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Executive Summary

The spring semester will include redesign in the depth areas of lighting and electrical and the breadth areas of mechanical systems and construction management for The Virginia Commonwealth University Life Sciences Building.

For the lighting redesign, four spaces are being looked at. These include the first and second floor lobby of the laboratory building, the genetics laboratory on the second floor of the laboratory building, the southern auditorium in the classroom building, and the exterior area between the two buildings that also encompasses the main campus entrance for the laboratory building.

The electrical redesign will include the redesign of the branch circuits affected by the lighting redesign and a overcurrent protective device coordination study. An analysis of the benefits of a central transformers verse distributed transformers will also be performed. Tying in with the mechanical breadth, the new electrical loads will be considered with the redesign of the mechanical system.

For the mechanical breadth, an analysis will be performed to study the effects of a utility transformer and emergency generator verse a low emission generator that will provide power for the eight rooftop units.

The construction management breadth will do a lifecycle cost analysis of the new mechanical system.