

ADVANCED CHEMISTRY LAB

SPACE DESCRIPTION

The Advanced Chemistry Lab is a supplemental laboratory space housing additional equipment needed for advanced instruction. Programs using this space may include Organic Chemistry and others.

SUCCESS FACTORS

Equipment: Advanced Chemistry Labs require (4) 6'-0" fume hoods,

Adjacency: Advanced Chemistry Labs shall be adjacent to a Biology/ Chemistry Lab for direct access and movement between the spaces.

GENERAL

All perimeter walls shall be full height to deck.

ACOUSTIC

Acoustic ratings for lab perimeter walls: STC 50. Special accommodations may be required due to location in the building.

Maximum NC Level for VAVs shall be less than 30 at maximum CFM

MECHANICAL

- Ventilation for (4) Fume hoods

PLUMBING

- Single-bowl sinks at each lab bench, with tall faucet and integral emergency eye wash
- Emergency shower (1/ lab) with integral eye wash and floor drain
- Acid piping at all drain locations
- Distilled water system

ELECTRICAL & DATA

Provide enough outlets for students with multiple devices – (2 min.) outlets per student at lab bench + outlets around the perimeter of the room

Provide power and data for the following standard classroom equipment:

- 2 (+/-) 75" touchscreen TVs on the front teaching wall.
- ALTERNATE: provide power and data in ceiling for 2 projectors at the front wall, in lieu of touchscreen TVs.
- Instructor bench with electrical and data connections for PC
- Audio/ sound system to include instructor microphone, soundbars and wireless connection to student headsets as needed.

LIGHTING

Provide LED lighting system with appreciable indirect component and good diffusion for maximum visibility from all directions.

Provide controls for zoning and dimming. Front row shall be switched separately with three preset dimmable levels: low, medium, high.

Provide low-brightness luminaires with high visual comfort probability (VCP) in all viewing directions. Average 40fc at 30" A.F.F. Min CRI 80.

Lighting watts per square foot and controls shall meet the latest requirements of ASHRAE 90.1

DOORS AND WINDOWS

Classroom doors shall be minimum STC 30 with 6" x 30" Window Lite preferred.

TECHNOLOGY

Instruction wall with projectors and/or whiteboards, or touchscreen TVs

ACCESSORIES AND EQUIPMENT

Review program requirements at intervals during the design phase. Provide at minimum:

- (4) 6'-0" Fume Hoods
- Refrigerator
- Fire blankets – wall mounted in box
- Fire extinguisher – wall mounted
- Lockable storage cabinets (base and wall cabinets)

FINISHES

Ceilings

Recommended Height: 9' to 10', with special consideration to acoustics when greater than 10'.

Ceilings shall have an NRC of .70 to .85.

In renovations, Labs without full height perimeter walls shall have ceilings with high CAC (Ceiling Attenuation Class) values.

Floors

Hard flooring such as VCT or epoxy.

Countertops

Countertops shall be Lab Grade phenolic resin or equal, with extremely high resistance to heat and chemicals. Countertops shall have integrated sinks.