## Architecture & Construction Cluster

### Instructions:
1. Enter the Program of Study name above.
2. Enter your high school name.
3. Enter the community college name.
4. Enter the date.
5. Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names—secondary and first year of post-secondary.
6. Enter school course numbers.
7. Enter NCES code for the course (secondary only).
8. Enter number of credits awarded.
9. Identify those courses that trigger the TSA for this POS.
10. Finally, check those standards that are taught with intent and purpose, and are assessed in each course. Note: The optional Focus Area tabs below are included for those POSs that have a very specific industry focus and uses those skill sets for multiple options in a Program of Study or if you want to use another set of industry validated standards.

<table>
<thead>
<tr>
<th>Cluster Code</th>
<th>Knowledge and Skills (CTE standards)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC 1</td>
<td>AC21 Use vocabulary, symbols, and formulas commonly used in design and construction.</td>
</tr>
<tr>
<td>AC 2</td>
<td>AC22 Use architecture and construction skills to create and manage a project.</td>
</tr>
<tr>
<td>AC 3</td>
<td>AC23 Comply with regulations and acceptable codes to establish and manage a legal and safe workplaces.</td>
</tr>
<tr>
<td>AC 4</td>
<td>AC24 Understand the nature and scope of the Architecture &amp; Construction Career Cluster and the role architecture and construction play in society and the economy.</td>
</tr>
<tr>
<td>AC 5</td>
<td>AC25 Understand the roles and responsibilities among trades and professions, including labor/management relationships.</td>
</tr>
<tr>
<td>AC 6</td>
<td>AC26 Read, interpret, and use technical drawings, documents, and specifications to plan a project.</td>
</tr>
<tr>
<td>AC 7</td>
<td>AC27 Evaluate a wide range of career pathway opportunities for success in architecture and construction careers.</td>
</tr>
</tbody>
</table>
## Building Construction

### Architecture & Construction Cluster

#### Instructions:
1. Enter the Program of Study name above.
2. Enter your high school name.
3. Enter the community college name.
4. Enter the date.
5. Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names—second year of post-secondary only.
6. Click on the cell for Course 2 Name, Course 3 Name, etc., and replace with your POS course names—second year of post-secondary only.
7. Enter number of credits awarded.
8. Identify those courses that trigger the TSA for this POS. 10. Check those standards that are taught with intent and purpose, and are assessed in each course. Note: The optional Focus Area tabs below are included for those POSs that have a very specific industry focus using those skill sets for multiple options in a Program of Study or if you want to use another set of industry validated standards.

<table>
<thead>
<tr>
<th>Cluster Knowledge and Skills [CTE standards]</th>
<th>BCT 102</th>
<th>BCT 103</th>
<th>BCT 104</th>
<th>BCT 106</th>
<th>ARCH 110</th>
<th>BCT 115</th>
<th>BCT 120</th>
<th>BCT 122</th>
<th>BCT 123</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCR01 Identify building materials, fasteners, adhesives, and their uses.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR02 Read plans and elevations.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR03 Identify and install floor systems.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR04 Identify and install roof framing and roofing.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR05 Install concrete reinforcing materials and forms.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR06 Install windows and exterior doors.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR07 Complete leadership and team building.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR08 Conduct distance measurement and layout.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR09 Plan and prepare for construction.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR10 Describe fire resistance and codes.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR11 Prepare foundations and walls.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR12 Handle and place concrete.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR13 Install exterior finishes.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR14 Install exterior and moisture protection.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR15 Install interior doors.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
<tr>
<td>ACCR16 Install interior trim.</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
<td>[TSA-Y or N?]</td>
</tr>
</tbody>
</table>
## 2019
### Skills-to-Course Matrix

**Building Construction**

*High School Name*
Portland Community College

January 19

### Architecture & Construction Cluster

**Instructions:**
1. Enter the Program of Study name above.
2. Enter your high school name.
3. Enter the community college name.
4. Enter the date.
5. Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names—secondary and first year of post-secondary.
6. Enter school course numbers.
7. Enter NCES code for the course (secondary only).
8. Enter number of credits awarded.
9. Identify those courses that trigger the TSA for this POS.
10. Finally, check those standards that are taught with intent and purpose, and are assessed in each course. Note: The optional Focus Area tabs below are included for those POSs that have a specific industry focus or are using those skill sets for multiple options in a Program of Study or if you want to use another set of industry validated standards.

### Cluster Knowledge and Skills (CTE standards)

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Code Number</th>
<th>K5 Statement</th>
<th>[TSA—Y or N?]</th>
<th>[TSA—Y or N?]</th>
<th>[TSA—Y or N?]</th>
<th>[TSA—Y or N?]</th>
<th>[TSA—Y or N?]</th>
<th>[TSA—Y or N?]</th>
<th>[TSA—Y or N?]</th>
<th>[TSA—Y or N?]</th>
<th>[TSA—Y or N?]</th>
<th>[TSA—Y or N?]</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC-CST 1</td>
<td>ACCS01</td>
<td>Understand contractual relationships with all parties involved in the building process to ensure successful production of a project</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>AC-CST 2</td>
<td>ACCS02</td>
<td>Understand approval procedures to ensure effective flow of information in the construction process</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>AC-CST 3</td>
<td>ACCS03</td>
<td>Understand and implement testing and inspection procedures to ensure successful completion of a construction project</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>AC-CST 4</td>
<td>ACCS04</td>
<td>Understand the purpose of scheduling as it relates to the successful completion of a construction project</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>AC-CST 5</td>
<td>ACCS05</td>
<td>Know and apply procedures and procedures required to maintain project safety</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>AC-CST 6</td>
<td>ACCS06</td>
<td>Manage relationships with internal and external parties to successfully complete construction projects</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>AC-CST 7</td>
<td>ACCS07</td>
<td>Compare and contrast the building systems and components for a given project</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>AC-CST 8</td>
<td>ACCS08</td>
<td>Demonstrate the construction skills required for each phase of a given project</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>AC-CST 9</td>
<td>ACCS09</td>
<td>Operate, use, and maintain appropriate tools, machinery, equipment, and resources to accomplish construction project goals</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
# Skills-to-Course Matrix

## Building Construction

### Architecture & Construction Cluster

<table>
<thead>
<tr>
<th>Cluster Knowledge and Skills (CTE standards)</th>
<th>Code Number</th>
<th>K1 Statement</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
<th>[NCES Code]</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC-DES 1</td>
<td>ACDP01</td>
<td>Justify design solutions through the use of research documentation and analysis of data.</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
</tr>
<tr>
<td>AC-DES 2</td>
<td>ACDP02</td>
<td>Use effective communication skills and strategies (listening, speaking, reading, writing, and graphic communications) to work with clients and colleagues.</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
</tr>
<tr>
<td>AC-DES 3</td>
<td>ACDP03</td>
<td>Understand the integral systems that impact the design of buildings and structures.</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
</tr>
<tr>
<td>AC-DES 4</td>
<td>ACDP04</td>
<td>Apply building codes, laws, and rules in the design and construction of projects.</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
</tr>
<tr>
<td>AC-DES 5</td>
<td>ACDP05</td>
<td>Identify the diversity of needs, values, and social patterns in project design, including accessibility standards, to appropriately meet client needs.</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
</tr>
<tr>
<td>AC-DES 6</td>
<td>ACDP06</td>
<td>Apply the techniques and skills of modern design, drafting, engineering, and construction to projects.</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
</tr>
<tr>
<td>AC-DES 7</td>
<td>ACDP07</td>
<td>Employ appropriate representational media to communicate concepts and design.</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
</tr>
<tr>
<td>AC-DES 8</td>
<td>ACDP08</td>
<td>Apply principles, conventions, standards, applications, and restrictions pertaining to the selection and use of construction materials, components, and assemblies for project design.</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
<td>[TSA–Y or N]</td>
</tr>
</tbody>
</table>
## 2019 Skills-to-Course Matrix

### Building Construction

| [High School Name] | Portland Community College | Jan-19 |

#### Architecture & Construction Cluster

Instructions: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Enter the community college name. 4) Enter the date. 5) Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names—secondary and first year of post-secondary. 6) Enter school course numbers. 7) Enter NCES code for the course (secondary only). 8) Enter number of credits awarded. 9) Identify those courses that trigger the TSA for this POS. 10) Finally, check those standards that are "taught with intent and purpose" and are "assessed" in each course. Note: The optional Focus Area tabs below are included for those POSs that have a very specific industry focus area using those skill sets for multiple options in a Program of Study or if you want to use another set of industry validated standards.

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Knowledge and Skills (CTE standards)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CTE Code</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>BCT 102</td>
<td>BCT 103</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
## 2019
### Skills-to-Course Matrix

**Building Construction**

[High School Name]  
Portland Community College  
Jan-19

#### Architecture & Construction Cluster

Instructions: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Enter the community college name. 4) Enter the date. 5) Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names—secondary and first year of post-secondary. 6) Enter school course numbers. 7) Enter NCES code for the course (secondary only). 8) Enter number of credits awarded. 9) Identify those courses that trigger the TSA for this POS. 10) Finally, check those standards that are taught with intent and purpose, and are assessed in each course. Note: The optional Focus Area tabs below are included for those POSs that have a very specific industry focus or using those skill sets for multiple options in a Program of Study or if you want to use another set of industry validated standards.

<table>
<thead>
<tr>
<th>Cluster Knowledge and Skills (CTE standards)</th>
<th>BCT 102</th>
<th>BCT 103</th>
<th>BCT 104</th>
<th>BCT 106</th>
<th>ARCH 110</th>
<th>BCT 135</th>
<th>BCT 127</th>
<th>BCT 120</th>
<th>BCT 121</th>
<th>BCT 122</th>
<th>BCT 123</th>
</tr>
</thead>
<tbody>
<tr>
<td>[TSA--Y or N?] [TSA--Y or N?] [TSA--Y or N?] [TSA--Y or N?] [TSA--Y or N?] [TSA--Y or N?] [TSA--Y or N?] [TSA--Y or N?] [TSA--Y or N?] [TSA--Y or N?] [TSA--Y or N?] [TSA--Y or N?]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code Number</th>
<th>CCCT1</th>
<th>KS Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM001</td>
<td></td>
<td>Recognize and employ universal construction signs and symbols to function safely in the workplace.</td>
</tr>
<tr>
<td>COM002</td>
<td></td>
<td>Describe troubleshooting procedures when solving a maintenance problem to maintain buildings and structures.</td>
</tr>
<tr>
<td>COM003</td>
<td></td>
<td>Apply construction skills when repairing, restoring, or renovating existing buildings and structures.</td>
</tr>
<tr>
<td>COM004</td>
<td></td>
<td>Determine work required to repair or renovate an existing building or structure.</td>
</tr>
<tr>
<td>COM005</td>
<td></td>
<td>Meet work practice prevention maintenance standards to service existing buildings and structures.</td>
</tr>
<tr>
<td>COM006</td>
<td></td>
<td>Maintain the safety building practices to ensure safe and efficient operation of buildings.</td>
</tr>
</tbody>
</table>
## 2019 Skills-to-Course Matrix

### Building Construction

#### Architecture & Construction Cluster

**Instructions:**
1. Enter the Program of Study name above.
2. Enter your high school name.
3. Enter the community college name.
4. Enter the date.
5. Click on the cell for Course Name, and replace with your POS course names—
   secondary and first year of post-secondary.
6. Enter school course numbers.
7. Enter NCES code for the course (secondary only).
8. Enter number of credits awarded.
9. Identify those courses that trigger the TSA for this POS.
10. Finally, check those standards that are taught with intent and purpose, and are assessed, in each course.

### Cluster Knowledge and Skills (CTE standards)

<table>
<thead>
<tr>
<th>CCTC Code Number</th>
<th>IS Statement</th>
<th>[NCES Code]</th>
<th>[TSA--Y or N?]</th>
<th>[NCES Code]</th>
<th>[TSA--Y or N?]</th>
<th>[NCES Code]</th>
<th>[TSA--Y or N?]</th>
<th>[NCES Code]</th>
<th>[TSA--Y or N?]</th>
<th>[NCES Code]</th>
<th>[TSA--Y or N?]</th>
<th>[NCES Code]</th>
<th>[TSA--Y or N?]</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACM001</td>
<td>Understand safe use of equipment in elevated masonry work.</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
</tr>
<tr>
<td>ACM003</td>
<td>Perform appropriate concrete expansion and quality control.</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
</tr>
<tr>
<td>ACM004</td>
<td>Use appropriate concrete tools and equipment.</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
</tr>
<tr>
<td>ACM005</td>
<td>Understand the composition of mortar and how to mix it properly.</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
</tr>
<tr>
<td>ACM006</td>
<td>Understand masonry units and installation techniques.</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
</tr>
<tr>
<td>ACM007</td>
<td>Apply masonry techniques to a variety of materials and conditions.</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
</tr>
<tr>
<td>ACM008</td>
<td>Understand and use appropriate techniques for reinforced masonry.</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
</tr>
<tr>
<td>ACM009</td>
<td>Understand how masonry is used in masonry.</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
</tr>
<tr>
<td>ACM010</td>
<td>Apply appropriate masonry laying techniques.</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
</tr>
<tr>
<td>ACM011</td>
<td>Understand the relationship between masonry construction techniques and moisture control.</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
</tr>
<tr>
<td>ACM012</td>
<td>Apply appropriate masonry construction techniques to a variety of materials and conditions.</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
</tr>
<tr>
<td>ACM013</td>
<td>Identify and remove masonry structures.</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
<td></td>
<td>[TSA--Y or N?]</td>
</tr>
</tbody>
</table>
## 2019
### Skills-to-Course Matrix

**Building Construction**

**[High School Name]**
**Portland Community College**
**Jan-19**

#### Architecture & Construction Cluster

Instructions: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Enter the community college name. 4) Enter the date. 5) Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names—secondary and first year of post-secondary. 6) Enter school course numbers. 7) Enter NCES code for the course (secondary only). 8) Enter number of credits awarded. 9) Identify those courses that trigger the TSA for this POS. 10) Finally, check those standards that are taught with intent and purpose, and are assessed in each course.

Note: The optional Focus Area tabs below are included for those POSs that have a very specific industry focus, using those skill sets for multiple options in a Program of Study or if you want to use another set of industry validated standards.

<table>
<thead>
<tr>
<th>Cluster Knowledge and Skills (CTE standards)</th>
<th>ACPL01</th>
<th>ACPL02</th>
<th>ACPL03</th>
<th>ACPL04</th>
<th>ACPL05</th>
<th>ACPL06</th>
<th>ACPL07</th>
<th>ACPL08</th>
<th>ACPL09</th>
<th>ACPL10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code Number</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KT Statement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TSA–Y or N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TSA–Y or N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TSA–Y or N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TSA–Y or N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TSA–Y or N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TSA–Y or N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TSA–Y or N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TSA–Y or N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TSA–Y or N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TSA–Y or N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CTE*</th>
<th>Code Number</th>
<th>KT Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

This matrix helps in aligning secondary school courses with post-secondary courses in the Architecture & Construction Cluster, ensuring a smooth transition and comprehensive skill development for students.
## 2019
### Skills-to-Course Matrix
**Building Construction**

*[High School Name]*
Portland Community College
Jan-19

### Architecture & Construction Cluster

<table>
<thead>
<tr>
<th>Instructions: 1) Enter the Program of Study name above. 2) Enter your high school name. 3) Enter the community college name. 4) Enter the date. 5) Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names—secondary and first year of post-secondary. 6) Enter school course numbers. 7) Enter NCES code for the course (secondary only). 8) Enter number of credits awarded. 9) Identify those courses that trigger the TSA for this POS. 10) Finally, check those standards that are taught with intent and purpose.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cluster Knowledge and Skills (CTE standards)</strong></td>
</tr>
<tr>
<td>CCE*</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>ACRE01</td>
</tr>
<tr>
<td>ACRE02</td>
</tr>
<tr>
<td>ACRE03</td>
</tr>
<tr>
<td>ACRE04</td>
</tr>
<tr>
<td>ACRE05</td>
</tr>
<tr>
<td>ACRE06</td>
</tr>
<tr>
<td>ACRE07</td>
</tr>
<tr>
<td>ACRE08</td>
</tr>
<tr>
<td>ACRE09</td>
</tr>
<tr>
<td>ACRE10</td>
</tr>
<tr>
<td>ACRE11</td>
</tr>
<tr>
<td>ACRE12</td>
</tr>
<tr>
<td>ACRE13</td>
</tr>
<tr>
<td>ACRE14</td>
</tr>
<tr>
<td>ACRE15</td>
</tr>
<tr>
<td>ACRE16</td>
</tr>
<tr>
<td>ACRE17</td>
</tr>
<tr>
<td>ACRE18</td>
</tr>
<tr>
<td>ACRE19</td>
</tr>
<tr>
<td>ACRE20</td>
</tr>
<tr>
<td>ACRE21</td>
</tr>
<tr>
<td>ACRE22</td>
</tr>
<tr>
<td>ACRE23</td>
</tr>
<tr>
<td>ACRE24</td>
</tr>
<tr>
<td>ACRE25</td>
</tr>
<tr>
<td>ACRE26</td>
</tr>
</tbody>
</table>

### Notes
The optional Focus Area tabs below are included for those POSs that have a very specific industry focus using those skill sets for multiple options in a Program of Study or if you want to use another set of industry validated standards.
### Building Construction

#### Architecture & Construction Cluster

<table>
<thead>
<tr>
<th>Course Name</th>
<th>BCT 102</th>
<th>BCT 103</th>
<th>BCT 104</th>
<th>BCT 106</th>
<th>BCT 108</th>
<th>BCT 110</th>
<th>BCT 115</th>
<th>BCT 120</th>
<th>BCT 121</th>
<th>BCT 122</th>
<th>BCT 123</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Print Reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential Materials and Methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Math</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hand Tool/Power Tool Use and Safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction to Architectural Drawing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential Building Codes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential Electrical Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential HVAC Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential Plumbing Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential Heating Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential Elevator Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Site Preparation and Safe Use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Framing 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Framing 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Framing 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Framing 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Framing 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Framing 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Framing 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Framing 8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Framing 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Cluster Knowledge and Skills (CTE standards)

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Knowledge and Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACSM01</td>
<td>Understand the safe use of equipment and tools used in sheet metal and HVAC.</td>
</tr>
<tr>
<td>ACSM02</td>
<td>Perform proper piping practices.</td>
</tr>
<tr>
<td>ACSM03</td>
<td>Perform welding and brazing operations.</td>
</tr>
<tr>
<td>ACSM04</td>
<td>Identify fasteners, hangers, and supports and their use in sheetmetal and HVAC.</td>
</tr>
<tr>
<td>ACSM05</td>
<td>Understand the fundamentals concepts related to heating systems.</td>
</tr>
<tr>
<td>ACSM06</td>
<td>Understand the fundamentals concepts related to air distribution systems.</td>
</tr>
<tr>
<td>ACSM07</td>
<td>Read and interpret blueprints related to HVAC and sheetmetal projects.</td>
</tr>
<tr>
<td>ACSM08</td>
<td>Understand the fundamentals concepts related to air distribution systems.</td>
</tr>
<tr>
<td>ACSM09</td>
<td>Understand the relationship between indoor air quality and HVAC.</td>
</tr>
<tr>
<td>ACSM10</td>
<td>Understand the relationship between indoor air quality and HVAC.</td>
</tr>
<tr>
<td>ACSM11</td>
<td>Maintain heating and cooling systems.</td>
</tr>
<tr>
<td>ACSM12</td>
<td>Understand principles of sheet metal fabrication.</td>
</tr>
<tr>
<td>ACSM13</td>
<td>Troubleshoot heating and cooling systems.</td>
</tr>
<tr>
<td>ACSM14</td>
<td>Design heating and cooling systems.</td>
</tr>
</tbody>
</table>
# Skills-to-Course Matrix

**Building Construction**

**[High School Name]**  
**Portland Community College**  
**Jan-19**

## Architecture & Construction Cluster

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Cluster Knowledge and Skills (CTE standards)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Print Reading</td>
<td>ACGR01 Understand how fundamental science concepts and strategies are applied through building science.</td>
</tr>
<tr>
<td>Residential Materials and Methods</td>
<td>ACGR02 Understand the rationale for sustainability and green building.</td>
</tr>
<tr>
<td>Construction Math</td>
<td>ACGR03 Understand the issues, concepts, strategies, and processes of sustainable site planning and land use.</td>
</tr>
<tr>
<td>Residential Building Codes</td>
<td>ACGR04 Identify water-efficiency and management issues, concepts, strategies, and metrics associated with green building.</td>
</tr>
<tr>
<td>Intruduction to Architectural Drawing</td>
<td>ACGR05 Understand how energy is used in buildings and how energy-saving materials, systems, and techniques are used in green buildings.</td>
</tr>
<tr>
<td>Residential Concrete</td>
<td>ACGR06 Identify fire prevention and fire safety strategies and their impact on green buildings.</td>
</tr>
<tr>
<td>Residential Framing</td>
<td>ACGR07 Understand how materials selection and use is applied in green building.</td>
</tr>
<tr>
<td>Residential Concrete Framing</td>
<td>ACGR08 Identify green building industry codes and resources.</td>
</tr>
<tr>
<td>Residential Framing</td>
<td>ACGR09 Understand how industry accepted practices associated with design, construction and verification impact green building.</td>
</tr>
</tbody>
</table>

### Instructions:
1. Enter the Program of Study name above.
2. Enter your high school name.
3. Enter the community college name.
4. Enter the date.
5. Click on the cell for Course 1 Name, Course 2 Name, etc., and replace with your POS course names—second year and first year of post-secondary.
6. Enter school course numbers.
7. Enter NCES code for the course (secondary only).
8. Enter number of credits awarded.
9. Identify those courses that trigger the TSA for this POS.
10. Finally, check those standards that are taught with intent and purpose and are assessed in each course.

Note: The optional Focus Area tabs below are included for those POSs that have a very specific industry focus or use those skill sets for multiple options in a Program of Study.