ISSUES TO CONSIDER WHEN DESIGNING NEW LAB SPACE - D.Jones/S.Williams

Adaptability
Aesthetics
Air conditioning/comfort cooling
Autoclaves
Building Maintenance. "After Sales" warranty, subsequent building maintenance
Coffee/tea room
Cold rooms
Compressed air
Containment suites
Dark rooms
Design brief:
How best to achieve the right design, who should be involved and to what extent - is it best done by liaison, by committee, by dictatorship!
Electrical services - Equipment drawing heavy current, 3-phase, RCD's, spike suppression etc
Energy conservation and management
Fire alarm systems
Flexibility
Floor coverings
Free standing equipment
Fume cupboards, both ducted and recirculatory filtration types
Gases - industrial and specials
Heavy equipment. Safe manual handling
"Hot" labs for radiochemical work
Innovative ideas - thinking ahead to 2010
I.T. requirements
Laboratory furniture - materials for work surfaces, underbench units, new materials etc
Lifts, for both personnel and goods
Lighting
Mechanical services - Plumbing - waste pipes, sinks, fittings etc. Gas supply and fittings, safety
Microbial safety cabinets
Microscope rooms
New technology in techniques and equipment
Office accommodation
On-site management of contractors. Their effect on other occupants of the building
Problems you haven't thought of yet!
Pure water supply - distilled, DI, RO, Elix etc
Raw water quality, hardness, pressure, potable water supplies, tank supply
Role of the Architect
Role of the Estates Officer
Role of the Laboratory Manager
Safety - build safety into the design - safety showers, eye wash, hand washing
Security, including the safe storage of personal effects
Space per person - office, laboratory, storage
Steam supplies
Storage - chemicals, consumables, equipment
Storage of personal effects
Temporary housing of staff and facilities during refurbishments
Vacuum systems - water jet pumps and their substitutes - vacuum pumps, Heto pumps
Warm rooms
Wash-up areas, glass washer, sterilisers
Waste disposal arrangements
Water conservation, (water jet pumps and water stills use large volumes of water)
Write-up areas