Lab

Toxicology Specimens are generally kept for six months to two years. Adequate freezer storage space should be included in the overall design for this area. Due to the presence of narcotics and other sensitive materials security will be an issue for cabinets and casework in this area.



Urinalysis

The urinalysis department is responsible for receiving, testing, and cataloging all patient urine specimens. This is also a very high volume department characterized by constant distribution of specimens and collected data.

Plan View of typical Urinalysis Lab

The Urinalysis area should remain modest in size due to the lack of personnel required in the highly automated area. However the area should also include adequate counter space for a large volume of specimens and automated testing machinery.



Hematology

The Hematology Department is responsible for analyzing and conducting tests of patient blood specimens. Blood cell counts, identification of white cells, and research into blood abnormalities are all conducted in this laboratory.

Plan View of typical Hematology Lab

Due to the variety of work being performed there should be both standing and sitting height work surfaces included in the Hematology casework design. Due to the large number of personnel present in this area, multiple workstations may be included in which G-Wall support panels should be used to increase privacy of organization.



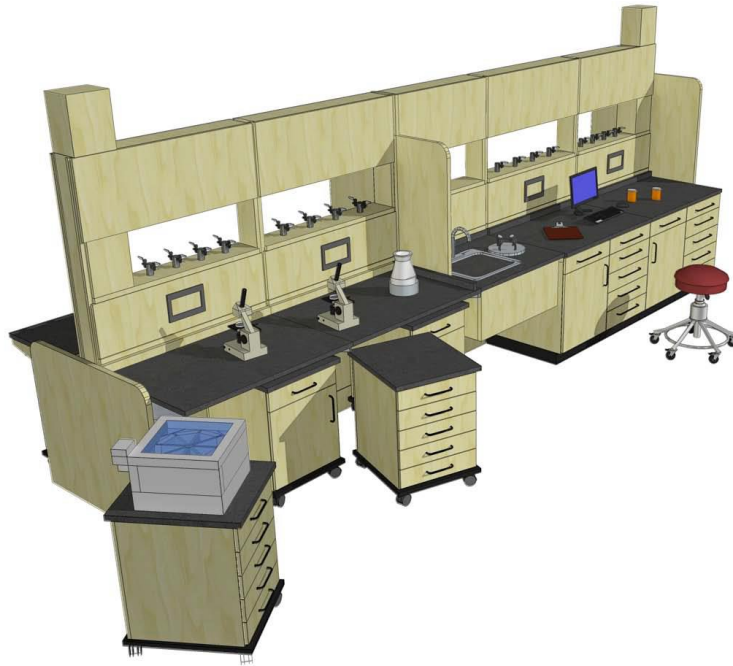
Immunology

Technicians in the Immunology Department conduct intricate tests concerning the human immune system. The goal of analysis done in this department is to determine causes of specific diseases and also to learn how to best prepare individuals for defense of certain diseases.

Plan View of a typical Immunology Lab

The most challenging and intricate testing procedures are completed in the Immunology Department. Although a limited number of Technicians will ever be present at one time the areas should be designed to reduce noise levels

and to remain as free of distractions as possible. Use of the G-Wall system provides independent work areas that increase both privacy and organization.



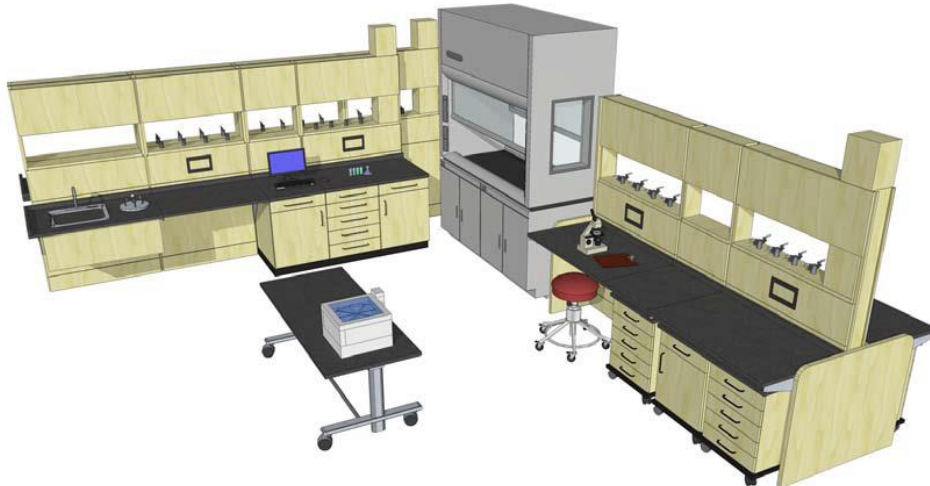
Microbiology

The Microbiology Department is responsible for examining specimens to determine the presence of disease causing organisms such as bacteria, fungi, viruses, and parasites.

The microbiology department may be separated into sub work areas such as Bacteriology, Mycology, Virology, and Parasitology. These individual sections should be isolated using negative air pressure systems to prevent accidental contamination to other areas.

Plan View of a Microbiology Lab

The Microbiology department will be a very complex area complete with multiple sub-departments and large scale lab equipment. Negative air pressure systems, inoculation chambers, fume hoods and refrigeration units may all be required in addition to any casework products. Due to the sensitive nature of the testing being done and the risk of accidental contamination. microbiology labs should be kept generally isolated from supporting lab areas.

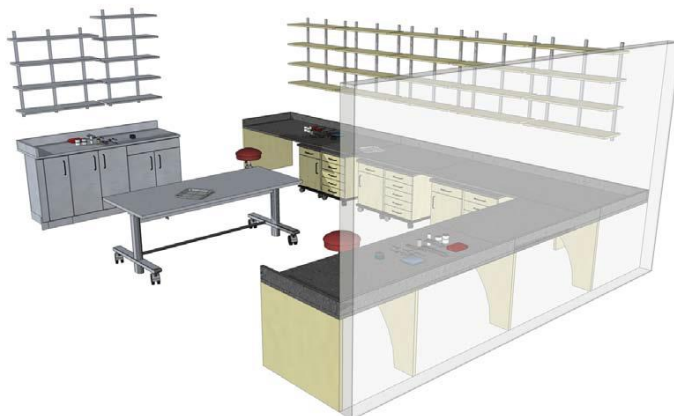


Pathology

In the Pathology Lab organ and tissue specimens are sent by the surgery and autopsy departments to be examined by eyesight to distinguish physical characteristics such as size, weight, and color. After the initial physical examination is completed in the Pathology Department, samples are then sent to the Histology Lab to be prepared and examined under a microscope.

Plan View of a Pathology Lab

The observations and examinations carried out in the Pathology Lab typically don't require the use of diagnostic machinery. Instead physical examination is conducted on the gross cutting table. The gross cutting stations are typically made of stainless steel due to the constant washing of the casework that is required to keep the area sterile.



Histology

After organ and tissue samples have been examined by the eye in the Pathology department, slides of each specimen are then prepared for further examination under a microscope. In the Histology Department these microscopic slides are examined and then subjected to a variety of sensitive chemical experiments.

Plan View of a Histology lab

The Histology Lab will also require large scale lab equipment including ventilation and fume hoods. Smaller equipment such as cryostats, chemical water baths, and centrifuges should be placed on freestanding tables and work surfaces.

