**ARCHITECTURAL ENGINEERING - MINOR**

The undergraduate minor in architectural engineering serves CU Boulder students who are interested in building science, engineering and system designs. The minor is intended to expose students to basic building science knowledge, engineering and system concepts, and calculation and design skills.

**Requirements**

**Admission**
A cumulative GPA of 2.750 or higher is required to be admitted to the minor.

The minor is not open to students pursuing the Bachelor of Science in architectural engineering or the Bachelor of Science in engineering plus with an architectural engineering disciplinary emphasis. In addition, the structural systems and construction engineering and management tracks (shown below) are not open to students pursuing the Bachelor of Science in civil engineering or the Bachelor of Science in engineering plus with a civil engineering disciplinary emphasis.

**Prerequisites**

The following prerequisite courses are required, with a grade of C- or higher in each. A student may be accepted into the minor with no more than two of these courses as deficiencies. All deficiencies must be completed before the minor is awarded.

- Calculus 1 (APPM 1350, MATH 1300, APPM 1340 or APPM 1345)
- Calculus 2 (APPM 1360 or MATH 2300)
- Calculus 3 (APPM 2350 or MATH 2400)
- Differential Equations and Linear Algebra (APPM 2360, or MATH 2130 + MATH 3430)
- Two semesters of calculus-based physics (PHYS 1110 or PHYS 1115, and PHYS 1120 or PHYS 1125)
- Statics (CVEN 2121, ASEN 2001, GEEN 2851, or MCEN 2023)

**Grade Requirements**

A cumulative GPA of 2.250 is required in the courses used to satisfy the minor requirements, with no individual grade lower than C-.

**Residency**

The minor requires 18 credit hours, at least nine of which must be AREN/ CVEN courses completed on the CU Boulder campus. This is composed of three required courses: two courses in a single track plus one elective course.

**Course Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREN 2050</td>
<td>Building Materials and Systems</td>
<td>3</td>
</tr>
<tr>
<td>CVEN 3246</td>
<td>Introduction to Construction</td>
<td>3</td>
</tr>
<tr>
<td>CVEN 3161</td>
<td>Mechanics of Materials 1 or MCEN 2063</td>
<td>3</td>
</tr>
<tr>
<td>CVEN 4556</td>
<td>Design of Wood Structures</td>
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<tr>
<td>CVEN 5830</td>
<td>Special Topics for Seniors/Grads (Distributed Generation Systems, Color Theory/Light Source, or Applied Data Analysis &amp; Modeling)</td>
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<tr>
<td>ENVD 3114</td>
<td>History and Theory of Environmental Design at the Small Scale: Buildings</td>
<td></td>
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<tr>
<td>ENVD 4352</td>
<td>Special Topics: Computer Methods</td>
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</tbody>
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1 Not open to students pursuing the Bachelor of Science in civil engineering or the Bachelor of Science in engineering plus with a civil engineering disciplinary emphasis.

2 Only the REVIT section is approved as an elective.