LAB DESIGN CHECKLIST

Fume Hoods

- Ensure installation of fume hoods meets PDC design standard 15020 – Laboratories.
- For selection of fume hoods, see the EH&S Fume Hood Selection Guide.
- For fume hood placement, see PDC design standard 15020 – Laboratories.
- Fume hood base cabinets should be flammable and corrosive storage cabinets.
- Upon installation of new fume hoods, a fume hood commissioning document must be completed. Contact Joanna Lynch at EH&S at 5-4288 for certification.

Emergency Showers and Eyewashes, Sinks

- Ensure installation of emergency showers and eyewashes meet PDC design standard 15430 – Safety Showers and Eyewashes.
- Upon installation of new emergency showers and eyewashes, an Emergency Shower/Eyewash Commissioning Form must be completed. Contact Joanna Lynch at EH&S at 5-4288 for certification.
- Ensure a handwashing sink in each lab, including tissue culture rooms, and a swing away type eyewash (see PDC design standard 15430).
- Ensure vacuum breakers are installed on laboratory faucet sinks.

Ventilation

- Ensure room pressurization in laboratory space is kept negative with respect to adjacent areas, see ANSI Z9.5-2003. The directional air flow should be from the corridor to the lab.
- Use single pass, 100% outside air, with no recirculation to other labs or parts of the building. No common plenums are used.

Biological Safety Cabinets

- Ensure biological safety cabinets are located deep within the lab, away from doors, heavy traffic, and supply/exhaust grilles.
- Biological safety cabinets must be certified prior to use, when relocated, and at least once per year.
Flooring and Surfaces

- Establish continuous floor material coved at edges for spill containment and control.
- Ensure all surfaces, walls, floors, and furniture are washable and capable of withstanding bleach and other harsh disinfectants or cleaners. Do not use any cloth furniture.

General Lab Comments

- Lips should be installed in on shelving used for chemical storage.
- Labs should be separated by walls/partitions that go deck to deck.
- Windows should be sealed.
- For placement of offices within laboratories, offices should be located closest to the main entrance of the lab rather than placed back into the lab for egress issues.
- Consider establishing a work area for graduate students with a physical separation within the lab using glass walls. (See ST Olin 4th floor example).
- For laboratory that are located next to mechanical or machine rooms, use acoustical lining to minimize noise and vibration.

Chemical Use and Organization

- For compressed gas cylinders, the use of chains is preferred over nylon strapping.
- Has a list of chemicals and their quantities and approximate usage amounts (weekly/monthly) been reviewed to determine air change rates, the need for storage cabinets or flammable storage refrigerators, etc.? This chemical list can be provided to Jerry Gordon at EH&S for review.

Security

- Ensure controlled access to the lab (e.g., lockable doors).