

## ARCH2242 - Mechanical and Electrical Integration

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| Credits:           | 3 (1/2/0)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Description:       | This course reviews the examination of mechanical, plumbing and electrical systems in both residential and commercial buildings. Content includes analysis of plumbing and heating, ventilation and air conditioning (HVAC) systems, and power and lighting systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Prerequisites:     | <ul style="list-style-type: none"> <li>• ARCH1122</li> <li>• ARCH1126</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Corequisites:      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Pre/Corequisites*: |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Competencies:      | <ol style="list-style-type: none"> <li>1. Determine the average R-value of a building envelope.</li> <li>2. Integrate heating and ventilation layouts in coordination with an architectural plan and section.</li> <li>3. Develop a water supply piping layout in coordination with an architectural plan.</li> <li>4. Develop a drain, waste and vent layout in coordination with an architectural plan.</li> <li>5. Incorporate a vent riser isometric coordinated to a previously drawn drain, waste and vent layout.</li> <li>6. Develop a power layout in coordination with an architectural plan.</li> <li>7. Develop a lighting layout in coordination with an architectural plan.</li> <li>8. Develop a communications layout in coordination with an architectural plan.</li> <li>9. Integrate a lighting layout into a reflected ceiling plan.</li> </ol> |
| MnTC goal areas:   | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

\*Can be taking as a Prerequisite or Corequisite.