# MSBPD
## Master of Science in Building Performance & Diagnostics

<table>
<thead>
<tr>
<th>Semester</th>
<th>Year</th>
<th>Units</th>
</tr>
</thead>
</table>
| Fall 1
| 1st Year | (39)    |
| Spring 1
| 1st Year | (39)    |
| Fall 2
| 2nd Year | (39)    |
| Spring 2
| 2nd Year | (36)    |

### Core:
- Building Performance Modeling (12 units)
- Performance of Advanced Building Systems (9 units)
- Productivity, Health & the Quality of Buildings (12 units)
- Experimental Design for Behavioral and Social Sciences (12 units)
- Building Controls & Diagnostics (12 units)

### Computing:
- Principles of Computing (10 units)
- Intro to Data Structures (10 units)

### Selectives:
- Refer to List (6 units)
- Refer to List (12 units)

### Electives:
- (9 units)
- (9 units)

### Program Description:
The Master of Science in Building Performance & Diagnostics (MSBPD) is a two-year program intended for practitioners, researchers, and educators in architecture and the building industry who wish to be leaders in advanced building technologies and their performance. This is a research-based degree, designed as a stepping stone to PhD-level education.

Admitted students may apply for advanced standing based on previous coursework or professional experience, eliminating the first semester. Advanced standing is also available to qualified CMU students within the B.Arch program through the Accelerated Master’s Program (AMP).

### Program Requirements:
In addition to the standard requirements for all graduate students in the School of Architecture, students in the MSBPD program must satisfy the following:
- Students must complete a minimum of 150 units of course work for graduation.
- Students must complete a minimum residency requirement of three (3) academic semesters.
- Full-time status (minimum 36 units per semester) is required during the residency period.
- Core and computing course substitutions must be approved by the program Track Chair.

### Engineering Selectives:
- Introduction to Sustainable Engineering (12 units)
- Data Acquisition (6 units)
- Mechanical & Electrical System Design for Buildings (6 units)
- Special Topics in BPD: Ecological Footprint (6 units)
- LEED, Green Design and Building Rating in a Global Context (6 units)
- Geographic Information Systems/CAFM (12 units)
- Zero Energy House (9 units)

### Computing:
- Principles of Computing (10 units)
- Intro to Data Structures (10 units)

### Selectives:
- Refer to List (12 units)
- Refer to List (12 units)

### Electives:
- (9 units)
- (6 units)

### Spring Selectives:
- Environmental Life-Cycle Assessment (12 units)
- Mathematical Modeling of Environmental Quality Systems (12 units)
- Computer-Based Approaches for Search & Decision Support in Civil Infrastructure (6 units)
- Fundamental Data Structures & Algorithms (Pre-Reqs are 21-127 & 15-121) (12 units)
- Energy System Modeling (12 units)
- Special Topics in BPD (9-12 units)
- Zero Energy House (9 units)