The Smarter Balanced Assessment Consortium endorses the principle that all students need to achieve a level of mathematics and English language arts skills that will prepare them for success in a wide range of careers, including those that require post-secondary education or training. A Career Readiness Task Force composed of experts from Smarter Balanced Assessment Consortium member states created The Smarter Balanced Career Academic Readiness Frameworks are a tool to assist students, parents, teachers, and counselors as students develop their career and academic goals. Use of the frameworks is voluntary for states. The frameworks are models that states can alter to meet local needs. The Task Force recommends that each state assemble a committee composed of experts from K–12 and higher education, relevant governmental and non-governmental organizations, and the business community to review and customize these frameworks.

**College and Career Readiness**

The Common Core State Standards are designed to provide students with the fundamental English language arts/literacy (ELA) and mathematics skills necessary for success in postsecondary education and in postsecondary career education and training programs leading to occupations that pay family-sustaining wages and offer opportunities for advancement. Smarter Balanced members from K–12 and higher education crafted a College Content-readiness Policy to define how participating colleges and universities may recognize and use student scores on the Grade 11 end-of-year summative assessments to inform course placement. This policy identifies the performance levels at which students may be exempted from remediation and guaranteed placement into entry-level, transferable credit-bearing courses.

Given the diversity of occupations—and the wide array of ELA and mathematics knowledge and skill that occupations require—it is not possible to draw a bright line between students who are and are not ready for further career education and training. Further, recent research by the National Assessment Governing Board concluded that college and career readiness are not equivalent constructs and that students who are not ready for entry-level, credit-bearing college courses may be ready for postsecondary career education or job training. The challenge for educators is to provide students with information about the occupations they are currently prepared to pursue—and those that they could be ready to pursue with additional academic progress—without suggesting that grades and test scores are indicators of innate ability or that present performance is an insurmountable barrier to future educational and career achievement.

Because career readiness is a broad construct that encompasses knowledge, skills, and attributes far beyond ELA and mathematics—including technical knowledge and skills and employability knowledge and skills—the Smarter Balanced assessments are not meant to certify student readiness for the world of work (see the statement of the Career Ready Partner Council for a complete definition of career readiness). Ideally, indicators of academic preparation (including courses completed and grades in addition to test scores) should be part of a multi-faceted approach to career counseling that includes student interests as well as technical preparation through career technical education (CTE) or other avenues. However, Smarter Balanced scores across the performance continuum do provide valuable information about student preparation to meet the ELA and math requirements for postsecondary education and training programs associated with the wide array of occupations.
Given these constraints, the Career Academic Readiness Frameworks seek to inform students, parents and educators about the variety of occupational fields that exist and about how the breadth of occupations potentially available increases as one’s level of academic preparation improves. The frameworks are meant to be aspirational and educational in nature, not to suggest that students are locked into a particular occupation or group of occupations based on their assessment performance. As such, the frameworks are recommended for use as a tool to support teacher and school counselor communication with students and parents about assessment results and as a resource to integrate into existing programs of career counseling. They are not recommended for distribution to students and parents as stand-alone documents.

Organization and Limitations of the Career Academic Readiness Frameworks

There are 16 model frameworks, one for each of the 16 Career Clusters® developed by the National Association of State Directors of Career Technical Education Consortium (NASDCTEc). Many states use these 16 clusters to organize curricula for career and technical education (CTE) programs. Within each framework, exemplar occupations are displayed in 3 large categories:

1) occupations which require a postsecondary degree, and therefore readiness for entry-level, transferable, credit-bearing courses in English/composition and mathematics/statistics;
2) occupations which require a certificate or occupationally-focused associate degree (commonly referred to as an Associate of Applied Science) that typically do not require entering students to enroll in transferable courses in these subjects at all or as the first course in a math or English sequence; and
3) occupations which require on the job training only.

The lists of occupations, and the level of education and training required for each occupation, were drawn from the O*Net database, developed and maintained by the U.S. Department of Labor. This national database is a well-respected source of information on occupations. However, it does have several important limitations. While the database does identify the most common level of education workers in a particular occupation possess, it does not specify the minimum level of education necessary to enter a particular occupation. In addition, the O*Net database does not include careers...
that are particular to the military (although civilian occupations that have a military equivalent are included in the database).

The most important limitations of the O*Net database for this purpose are that it does not account for state and local variation in occupational requirements or education offerings. Requirements for formal apprenticeships vary by state (see www.doleta.gov) and so are not captured in the frameworks. Likewise, community college systems in some states offer the Associate of Applied Science, while others do not. There is also variation in the level of English and math required for similar degree programs. As states customize the frameworks, they are encouraged to re-align them to be consistent with local conditions. States also may want to take the added step of creating links between occupations and degree or certificate programs offered in the state.

Finally, the model frameworks do not distinguish between high- and low-frequency occupations or identify high-growth or high-demand fields. There is considerable variation in the frequency and demand for occupations by state and region that is not captured in O*Net. In constructing the frameworks, the Task Force decided to include all occupations listed in O*Net within each cluster. As states customize the frameworks, they may choose to edit the occupation lists to highlight high-frequency and/or high-demand fields within the state’s labor market. This information is typically produced by state governments; in addition, the Georgetown Center on Education and the Workforce has produced state-level reports on high-growth/high demand fields that may be a useful reference.

Recommended Uses for the Frameworks

The Career Readiness Task Force recommends that the frameworks be used as a counseling tool for Grade 8 and high school; however, states may use them with earlier grades at their option. Career counseling at Grade 8 is important so that students’ occupational interests can help to frame their high school academic programs (while Grade 8 end-of-year assessment results typically will arrive too late to inform course taking during Grade 9, Grade 8 interim assessment results can inform 9th grade courses because the schedule for the interim assessment is determined locally).

To guard against students concluding that their assessment results lock them into certain occupations or occupational groups, the frameworks are recommended for use as part of a broader program of counseling and information to assist students and parents in understanding and acting upon their assessment results.

State Customization of the Frameworks

As noted above, states are encouraged to customize the frameworks based on career and technical education curricula, the state labor market, the educational offerings of postsecondary institutions, or other factors. States also are encouraged to link from the career frameworks to existing career guidance resources and services, such as interest inventories, graduation plans, etc. Finally, since most states will display the frameworks on the internet, states may link from the frameworks to the O*Net My Next Move web site, which contains a wealth of information on the nature of each occupation, and to information on related postsecondary education and training programs offered within the state.
Because each state may customize the career cluster frameworks, no attempt has been made to develop a graphic design for the frameworks. Instead, they are presented in simple Microsoft Word documents to facilitate state review and customization. A model layout is provided, also in a simple format, to highlight the content and format decisions that will influence the final design a state may choose. States are encouraged to develop more creative designs. As state designs are finalized, Smarter Balanced will share that information among its member states.
All students need to achieve a level of mathematics and English language arts skills that will prepare them for success in a wide range of careers, including those that require post-secondary education or training. The Smarter Balanced assessments are designed to measure how well students understand and are able to apply the English and mathematics knowledge and skills needed for success in entry-level college courses and post-high school career education and training programs. To help students and parents better understand the wide array of available occupations that may suit their interests, the level of post-high school education and training required to enter different occupations, and the level of mathematics and English preparation necessary for success in those programs, [STATE] has created this resource. It consists of charts for 16 different groups of occupations, or “career clusters” (see list below) that include:

<table>
<thead>
<tr>
<th>Occupations</th>
<th>Post-High School Education or Training</th>
<th>Smarter Balanced Assessment Results</th>
<th>Implications for Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Occupations that require various levels of post-high school education or training.</td>
<td>• The types of post-high school education or training for which a student with each level of math or English achievement is currently prepared.</td>
<td>• Description of the four achievement levels on the Smarter Balanced assessments.</td>
<td>• Based on the achievement level, what a student would have to do in Grade 12 to be ready for credit-bearing college courses.</td>
</tr>
</tbody>
</table>

16 Career Clusters®

1. Agriculture, Food & Natural Resources
2. Architecture & Construction
3. Arts, AV Technology & Communications
4. Business, Management & Administration
5. Education & Training
6. Finance
7. Government & Public Administration
8. Health Science
9. Hospitality & Tourism
10. Human Services
11. Information Technology
12. Law, Public Safety, Corrections & Security
13. Manufacturing
14. Marketing, Sales and Service
15. Science, Technology, Engineering & Mathematics
16. Transportation, Distribution & Logistics
Starting with the career clusters, students and parents can explore the array of possible occupations and their associated post-high school education and training requirements. Students and parents should discuss the career cluster charts with teachers and guidance counselors as students map their high school course schedules and post-high school plans.

It is important to keep in mind that readiness for particular careers involves a lot more than the English and math knowledge and skills measured by the Smarter Balanced assessments. Students and parents are encouraged to take advantage of the resources below to learn more about particular careers and to discuss career options with teachers and guidance counselors.

**Glossary of Terms**

**Bachelor's Degree:** A four-year degree typically awarded by a college or university. Bachelor's degrees can prepare students for particular occupations or may provide broad preparation for the workforce or further graduate education.

**Associate Degree:** A two-year degree typically awarded by a community college or technical school. Associate degrees can prepare students for a particular occupation, or they can encompass the first two years of general education requirements needed for a bachelor's degree. Typically, entry level English or math courses for associate degrees will transfer to four-year colleges and universities and require similar levels of high school preparation.

**Certificates and Associate of Applied Science (AAS):** These credentials are awarded by community colleges or technical schools in specific occupational fields. Most require two years or less of full-time study, and transfer-level English or math courses may not be required.

**College Readiness:** As defined for the Smarter Balanced assessments, the knowledge and skills in English and math necessary for a variety of introductory college courses and, in particular, for entry-level, transferable, credit-bearing courses in English or composition and mathematics or statistics.
Graduate Degree: This category includes a broad array of academic and professional degrees. Programs can range from a one- or two-year master’s degree to doctoral or professional degrees in fields such as medicine requiring four years or more.

On the Job Training (OJT): Positions that require only OJT do not require any formal post-high school education or training.

Learn More

The 16 Career Clusters® [www.careertech.org/career-clusters/glance/careerclusters.html]

Occupation Information [www.mynextmove.org]

Smarter Balanced Assessments [www.smarterbalanced.org]

State Resource 1 XXX
State Resource 2 XXX
State Resource 3 XXX
Smarter Balanced scores are not an indication of potential and place no limits on the types of occupations that a student may want to pursue. Instead, the scores provide students, parents and teachers with a clear measure of current performance to help chart a path toward meeting each student’s career goals.

Career Cluster: XXX

<table>
<thead>
<tr>
<th>Occupations</th>
<th>Post-High School Education or Training</th>
<th>Smarter Balanced Assessment Results</th>
<th>Implications for Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation 1A (Associate)</td>
<td>Requires a postsecondary degree (Associate, Bachelor’s or graduate degree)</td>
<td>Level 4: Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English].</td>
<td>Level 4: Student is exempt from non-credit developmental college course work. [INSERT STATE GRADE 12 REQUIREMENTS TO RETAIN EXEMPTION, IF ANY]. Student is encouraged to take appropriate advanced courses leading to college credit while in high school.</td>
</tr>
<tr>
<td>Occupation 2A (Associate)</td>
<td></td>
<td>Level 3: Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English].</td>
<td>Level 3: Student is conditionally exempt from non-credit developmental college course work, contingent on [INSERT STATE REQUIREMENTS]. Student is encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school.</td>
</tr>
<tr>
<td>Occupation 1B (Bachelors)</td>
<td></td>
<td></td>
<td>Level 2: Student is exempt from non-credit developmental college course work. [INSERT STATE GRADE 12 REQUIREMENTS TO RETAIN EXEMPTION, IF ANY]. Student is encouraged to take appropriate advanced courses leading to college credit while in high school.</td>
</tr>
<tr>
<td>Occupation 2B (Bachelors)</td>
<td></td>
<td></td>
<td>Level 2: Student is exempt from non-credit developmental college course work. [INSERT STATE GRADE 12 REQUIREMENTS TO RETAIN EXEMPTION, IF ANY]. Student is encouraged to take appropriate advanced courses leading to college credit while in high school.</td>
</tr>
<tr>
<td>Occupation 1G (Graduate)</td>
<td></td>
<td></td>
<td>Level 2: Student needs support to meet college readiness standard.</td>
</tr>
<tr>
<td>Occupation 2G (Graduate)</td>
<td></td>
<td></td>
<td>Level 2: Student needs support to meet college readiness standard.</td>
</tr>
<tr>
<td></td>
<td>Requires a certificate and/or on-the job training. These programs do not require that entering students are prepared for credit-bearing, transferable courses in math or English.</td>
<td>Level 2: Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college readiness in [math/English].</td>
<td>Level 2: Student needs support to meet college readiness standard.</td>
</tr>
<tr>
<td>Occupation 1C (Certificate/Associate of Applied Science)</td>
<td>Requires on the job training only.</td>
<td></td>
<td>Level 1: Student needs substantial support to meet college readiness standard.</td>
</tr>
<tr>
<td>Occupation 2C (Certificate/AAS)</td>
<td></td>
<td></td>
<td>Level 1: Student needs substantial support to meet college readiness standard.</td>
</tr>
<tr>
<td>Occupation 1D (High School Diploma)</td>
<td></td>
<td></td>
<td>Level 1: Student needs substantial support to meet college readiness standard.</td>
</tr>
<tr>
<td>Occupation 2D (High School Diploma)</td>
<td></td>
<td></td>
<td>Level 1: Student needs substantial support to meet college readiness standard.</td>
</tr>
<tr>
<td>Occupation 1N (No HS Diploma)</td>
<td></td>
<td></td>
<td>Level 1: Student needs substantial support to meet college readiness standard.</td>
</tr>
<tr>
<td>Occupation 2N (No HS Diploma)</td>
<td></td>
<td></td>
<td>Level 1: Student needs substantial support to meet college readiness standard.</td>
</tr>
</tbody>
</table>
Notes

This layout is provided as a possible model, but states are encouraged to develop other designs. The layout of the material will depend on several state-determined factors:

- The number of occupations a state chooses to display. Smarter Balanced has chosen to provide states with the complete list of occupations from the O*Net database, but states are encouraged to edit that list to align to the state labor market, CTE curricula, and/or postsecondary education and training options. States also may want to augment the list to include apprenticeships associated with particular occupations.
- The extent of state requirements for students to retain or earn an exemption from developmental coursework and state decisions about whether and how to integrate that information into the career readiness frameworks.
- Additional information on CTE offerings, internships or other experiential learning opportunities that states may want to include under the “implications” header.
- Whether the resource will be offered only online or also in a paper format. By taking advantage of hyperlinks, a wider variety of layout options become available. However, states may want to offer a paper option to facilitate use in schools.

The model provided here applies to Grade 11 results. States wishing to use the framework with earlier grades will need to edit the “Implications” column to reflect school and postsecondary requirements (e.g. number and type of English and math courses required for admission to public four-year colleges and universities).

The descriptions under “Smarter Balanced Assessment Results” are not the final text that will be included in Smarter Balanced score reports. When that language is finalized in fall 2014, it will be widely distributed to states so that documents such as this may be updated.
<table>
<thead>
<tr>
<th>Achievement Level 4</th>
<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English].</td>
<td><strong>Description:</strong> Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English].</td>
<td>• Computer User Support Specialists (Associates)</td>
</tr>
<tr>
<td><strong>Grade 12 Implications:</strong> Student is exempt from developmental course work. Students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain this exemption. Students are encouraged to take appropriate advanced courses leading to college credit while still in high school.</td>
<td><strong>Grade 12 Implications:</strong> Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school.</td>
<td>• First-Line Supervisors of Office and Administrative Support Workers (Bachelors)</td>
</tr>
<tr>
<td><strong>Postsecondary Education and Training:</strong> Requires a postsecondary degree.</td>
<td><strong>Postsecondary Education and Training:</strong> Requires a postsecondary degree.</td>
<td>• Food Scientists and Technologists (Bachelors)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Biochemists and Biophysicists (Graduate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Economists (Graduate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Biological Science Teachers, Postsecondary (Graduate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cartographers and Photogrammetrists (Bachelors)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Conservation Scientists (Bachelors)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Engineering Technicians, Except Drafters, All Other (Bachelors)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Environmental Science Teachers, Postsecondary (Graduate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Environmental Scientists and Specialists, Including Health (Bachelors)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Forest and Conservation Technicians (Associates)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Forest and Conservation Workers (Bachelors)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Foresters (Bachelors)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Geological and Petroleum Technicians (Bachelors or Graduate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Geophysical Data Technicians (Bachelors or Graduate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Mechanical Engineering Technicians (Bachelors)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Natural Sciences Managers (Bachelors)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Park Naturalists (Bachelors)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Precision Agriculture Technicians (Bachelors)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Range Managers (Bachelors)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Recreation and Fitness Studies Teachers, Postsecondary (Graduate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Recreation Workers (Bachelors)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Ship and Boat Captains (Associates)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Soil and Water Conservationists (Bachelors)</td>
</tr>
</tbody>
</table>
| Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice. | Environmental Science and Protection Technicians, Including Health (Bachelors)  
Occupational Health and Safety Specialists (Bachelors)  
Occupational Health and Safety Technicians (Bachelors)  
Recycling Coordinators (Bachelors) | Nursery and Greenhouse Managers (Bachelors)  
Soil and Plant Scientists (Bachelors or Graduate)  
Chemical Technicians (Associates)  
Veterinary Assistants and Laboratory Animal Caretakers (Associates)  
Agricultural Technicians (Bachelors) |
### Career Readiness Framework
Agriculture, Food and Natural Resources

<table>
<thead>
<tr>
<th>Achievement Level 2</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Audio and Video Equipment Technicians (HS diploma or Certificate)  
• Chemical Technicians (HS diploma)  
• Food Science Technicians (HS diploma)  
• First-Line Supervisors of Office and Administrative Support Workers (Associates)  
• Refrigeration Mechanics and Installers (Certificate)  
• First-Line Supervisors of Construction Trades and Extraction Workers (HS diploma or Certificate)  
• Forest and Conservation Technicians (HS diploma)  
• First-Line Supervisors of Retail Sales Workers (HS diploma)  
• Captains, Mates, and Pilots of Water Vessels (HS diploma or certificate)  
• Geological Sample Test Technicians (HS diploma or certificate)  
• Mechanical Engineering Technicians (HS diploma)  
• Aircraft Mechanics and Service Technicians (HS diploma and Certificate)  
• Commercial Divers (HS diploma or certificate)  
• Pesticide Handlers, Sprayers, and Applicators, Vegetation (HS diploma and certificate)  
• Mobile Heavy Equipment Mechanics, Except Engines (HS diploma or certificate)  
• Farm Equipment Mechanics and Service Technicians (HS diploma)  
• Log Graders and Scalers (HS diploma)  
• Gas Plant Operators (HS diploma or certificate)  
• First-Line Supervisors of Farming, Fishing, and Forestry Workers (HS diploma or certificate)  
• Agricultural Inspectors (HS diploma or certificate)  
• Water and Wastewater Treatment Plant and System Operators (HS diploma or certificate) | • Pump Operators, Except Wellhead Pumpers (HS diploma or certificate)  
• Helpers--Extraction Workers (HS diploma)  
• Explosive Workers, Ordnance Handling Experts, and Blasters (HS diploma)  
• Office Machine Operators, Except Computer (HS diploma)  
• Pest Control Workers (HS diploma)  
• Excavating and Loading Machine and Dragline Operators (HS diploma)  
• Industrial Truck and Tractor Operators (HS diploma or certificate)  
• Loading Machine Operators, Underground Mining (HS diploma)  
• Mine Cutting and Channeling Machine Operators (HS diploma)  
• Mine Shuttle Car Operators (HS diploma)  
• Refuse and Recyclable Material Collectors (HS diploma)  
• Roof Bolters, Mining (HS diploma)  
• Rotary Drill Operators, Oil and Gas (HS diploma)  
• Roustabouts, Oil and Gas (HS diploma)  
• Sawing Machine Setters, Operators, and Tenders, Wood (HS diploma)  
• Wellhead Pumpers (HS diploma)  
• First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers (HS diploma)  
• First-Line Supervisors of Logging Workers (HS diploma or certificate)  
• Tree Trimmers and Pruners (HS diploma)  
• Parts Salespersons (HS diploma)  
• Nursery Workers (HS diploma) |

**Grade 12 Implications:** Student needs support to meet college content-readiness standard.

**Postsecondary Education and Training:** Requires a certificate and/or on-the-job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition.
### Career Readiness Framework

**Agriculture, Food and Natural Resources**

<table>
<thead>
<tr>
<th>Operators (HS diploma or certificate)</th>
<th>Floral Designers (HS diploma)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Food Batchmakers (HS diploma)</td>
<td>• Farmworkers and Laborers, Crop, Nursery, and Greenhouse (HS diploma)</td>
</tr>
<tr>
<td>• Animal Trainers (HS diploma)</td>
<td>Butchers and Meat Cutters (HS diploma or certificate)</td>
</tr>
<tr>
<td>• Nonfarm Animal Caretakers (HS diploma)</td>
<td>• Gas Compressor and Gas Pumping Station Operators (HS diploma or certificate)</td>
</tr>
<tr>
<td>• Veterinary Assistants and Laboratory Animal Caretakers (HS diploma or certificate)</td>
<td>Petroleum Pump System Operators, Refinery Operators, and Gaugers (HS diploma)</td>
</tr>
<tr>
<td>• Hazardous Materials Removal Workers (HS diploma or certificate)</td>
<td></td>
</tr>
<tr>
<td>• Handling Experts, and Blasters (HS diploma or certificate)</td>
<td></td>
</tr>
</tbody>
</table>

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
<table>
<thead>
<tr>
<th>Achievement Level 1</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Refrigeration Mechanics and Installers (Less than HS diploma)  
• Retail Salespersons (Less than HS diploma)  
• Log Graders and Scalers (Less than HS diploma)  
• Animal Trainers (Less than HS diploma)  
• Nonfarm Animal Caretakers (Less than HS diploma)  
• Farm Labor Contractors (Less than HS diploma)  
• Hunters and Trappers (Less than HS diploma)  
• First-Line Supervisors of Agricultural Crop and Horticultural Workers (Less than HS diploma)  
• First-Line Supervisors of Logging Workers (Less than HS diploma)  
• Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders (Less than HS diploma)  
• Food Cooking Machine Operators and Tenders (Less than HS diploma)  
• Graders and Sorters, Agricultural Products (Less than HS diploma)  
• Meat, Poultry, and Fish Cutters and Trimmers (Less than HS diploma)  
• Slaughtermen and Meat Packers (Less than HS diploma)  
• Continuous Mining Machine Operators (Less than HS diploma)  
• Conveyor Operators and Tenders (Less than HS diploma)  
• Derrick Operators, Oil and Gas (Less than HS diploma)  
• Earth Drillers, Except Oil and Gas (Less than HS diploma)  
• Explosives Workers, Ordnance |
| **Grade 12 Implications:** Student needs substantial support to meet college content-readiness standard. | • Fallers (Less than HS diploma)  
• Logging Equipment Operators (Less than HS diploma)  
• Rock Splitters, Quarry (Less than HS diploma)  
• Rotary Drill Operators, Oil and Gas (Less than HS diploma)  
• Floral Designers (Less than HS diploma)  
• Roustabouts, Oil and Gas (Less than HS diploma)  
• Service Unit Operators, Oil, Gas, and Mining (Less than HS diploma)  
• Tank Car, Truck, and Ship Loaders (Less than HS diploma)  
• Agricultural Equipment Operators (Less than HS diploma)  
• Landscaping and Groundskeeping Workers (Less than HS diploma)  
• Tree Trimmers and Pruners (Less than HS diploma)  
• Farmworkers, Farm, Ranch, and Aquacultural Animals (Less than HS diploma)  
• Farmworkers and Laborers, Crop, Nursery, and Greenhouse (Less than HS diploma)  
• Farmworkers and Laborers, Crop (Less than HS diploma)  
• Fishers and Related Fishing Workers (Less than HS diploma)  
• Farmworkers, Farm, Ranch, and Aquacultural Animals (Less than HS diploma) |
| **Postsecondary Education and Training:** Requires on the job training only. | |

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
<table>
<thead>
<tr>
<th>Achievement Level 4</th>
<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description:** Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | **Description:** Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | • Architect-Masters  
• Construction Engineer-MS (Masters of Science)  
• Design Builder- MS  
• Environmental Engineer-MS  
• Fire Prevention and Protection Engineer-MS  
• Building Designer-MS  
• Project Manager-Bachelor of Science or MS  
• Construction Engineer-MS  
• Mechanical Engineer-MS  
• Regional and Urban Planner/Designer-MS  
• Electrical Engineer-MS  
• Civil Engineer-MS  
• Civil Engineering Technician-AAS or Higher  
• Structural Engineer-MS  
• Electronic Engineer-MS  
• Environmental Engineer-MS  
• Construction Manager-BS or higher  
• Code Official-Associates of Applied Science (AAS) or higher | • Service Contractor and Field Supervisor-AAS or Higher  
• Superintendent-BS or Higher  
• General Contractor/Builder-OJT and AAS or Higher  
• Environmental Designer-BS or Higher  
• Contractor-OJT and AAS or Higher  
• Project Manager-BS  
• Solar Energy Installation Manager-AAS or Higher  
• Kitchen and Bath Designer-BA  
• Equipment and Material Manager-AAS or Higher  
• Project Estimator-AAS or Higher  
• Project Inspector-AAS or Higher  
• Building Code Official-AAS or Higher  
• Code Official-AAS or Higher  
• Cost Estimator-AAS or Higher  
• Interior Designer-BS  
• Specification Writer-BS  
• Construction Inspector-AAS or Higher  
• Industrial Construction Inspector-BS  
• Safety Director-BS |

**Grade 12 Implications:**  
Student is exempt from developmental course work. Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while still in high school.  

**Grade 12 Implications:**  
Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school.

**Postsecondary Education and Training:** Requires a postsecondary degree.  

**Postsecondary Education and Training:** Requires a postsecondary degree.

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
<table>
<thead>
<tr>
<th>Achievement Level 2</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Carpenter-Certificate (C) and/or OJT (O)  
• Construction Foreman-C&O  
• Subcontractor-C or O  
• Drafter-C  
• System Installer-C & O  
• Security and Fire Alarm System Installer-C&O  
• Hazardous Material Remover-C  
• Mason-C&O  
• Plumber-C  
• Pipefitter/Steamfitter-C  
• Sheet Metal Worker-C&O  
• Electrician-C  
• Electronic Systems Technician-C&O  
• Surveying and Mapping Technician-C&O  
• Heating, Ventilation, Air Conditioning and Refrigeration Mechanic-C&O  
• Maintenance and Repair Workers-C or O (some AAS)  
• Specialty Contractor-C&O  
• Crane and Tower Operator-C&O  
• Hoist and Winch Operator-C  
• Operating Engineers-C  
• Solar Energy Technician-C  
• Surveyor-C  
• Wind Turbine Service Technician-C&O  
• Welder-C&O  
• Furniture Designer-C&O  
• Set Designer-C&O |
| **Grade 12 Implications:** Student needs support to meet college content-readiness standard. | |
| **Postsecondary Education and Training:** Requires a certificate and/or on-the job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition. | Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice. |
### Achievement Level 1

**Description.** Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness.

- Drywall Installer
- Construction Laborer
- Concrete Finisher
- Cement Mason and Concrete Finisher
- Block Mason
- Fence Erector
- Insulation Worker
- Plasterers and Stucco Mason
- Paperhanger

### Grade 12 Implications:
Student needs substantial support to meet college content-readiness standard.

- Painter
- Pile Driver Operator
- Tile and Marble Setter
- Roofer
- Carpenter’s Helper
- Plumber’s Helper
- Pipelayers
- Electrician’s Helper
- Hod Carrier
- Glazier
- Carpet Installer
- Floor Layer
- Floor Sander
- Reinforcing Iron and Rebar Worker
- Riggers
- Structural Iron and Steel Worker
- Landscaping and Groundskeeping Worker
- Paving/Surfacing Worker

### Postsecondary Education and Training:
Requires on-the-job training only.

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
### Career Readiness Framework
#### Arts, Audio-Video Technology and Communications

<table>
<thead>
<tr>
<th>Achievement Level 4</th>
<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description**: Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | **Description**: Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | • Directors – Stage, Motion Pictures, Television, and Radio (Bachelors)  
• Editors (Bachelors)  
• English Language and literature Teachers, Postsecondary (Graduate)  
• Poets, Lyricists and Creative Writers (Bachelors)  
• Producers (Bachelors)  
• Program Directors (Bachelors)  
• Reporters and Correspondents (Bachelors)  
• Talent Directors (Bachelors)  
• Technical Directors/Managers (Bachelors)  
• Technical Writers (Bachelors)  
• Music Directors (Bachelors)  
• Music Composers and Arrangers (Associate)  
• Musicians, Instrumental (Associate)  
• Proofreaders and Copy Markers (Bachelors)  
• Art Directors (Bachelors)  
• Desktop Publishers (Associate)  
• Fashion Designers (Associate)  
• Interior Designers (Bachelors) |

<table>
<thead>
<tr>
<th>Grade 12 Implications:</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while in high school.</td>
<td>Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school.</td>
<td>Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school.</td>
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<tbody>
<tr>
<td>Requires a postsecondary degree.</td>
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</tbody>
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*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
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<thead>
<tr>
<th>Achievement Level 2</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description.</strong> Student demonstrates partial understanding of and ability to</td>
<td>- Audio and Video Equipment Technicians (Certificate or Associate)</td>
</tr>
<tr>
<td>apply the knowledge and skills associated with college content readiness.</td>
<td>- Broadcast Technicians (Certificate)</td>
</tr>
<tr>
<td></td>
<td>- Camera and Photographic Equipment Repairers (Certificate or Associate)</td>
</tr>
<tr>
<td></td>
<td>- Camera Operators, Television, Video, and Motion Picture (Associate)</td>
</tr>
<tr>
<td></td>
<td>- Sound Engineering Technicians (HS Diploma or Certificate)</td>
</tr>
<tr>
<td></td>
<td>- Court Reporters (Certificate or Associate)</td>
</tr>
<tr>
<td></td>
<td>- Radio and Television Announcers (HS Diploma or Certificate)</td>
</tr>
<tr>
<td></td>
<td>- Radio Operators (HS Diploma or Certificate)</td>
</tr>
<tr>
<td></td>
<td>- Sound Engineering Technicians (HS Diploma or Certificate)</td>
</tr>
<tr>
<td></td>
<td>- Makeup Artists, Theatrical and Performance (Certificate or Associate)</td>
</tr>
<tr>
<td></td>
<td>- Prepress Technicians and Workers (Certificate)</td>
</tr>
<tr>
<td></td>
<td>- Printing Press Operators (Certificate)</td>
</tr>
<tr>
<td></td>
<td>- Computer, Automated Teller, and Office Machine Repairers (Certificate or Associate)</td>
</tr>
<tr>
<td></td>
<td>- Electronic Home Entertainment Equipment Installers and Repairers (Certificate or Associate)</td>
</tr>
<tr>
<td></td>
<td>- Radio Mechanics (Certificate or Associate)</td>
</tr>
<tr>
<td></td>
<td>- Telecommunications Equipment Installers and Repairers except Line Installers (Certificate)</td>
</tr>
<tr>
<td><strong>Grade 12 Implications:</strong></td>
<td></td>
</tr>
<tr>
<td>Student needs support to meet college content-readiness standard.</td>
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<td></td>
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</tr>
<tr>
<td><strong>Postsecondary Education and Training:</strong> Requires a certificate and/or on-the job</td>
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</tr>
<tr>
<td>training. These programs do not require that students are prepared at entry for</td>
<td></td>
</tr>
<tr>
<td>credit-bearing, transferable courses in mathematics or statistics, or English or</td>
<td></td>
</tr>
<tr>
<td>composition.</td>
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</tr>
</tbody>
</table>

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
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<tr>
<th>Achievement Level 1</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Craft Artists (OJT)  
• Public Address System and other Announcers (OJT)  
• Actors (OJT)  
• Laborers and Freight, Stock, and Material Movers, Hand (OJT)  
• Singers (OJT)  
• Data Entry Keyers (OJT)  
• Etchers and Engravers (OJT)  
• Print Binding and Finishing Workers (OJT) |
| **Grade 12 Implications:** Student needs substantial support to meet college content-readiness standard. | • Coin, Vending, and Amusement Machine Servicers and Repairers (OJT)  
• Telecommunications Line Installers and Repairers (OJT)  
• Painting, Coating, and Decorating Workers (OJT)  
• Photographic Process Workers and Processing Machine Operators (OJT) |
| **Postsecondary Education and Training:** Requires on the job training only. | |

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
<table>
<thead>
<tr>
<th>Achievement Level 4</th>
<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description:** Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | **Description:** Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | • Accountants (Graduate)  
• Auditors (Bachelors)  
• Chief Executives (Graduate)  
• Compliance Managers (Bachelors)  
• Computer & Info System Managers (Bachelors)  
• Computer & Info System Managers (Bachelors)  
• Computer Programmers (Bachelors)  
• Cost Estimators (Bachelors)  
• Database Administrators (Bachelors)  
• Executive Secretaries and Executive Administrative Assistants (Associates)  
• First-Line Supervisors of Office and Administrative Support Workers (Certificate, Associates)  
• General & Operations Managers (Associates)  
• Management Analysts (Bachelors)  
• Market Research Analysts and Marketing Specialists (Bachelors)  
• Medical & Health Services Managers (Graduate)  
• Public Relations Specialists (Bachelors)  
• Regulatory Affairs Managers (Bachelors)  
• Sales Managers (Bachelors)  
• Sales Representatives, Wholesale, & Manufacturing, Technical & Scientific Products (Bachelors)  
• Secretaries and Administrative Assistants (Certificate, Associates)  
• Insurance Sales Agents (HS Diploma or Bachelors) |
<p>| <strong>Grade 12 Implications:</strong> Student is exempt from developmental course work. Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while still in high school. | <strong>Grade 12 Implications:</strong> Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school. |<br />
| <strong>Postsecondary Education and Training:</strong> Generally requires a postsecondary degree. | <strong>Postsecondary Education and Training:</strong> Generally requires a postsecondary degree. | Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice. |</p>
<table>
<thead>
<tr>
<th>Achievement Level 2</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Billing, Cost, & Rate Clerks (OJT)  
• Accounting & Auditing Clerks (OJT)  
• Customer Service Representatives (OJT)  
• Drivers/Sales Workers (OJT)  
• Office Clerks (OJT)  
• Order Fillers, Wholesale and Retail Sales (OJT)  
• Receptionists and Information Clerks (OJT)  
• Shipping, Receiving, & Traffic Clerks (OJT) |
| **Grade 12 Implications:** Student needs support to meet college content-readiness standard. | |
| **Postsecondary Education and Training:** Generally requires a certificate and/or on-the-job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition. | |

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
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</table>
| **Description.** Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Call center representative  
• Data entry |
| **Grade 12 Implications:** Student needs substantial support to meet college content-readiness standard. | |
| **Postsecondary Education and Training:** Requires on the job training only. | |

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
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<th>Description:</th>
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<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| Achievement Level 4 | Achievement Level 3 | - Adult Basic and Secondary Education Literacy Instructor (Graduate)  
- Archivist (Graduate)  
- Audio Visual Collections Specialist (Bachelors)  
- Career/Technical Education Teacher, Middle and Secondary (Bachelors)  
- Clinical Counseling and School Psychologist (Graduate)  
- Clinical, Counseling, and School Psychologist (Graduate)  
- Copy Writer (Bachelors)  
- Curators (Graduate)  
- Dieticians (Graduate)  
- Distance Learning Coordinator (Graduate)  
- Education Administrators, Elementary and Secondary (Graduate)  
- Education Administrators, Postsecondary (Graduate)  
- Education Administrators, Preschool and Childcare Center (Bachelors)  
- Educational Guidance, School, and Vocational Counselors (Graduate)  
- Elementary School Teacher (Bachelors)  
- Instructional Coordinators (Graduate)  
- Instructional Designers and Technologists (Graduate)  
- Librarian (Graduate)  
- Middle School Teacher (Bachelors)  
- Poet, Creative Writer (Associates)  
- Postsecondary Teacher (Graduate)  
- Preschool Teacher (Associates)  
- Recreation Workers (Bachelors)  
- Regulatory Affairs Specialist (Bachelors)  
- School Psychologist (Graduate)  
- Secondary School Teacher (Bachelors)  
- Special Education Teacher (Bachelors)  
- Substance Abuse and Behavior Disorder Counselors (Associates)  
- Vocation Education Teacher, Postsecondary (Associates)  

| Grade 12 Implications: | Grade 12 Implications: |  |
|-----------------------|-----------------------|  |
| Student is exempt from developmental course work. Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while in high school.  | Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school.  |  |
| Postsecondary Education and Training: Requires a postsecondary degree.  | Postsecondary Education and Training: Requires a postsecondary degree.  |  |
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</table>
| **Description.** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Coaches and Scouts (OJT)  
• Fitness Training and Aerobics Instructor (OJT, Certificate)  
• Library Assistant, Clerical (OJT)  
• Teacher Assistant (OJT) |
| **Grade 12 Implications:** Student needs support to meet college content-readiness standard. | |
| **Postsecondary Education and Training:** Requires a certificate and/or on-the-job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition. | |

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
**Career Readiness Framework**

**Education and Training**

<table>
<thead>
<tr>
<th>Achievement Level 1</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Attendance Clerk  
• Teacher Aide  
• Yard/Recess Aide |
| **Grade 12 Implications:** Student needs substantial support to meet college content-readiness standard. | |
| **Postsecondary Education and Training:** Requires on the job training only. | |

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
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<th>Achievement Level 4</th>
<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description:** Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | **Description:** Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | • Actuaries (Bachelors)  
• Brokerage Clerks (HS Diploma, Certificate or Bachelors)  
• Budget Analysts (Bachelors)  
• Business Teachers, Postsecondary (Graduate)  
• Claims Adjusters, Examiners, and Investigators (Bachelors)  
• Credit Analysts (Bachelors)  
• Financial Analysts (Bachelors)  
• Financial Managers (Graduate or Bachelors)  
• Financial Managers, Branch or Department (Bachelors)  
• Financial Quantitative Analysts (Bachelors)  
• Financial Specialists (Graduate or Bachelors)  
• Fraud Examiners, Investigators and Analysts (Bachelors)  
• Insurance Adjusters, Examiners, and Investigators (Bachelors or Certificate)  
• Insurance Appraisers, Auto Damage (HS Diploma, Associates or Bachelors)  
• Insurance Underwriters (Bachelors)  
• Investment Fund Managers (Graduate)  
• Investment Underwriters (Graduate or Bachelors)  
• Loan Counselors (Bachelors)  
• Loan Officers (HS Diploma, Certificate or Bachelors)  
• Personal Financial Advisors (Bachelors)  
• Risk Management Specialists (Graduate or Bachelors)  
• Sales Agents, Securities and Commodities (Bachelors)  
• Securities and Commodities Traders (Bachelors)  
• Securities, Commodities, and Financial Services Sales Agents (Bachelors)  
• Tax Preparers (HS Diploma, Associates or Bachelors)  
• Treasurers and Controllers (Graduate) |
| **Grade 12 Implications:** Student is exempt from developmental course work. Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while still in high school. | **Grade 12 Implications:** Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school. |  |
| **Postsecondary Education and Training:** Generally requires a postsecondary degree. | **Postsecondary Education and Training:** Generally requires a postsecondary degree. |  |

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
### Achievement Level 2

**Description.** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness.

**Grade 12 Implications:**
Student needs support to meet college content-readiness standard.

### Exemplar Occupations

- Bill and Account Collectors (HS Diploma)
- Credit Authorizers (Certificate or Associates)
- Insurance Claims Clerks (HS Diploma or Certificate)
- Insurance Policy Processing Clerks (HS Diploma or Certificate)
- Loan Interviewers and Clerks (Certificate or Associates)
- New Accounts Clerks (HS Diploma)
- Sales Agents, Financial Services (HS Diploma)
- Telemarketers (HS Diploma)
- Tellers (HS Diploma)
- Title Examiners, Abstractors, and Searchers (HS Diploma or Certificate)

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
## Achievement Level 1

**Description**: Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness.

- No Positions

**Grade 12 Implications**: Student needs substantial support to meet college content-readiness standard.

**Postsecondary Education and Training**: Requires on the job training only.

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
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<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
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</table>
| **Description:** Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | **Description:** Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | - Accountant (Bachelors’ Degree)  
- Administrative Services Manager (Associate’s Degree)  
- Appraiser, Real Estate – (Bachelor’s Degree)  
- Architectural and Engineering Managers (Bachelors’ Degree)  
- Architecture Teachers, Post-Secondary (PhD.)  
- Assessor (HS Diploma, Associate Degree, OJT)  
- Auditor (Bachelor’s Degree)  
- Aviation Inspector (Associate’s Degree)  
- Broadcast News Analyst (Bachelor’s Degree)  
- Chief Executive (Master’s, PhD, J.D., M.D.)  
- City and Regional Planning Aides (Master’s Degree)  
- Climate Change Analyst (Master’s Degree)  
- Communications Teacher, Post-Secondary (PhD.)  
- Compliance Officer (Bachelor’s Degree)  
- Economist (PhD or Professional Degree)  
- Emergency Management Director (Bachelor’s Degree)  
- Equal Opportunity Representatives and Officers (Bachelor’s Degree)  
- Financial Examiner (Bachelor’s Degree)  
- Freight & Cargo Inspectors (Bachelor’s Degree)  
- General & Operations Managers (Associate’s Degree)  
- Intelligence Analyst (Bachelor’s Degree)  
- Logistics Manager (Bachelor’s Degree)  
- Mapping Technician (Associate’s Degree) |
<p>| <strong>Grade 12 Implications:</strong> Student is exempt from developmental course work. Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while in high school. | <strong>Grade 12 Implications:</strong> Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school. |</p>
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</tr>
</thead>
<tbody>
<tr>
<td>• Political Scientist (PhD)</td>
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</tr>
<tr>
<td>• Political Science Teacher, Post-Secondary (PhD)</td>
<td></td>
</tr>
<tr>
<td>• Public Relations Specialist (Bachelor’s Degree)</td>
<td></td>
</tr>
<tr>
<td>• Reporters and Correspondents (Bachelor’s Degree)</td>
<td></td>
</tr>
<tr>
<td>• Revenue Agent (Bachelor’s Degree)</td>
<td></td>
</tr>
<tr>
<td>• Social &amp; Community Service Managers (Bachelor’s Degree)</td>
<td></td>
</tr>
<tr>
<td>• Statistical Assistants (Bachelor’s Degree)</td>
<td></td>
</tr>
<tr>
<td>• Storage &amp; Distribution Managers (Bachelor’s Degree)</td>
<td></td>
</tr>
<tr>
<td>• Surveying Technician (Associate’s Degree)</td>
<td></td>
</tr>
<tr>
<td>• Tax Collector (Bachelor’s Degree)</td>
<td></td>
</tr>
<tr>
<td>• Tax Examiner (Bachelor’s Degree)</td>
<td></td>
</tr>
<tr>
<td>• Transportation Manager (Bachelor’s Degree)</td>
<td></td>
</tr>
<tr>
<td>• Urban &amp; Regional Planners (Bachelor’s or Master’s Degree)</td>
<td></td>
</tr>
</tbody>
</table>

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
## Achievement Level 2

**Description.** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness.

<table>
<thead>
<tr>
<th>Exemplar Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Construction and Building Inspectors (Some College, OJT)</td>
</tr>
<tr>
<td>• Coroner (Some College, OJT)</td>
</tr>
<tr>
<td>• Court Clerk (HS Diploma)</td>
</tr>
<tr>
<td>• Detectives and Criminal Investigators (HS Diploma, OJT, Certificate)</td>
</tr>
<tr>
<td>• Eligibility Interviewers, Government Programs (HS Diploma)</td>
</tr>
<tr>
<td>• Government Property Inspectors and Investigators (Some College, OJT)</td>
</tr>
<tr>
<td>• Immigration &amp; Customs Inspector (High School Diploma, OJT)</td>
</tr>
<tr>
<td>• License Clerks (HS Diploma, OJT)</td>
</tr>
<tr>
<td>• Licensing Examiners &amp; Inspectors (HS Diploma)</td>
</tr>
<tr>
<td>• Meter Reader (HS Diploma)</td>
</tr>
<tr>
<td>• Municipal Clerk (HS Diploma)</td>
</tr>
<tr>
<td>• Post Master (HS Diploma)</td>
</tr>
<tr>
<td>• Postal Service Clerk (HS Diploma)</td>
</tr>
<tr>
<td>• Postal Service Mail Carriers (HS Diploma)</td>
</tr>
<tr>
<td>• Tax Preparer (HS Diploma, OJT)</td>
</tr>
</tbody>
</table>

**Grade 12 Implications:** Student needs support to meet college content-readiness standard.

**Postsecondary Education and Training:** Requires a certificate and/or on-the-job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition.
Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
<table>
<thead>
<tr>
<th>Achievement Level 1</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Mail Sorters (OJT)  
• Mail Processors (OJT)  
• Mail Processing Machine Operators (OJT) |
| **Grade 12 Implications:** Student needs substantial support to meet college content-readiness standard. | |
| **Postsecondary Education and Training:** Requires on the job training only. | |
Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
### Achievement Level 4

**Description:** Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/english].

### Achievement Level 3

**Description:** Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/english].

### Exemplar Occupations

- Acupuncturist-Masters (MS)
- Anesthesiologist Assistant-MS, Bachelor (B)
- Athletic Trainer-B or higher
- Biochemist-MS or higher
- Biostatistician-MS or higher
- Dental Assistant-Associate (AA/AS) or apprenticeship (A)
- Dental Hygienist-AA/AS or higher
- Diagnostic Medical Sonographer-AA/AS
- EMT/Paramedic-Certificate (C) or AA/AS
- Genetic Counselor-MS
- Massage Therapist-AK/AS or C
- Medical and Clinical Laboratory Technician-AA/AS or higher
- Dietician/Nutritionist-BS
- Occupational Therapy Assistant-AA/AS
- Optician, Dispensing- AA/AS or C
- Pharmacist- D/P
- Physical Therapist-D/P
- Physician-D/P
- Physician Assistant-B or higher
- Psychologist-MS or higher
- Radiologic Technician-AA/AS or higher
- Radiologist- D/P
- Registered Nurse-AA/AS, B/M/Doctoral
- Research Scientist-MS and higher
- Respiratory Therapist-AA/AS
- School Psychologist-MS
- Speech/Language Pathologist-MS
- Speech/Language Pathology Assistant-B or higher
- Sports Medicine Physician–D/P
- Veterinarian-D/P

### Grade 12 Implications:

**Student is exempt from developmental course work.**

Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while in high school.

**Postsecondary Education and Training:** Requires a postsecondary degree.

### Grade 12 Implications:

**Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12.** Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school.

**Postsecondary Education and Training:** Requires a postsecondary degree.

---

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
<table>
<thead>
<tr>
<th>Achievement Level 2</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Dental Laboratory Technician-OJT (O) or Apprenticeship (A)  
• Dietetic Technician-O  
• Medical Equipment Preparer-O, AAS  
• Medical Records and Health Information Technician-C  
• Medical Secretary-A, AAS  
• Nursing Assistant-C, A  
• Phlebotomist-C  
• Pharmacy Technician-C, AAS  
• Physical Therapist Aide-O  
• Psychiatric Aide-C, AA |

**Grade 12 Implications:**
Student needs support to meet college content-readiness standard.

**Postsecondary Education and Training:** Requires a certificate and/or on-the-job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition.

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
<table>
<thead>
<tr>
<th>Achievement Level 1</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Data Entry Keyer  
• Home Health Aide  
• Pharmacy Aide  
• Call Center Representative |
| **Grade 12 Implications:** Student needs substantial support to meet college content-readiness standard. | |
| **Postsecondary Education and Training:** Requires on the job training only. | |

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
<table>
<thead>
<tr>
<th>Achievement Level 4</th>
<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description:** Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | **Description:** Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | - Baker (Certificate or HS Diploma)  
- Chef (Certificate or Associates)  
- Concierge (Associates)  
- Cook – Private Household (Certificate or OJT)  
- Farm & Home Management Advisor (Graduate)  
- Food Service Manager (Associates or OJT)  
- Gaming Manager (Associates or OJT)  
- Interpreter/Translator (Bachelors)  
- Lodging Manager (Associates or Bachelors)  
- Meeting/Convention/Event Planner (Bachelors)  
- Museum Conservator (Graduate)  
- Recreation Worker (Bachelors)  
- Residential Advisor (Bachelors)  
- Self-Enrichment Education Teacher (HS Diploma or Bachelors)  
- Set & Exhibit Designers (Bachelors)  
- Travel Agent (HS Diploma or Associates)  
- Travel Guide (Associates or OJT) |

**Grade 12 Implications:**  
Student is exempt from developmental course work. Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while still in high school.

**Grade 12 Implications:**  
Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school.

**Postsecondary Education and Training:** Requires a postsecondary degree.

**Postsecondary Education and Training:** Requires a postsecondary degree.

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
<table>
<thead>
<tr>
<th>Achievement Level 2</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Athletes & Sports Competitors (HS Diploma)  
• Barista (High School Diploma or OJT)  
• Bartender (High School Diploma or OJT)  
• Butcher (High School Diploma or OJT)  
• Cook – Restaurant (HS Diploma)  
• First-Line Supervisors of Food Prep (HS Diploma)  
• First-Line Supervisors of Housekeeping and Janitorial Workers (HS Diploma)  
• Gaming & Sports Book Writers (High School Diploma)  
• Gaming Supervisor (High School Diploma)  
• Hotel/Motel/Resort Desk Clerks (HS Diploma or OJT)  
• Institution/Cafeteria Cooks (HS Diploma or OJT)  
• Laundry/Dry-Cleaning Workers (HS Diploma)  
• Reservation/Ticket Agent (OJT)  
• Tour Guide (HS Diploma)  
• Umpires/Referees/Sports Officials (HS Diploma) |

| Grade 12 Implications: Student needs support to meet college content-readiness standard. |

| Postsecondary Education and Training: Requires a certificate and/or on the job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition. |

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
## Career Readiness Framework
### Hospitality and Tourism

<table>
<thead>
<tr>
<th>Achievement Level 1</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Amusement/Recreation Attendant (HS Diploma or GED)  
• Animal Trainer (HS Diploma)  
• Baggage Porters and Bellhops (HS Diploma)  
• Dining Room Attendant (OJT)  
• Dishwasher (OJT)  
• Fast Food Cook (OJT)  
• Food Preparation Workers (OJT)  
• Food Servers (OJT)  
• Gaming Cage Worker/Dealer (HS Diploma)  
• Gaming Change Person and Booth Cashier (HS Diploma)  
• Host/Hostess (OJT)  
• Janitors/Cleaners (HS Diploma/GED/OJT)  
• Maid/Housekeeping (HS Diploma)  
• Meat Packer/Slaughterhouse Worker (OJT)  
• Short Order Cooks (OJT)  
• Switchboard Operator (HS Diploma)  
• Usher/Ticket Taker (HS Diploma or OJT)  
• Wait Staff (OJT)  
• Call Center Representative (OJT) |

**Grade 12 Implications:** Student needs substantial support to meet college content-readiness standard.

**Postsecondary Education and Training:** Requires on the job training only.

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
<table>
<thead>
<tr>
<th>Achievement Level 4</th>
<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English].</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Description:</strong> Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English].</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Chief Executives (Graduate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Child, Family and School Social Workers (Bachelors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Clergy (Graduate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Clinical, Counseling, and School Psychologists (Graduate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Embalmers (Associates)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Epidemiologist (Graduate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Fashion Designers (Certificate or Associates)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Health Educators (Bachelors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Healthcare Social Workers (Graduate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Industrial Psychologists (Graduate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Interpreters and Translators (Bachelors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Loan Counselor (Bachelors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Marriage and Family Therapists (Graduate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Mental Health Social Workers (Graduate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Political Scientists (Graduate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Preschool Teacher (Associates or HS Diploma and OJT)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Probation Officers and Correctional Treatment Specialists (Bachelors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Psychiatric Technician (Associates or Bachelors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Public Relations Specialists (Bachelors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Recreation Workers (Bachelors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Sales Managers (Bachelors)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Social and Human Services Assistants (Associates)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Sociologists (Graduate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Substance Abuse and Behavior Disorder Counselors (Associates)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Grade 12 Implications:**
Student is exempt from developmental course work. Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while in high school.

**Grade 12 Implications:**
Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school.

**Postsecondary Education and Training:** Requires a postsecondary degree.

**Postsecondary Education and Training:** Requires a postsecondary degree.

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
<table>
<thead>
<tr>
<th>Achievement Level 2</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness. | - Childcare Workers (OJT)  
- Customer Service Representatives (OJT)  
- Fitness Trainers and Aerobics Instructors (Certificate and OJT)  
- Funeral Attendants (OJT)  
- Hairdressers, Hairstylists, and Cosmetologists (Certificate and OJT)  
- Massage Therapists (Certificate and OJT)  
- Personal Care Aids (OJT) |

**Grade 12 Implications:**  
Student needs support to meet college content-readiness standard.

**Postsecondary Education and Training:** Requires a certificate and/or on-the-job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition.

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
<table>
<thead>
<tr>
<th>Achievement Level 1</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Manicurists and Pedicurists (OJT)  
• Nannies (OJT)  
• Pressers, Textile, Garment, and Related Materials (OJT)  
• Tailors, Dressmakers, and Custom Sewers (OJT) |

**Grade 12 Implications:**  
Student needs substantial support to meet college content-readiness standard.

**Postsecondary Education and Training:** Requires on the job training only.

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
<table>
<thead>
<tr>
<th>Achievement Level 4</th>
<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description**: Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | **Description**: Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | **Search Marketing Strategist** (Bachelors)  
**Software Architect** (Bachelors)  
**Software Developer, Applications** (Bachelors)  
**Software Developer, Systems Software** (Bachelors)  
**Software Engineer** (Bachelors)  
**Software Integration Engineer** (Bachelors)  
**Software Quality Assurance Engineers and Testers** (Bachelors)  
**System Administrator** (Bachelors)  
**System Analyst** (Bachelors)  
**Telecommunication Manager** (Bachelors)  
**Video Game Designer** (Bachelors)  
**Wide or Local Area Network Engineer** (Bachelors)  
**Project manager** (Bachelors)  
**Sales Manager** (Bachelors)  
**Network Engineer** (Bachelors)  
**Multimedia Artists and Animator** (Bachelors)  
**Network and Computer Systems Administrator** (Bachelors)  
**Network Architect** (Bachelors)  
**Network Director** (Bachelors) |
| **Grade 12 Implications**: Student is exempt from developmental course work. Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while still in high school. | **Grade 12 Implications**: Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school. |  |
| **Postsecondary Education and Training**: Requires a postsecondary degree, and post graduate education and training. | **Postsecondary Education and Training**: Requires a postsecondary degree. |  |
Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
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<tr>
<th>Achievement Level 2</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description.</strong> Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness.</td>
<td>• Computer, Automated Teller, and Office Machine Repairers (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Computer Network Support Specialist (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Computer Numerically Controlled Machine Tool Setup Programmers, Milling and Turning (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Computer Programmer (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Data Warehousing Specialist (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Database Architect (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Desktop support (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Document Management Specialist (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Geographic Information Systems Technicians (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Hardware and Infrastructure Installer (Associates)</td>
</tr>
<tr>
<td></td>
<td>• IT Project Manager Apprentice (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Mobile Application Developer (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Network Administrator (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Network Technician (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Programmer Analyst (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Search Marketing Strategists (Associates)</td>
</tr>
<tr>
<td></td>
<td>• System Computer and Software Sales (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Telecommunications Engineering Specialist (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Web Administrators (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Web Developer (Associates)</td>
</tr>
<tr>
<td></td>
<td>• Webmaster (Associates)</td>
</tr>
<tr>
<td><strong>Grade 12 Implications:</strong> Student needs support to meet college content-readiness standard.</td>
<td></td>
</tr>
<tr>
<td><strong>Postsecondary Education and Training:</strong> Requires a certificate and/or on-the job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition.</td>
<td></td>
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</tbody>
</table>
Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
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<tr>
<th>Achievement Level 1</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Computer Operator (OJT)  
• Computer Support Specialist (OJT)  
• Computer User Support Specialist (OJT)  
• Desktop Technician (OJT)  
• Help Desk Support Technician (OJT)  
• Retail Computer Sales Specialist (OJT)  
• Wireless Devices Sales Specialist (OJT) |
| **Grade 12 Implications:** Student needs substantial support to meet college content-readiness standard. | |
| **Postsecondary Education and Training:** Requires on the job training only. | |
Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
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<thead>
<tr>
<th>Achievement Level 4</th>
<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description:** Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | **Description:** Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | • Administrative Law Judges, Adjudicators, and Hearing Officers (Graduate)  
• Criminal Justice and Law Teachers, Postsecondary (Graduate)  
• Emergency Management Directors (Bachelors)  
• Forensic Science Technicians (Bachelors)  
• Judges and Magistrates (Graduate)  
• Judicial Law Clerks (Graduate)  
• Lawyers (Graduate)  
• Arbitrators, Mediators, and Conciliators (Graduate)  
• Intelligence Analysts (Bachlors)  
• Probation Officers (Bachelors)  
• Child, Family and School Social Workers (Bachelors or Graduate)  
• Security Management Specialists (Bachelors)  
• Business Continuity Planners (Bachelors)  
• Loss Prevention Manager (Bachelors)  
• First-Line Public Safety Supervisors (Associate or Bachelors)  
• Legal Secretaries (Associate)  
• Paralegals and Legal Assistants (Associate)  
• Paramedics (Associate)  
• Police Officers and Detectives (Associate)  
• Sheriffs and Deputy Sheriffs (Associate)  
• Transit and Railroad Police (Associate)  
• Private Detectives and Investigators (Associate)  
• Security Managers (Bachelors) |
| **Grade 12 Implications:** Student is exempt from developmental course work. Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while still in high school. | **Grade 12 Implications:** Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school. | |
| **Postsecondary Education and Training:** Requires a postsecondary degree, and post graduate education and training. | **Postsecondary Education and Training:** Requires a postsecondary degree. | |

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
## Achievement Level 2

**Description.** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness.

**Exemplar Occupations**

- Bailiffs (HS Diploma or Certificate)
- Correctional Officers and Jailers (Certificate or Associate)
- Court Reporters (Certificate)
- Emergency Medical Technicians (Certificate or Associate)
- Immigration and CustomsInspectors (Certificate or Associate)
- Fire Inspectors or Investigators (Certificate or Associate)
- Firefighters (Certificate or Associate)
- Criminal Investigators or Special Agents (HS Diploma or Certificate)
- Gaming Surveillance Officers and Gaming Investigators (HS Diploma)
- Police, Fire, and Ambulance Dispatchers (HS Diploma)

### Grade 12 Implications:
Student needs support to meet college content-readiness standard.

### Postsecondary Education and Training:
Requires a certificate and/or on-the-job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition.

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
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<th>Achievement Level 1</th>
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</tr>
</thead>
</table>
| **Description.** Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Crossing Guards (OJT)  
• Forest Fire Fighters (OJT)  
• Parking Enforcement Workers (OJT)  
• Security Guards (OJT)  
• Transportation Security Screeners (OJT) |

**Grade 12 Implications:**  
Student needs substantial support to meet college content-readiness standard.

**Postsecondary Education and Training:** Requires on the job training only.

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
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<tr>
<th>Achievement Level 4</th>
<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description:** Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | **Description:** Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | • Industrial Production Managers (Bachelors)  
• Purchasing Agents, Except Wholesale, Retail, and Farm Products (Bachelors)  
• Electrical and Electronics Repairers, Commercial and Industrial Equipment (PS courses or Associates)  
• Electronics Engineering Technicians (PS courses or Associates)  
• Engineering Technicians, Except Drafters, All Other (Associates or higher)  
• First-Line Supervisors of Mechanics, Installers, and Repairers (PS courses or Associates)  
• Industrial Engineering Technicians (Associates)  
• Mechanical Engineering Technicians (Associates or higher)  
• Medical Appliance Technicians (PS courses or Associates)  
• Nuclear Equipment Operation Technicians (Associates)  
• Nuclear Monitoring Technicians (PS courses or Associates)  
• Nuclear Power Reactor Operators (PS courses or Associates) |
| **Grade 12 Implications:** Student is exempt from developmental course work. Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while still in high school. | **Grade 12 Implications:** Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school. | |
| **Postsecondary Education and Training:** Requires a postsecondary degree. | **Postsecondary Education and Training:** Requires credit-bearing post-secondary courses, certificate or degree | |

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
<table>
<thead>
<tr>
<th>Achievement Level 2</th>
<th>Exempler Occupations</th>
</tr>
</thead>
</table>
| **Description:** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness. | - Electric Motor, Power Tool, and Related Repairers (HS Diploma, OJT, and/or Certificate)  
- Electrical and Electronic Equipment Assemblers (HS Diploma, OJT, and/or Certificate)  
- Electrical Engineering Technicians (HS Diploma, OJT, and/or Certificate)  
- Electromechanical Equipment Assemblers (HS Diploma, OJT, and/or Certificate)  
- Elevator Installers and Repairers (HS Diploma, OJT, and/or Certificate)  
- Engine and Other Machine Assemblers (HS Diploma, OJT, and/or Certificate)  
- Industrial Machinery Mechanics (HS Diploma, OJT, and/or Certificate)  
- Installation, Maintenance, and Repair Workers, All Other (HS Diploma, OJT, and/or Certificate)  
- Maintenance and Repair Workers, General (HS Diploma, OJT, and/or Certificate)  
- Maintenance Workers, Machinery (HS Diploma, OJT, and/or Certificate)  
- Medical Equipment Repairers (HS Diploma, OJT, and/or Certificate)  
- Aircraft Structure, Surfaces, Rigging, and Systems Assemblers (HS Diploma, OJT, and/or Certificate)  
- Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic (HS Diploma, OJT, and/or Certificate)  
- Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic (HS Diploma, OJT, and/or Certificate)  
- Computer-Controlled Machine Tool Operators, Metal and Plastic (HS Diploma, OJT, and/or certificate)  
- Machinists (HS Diploma, OJT, and/or Certificate)  
- Manufacturing Production Technicians (HS Diploma, OJT, and/or Certificate)  
- Milling and Planer Machine Setters, Operators, and Tenders, Metal and Plastic (HS Diploma, OJT, and/or Certificate)  
- Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic (HS Diploma, OJT, and/or Certificate)  
- Sawing Machine Setters, Operators, and Tenders, Wood (HS Diploma, OJT and/or Certificate)  
- Tool and Die Makers (HS Diploma, OJT, and/or Certificate)  
- Welders, Cutters, Solderers, and Brazers (HS Diploma, OJT, and/or Certificate)  
- Welder Fitters (HS Diploma, OJT, and/or Certificate)  
- Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (HS Diploma, OJT, and/or Certificate)  
- Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic  
- Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic (HS Diploma, OJT, and/or Certificate)  
- Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic (HS Diploma, OJT, and/or Certificate)  
- First-Line Supervisors of Production and Operating Workers (HS Diploma, OJT, and/or Certificate)  
- Forging Machine Setters, Operators, and Tenders, Metal and Plastic (HS Diploma, OJT, and/or Certificate) |
<p>| <strong>Grade 12 Implications:</strong> Student needs support to meet college content-readiness standard. | |
| <strong>Postsecondary Education and Training:</strong> Requires a certificate and/or on-the-job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition. | |</p>
<table>
<thead>
<tr>
<th></th>
<th>Career Readiness Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Manufacturing</td>
</tr>
<tr>
<td></td>
<td>Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic (HS Diploma, OJT, and/or Certificate)</td>
</tr>
<tr>
<td></td>
<td>Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers (HS Diploma, OJT, and/or Certificate)</td>
</tr>
<tr>
<td></td>
<td>Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders (HS Diploma, OJT, and/or Certificate)</td>
</tr>
<tr>
<td></td>
<td>Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.</td>
</tr>
</tbody>
</table>
# Career Readiness Framework
## Manufacturing

<table>
<thead>
<tr>
<th>Achievement Level 1</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description:** Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness. | - Adhesive Bonding Machine Operators and Tenders (HS Diploma, OJT)  
- Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders (HS Diploma, OJT)  
- Coating, Painting, and Spraying Machine Setters, Operators, and Tenders (HS Diploma, OJT)  
- Coil Winders, Tapers, and Finishers (HS Diploma, OJT)  
- Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders (HS Diploma, OJT)  
- Cutting and Slicing Machine Setters, Operators, and Tenders (HS Diploma, OJT)  
- Inspectors, Testers, Sorters, Samplers, and Weighers (HS Diploma, OJT)  
- Etchers and Engravers (HS Diploma)  
- Foundry Mold and Coremakers (HS Diploma, OJT)  
- Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders (HS Diploma, OJT)  
- Grinding and Polishing Workers, Hand (HS Diploma, OJT)  
- Hydroelectric Plant Technicians (HS Diploma, OJT)  
- Layout Workers, Metal and Plastic (HS Diploma, OJT)  
- Machine Feeders and Offbearers (HS Diploma, OJT)  
- Material Moving Workers, All Other (HS Diploma, OJT)  
- Metal Workers and Plastic Workers, All Other (HS Diploma, OJT)  
- Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic (HS Diploma, OJT)  
- Packaging and Filling Machine Operators and Tenders (HS Diploma, OJT)  
- Packers and Packagers, Hand (HS Diploma, OJT)  
- Paper Goods Machine Setters, Operators, and Tenders (HS Diploma, OJT)  
- Patternmakers, Metal and Plastic (HS Diploma, OJT)  
- Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic (HS Diploma, OJT)  
- Pourers and Casters, Metal (HS Diploma, OJT)  
- Production Workers, All Other (HS Diploma)  
- Sheet Metal Workers (HS Diploma, OJT)  
- Structural Metal Fabricators and Fitters (HS Diploma, OJT)  
- Team Assemblers (HS Diploma)  
- Tool Grinders, Filers, and Sharpeners (HS Diploma, OJT)  
- Metal-Refining Furnace Operators and Tenders (HS Diploma, OJT)  
- Model Makers, Metal and Plastic (HS Diploma, OJT)  
- Molders, Shapers, and Casters, Except Metal and Plastic (HS Diploma, OJT)  
- Molding and Casting Workers (HS Diploma, OJT) |

**Grade 12 Implications:** Student needs substantial support to meet college content-readiness standard.

**Postsecondary Education and Training:** Requires on the job training only.

Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
<table>
<thead>
<tr>
<th>Achievement Level 4</th>
<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description:** Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | **Description:** Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | • Advertising and Promotions Manager (Bachelors)  
• Appraisers, Real Estate (Bachelors)  
• Business Teacher (Bachelors or Graduate)  
• Computer Programmers (Bachelors)  
• First Line Supervisors of Non-Retail Workers (HS Diploma, Associates or Bachelors)  
• Interior Designer (Bachelors)  
• Marketing Research Analysts and Marketing Specialists (Bachelors)  
• Marketing Managers (Bachelors)  
• Meeting, Convention and Event Planners (Bachelors)  
• Property, Real Estate, and Community Association Managers (Bachelors)  
• Sales Engineers (Bachelors)  
• Sales Managers (Bachelors)  
• Sales Representative, Wholesale and Manufacturing, except Technical and Science Products (Bachelors)  
• Sales Representative, Wholesale and Manufacturing, Technical and Science Products (Bachelors)  
• Assessors (Associates or Some College)  
• Fashion Designers (Associates or Bachelors)  
• Lodging Manager (HS Diploma, Some College or Bachelors)  
• Procurement Clerk (HS Diploma or Some College)  
• Real Estate Brokers (Associates or OJT)  
• Real Estate Sales Agents (HS Diploma, Some College or OJT)  
• Solar Sales Representatives and Assessors (Associates or Bachelors)  
• Travel Agents (HS Diploma or Some College)  
• Travel Guides (HS Diploma or Some College)  
• Wholesale and Retail Buyers, except Farm Products (Associates or OJT)  
• Kitchen and Bath Designers (Bachelors)  
• Beauty Industry Merchandising and Marketing (Bachelors)  
• Apparel Industry Management (Bachelors)  
• Merchandise Product Development (Bachelors) |
| **Grade 12 Implications:**  
Student is exempt from developmental course work. Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while still in high school. | **Grade 12 Implications:**  
Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school. |  |
| **Postsecondary Education and Training:** Generally requires a postsecondary degree. | **Postsecondary Education and Training:** Generally requires credit-bearing post secondary certificate or degree |  |

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
<table>
<thead>
<tr>
<th>Achievement Level 2</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Customer Service Representative (HS Diploma)  
• Demonstrators and Product Promoters (HS Diploma or OJT)  
• Driver/Sales Workers (HS Diploma or OJT)  
• First Line Supervisors of Retail Sales Workers (HS Diploma)  
• Floral Designers (HS Diploma or OJT)  
• Gaming Change Persons and Booth Cashiers (HS Diploma)  
• Hotel Desk Clerks (HS Diploma)  
• Marking Clerks (HS Diploma or OJT)  
• Merchandise Displayers and Window Trimmers (HS Diploma)  
• Office Clerks, General (HS Diploma)  
• Order Fillers, Wholesale and Retail Sales (HS Diploma or OJT)  
• Parts Salespersons (HS Diploma)  
• Procurement Clerk (HS Diploma or Some College)  
• Reservation and Transportation Ticket Agents and Travel Clerks (HS Diploma)  
• Retail Salesperson (HS Diploma)  
• Transportation Attendants except Flight Attendants (HS Diploma)  
• Fashion Stylist (HS Diploma or OJT)  
• Fashion Blogger (HS Diploma or OJT)  
• Trend Analyst (HS Diploma or OJT)  
• Furniture Designer (HS Diploma or OJT)  
• Set Designer (HS Diploma or OJT) |
| **Grade 12 Implications:** Student needs support to meet college content-readiness standard. | |
| **Postsecondary Education and Training:** Generally requires a certificate and/or on-the-job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition. | |

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
<table>
<thead>
<tr>
<th>Achievement Level 1</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Automotive and Watercraft Service Attendants (HS Diploma or OJT)  
• Cashier (HS Diploma or OJT)  
• Counter or Rental Clerks (HS Diploma or OJT)  
• Models (OJT)  
• Parking Lot Attendant (OJT)  
• Stock Clerks, Sales Floor (HS Diploma or OJT)  
• Stock Clerks, Stockroom, Warehouse or Storage Yard (OJT) |

**Grade 12 Implications:** Student needs substantial support to meet college content-readiness standard.

**Postsecondary Education and Training:** Requires on the job training only.

*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
<table>
<thead>
<tr>
<th>Achievement Level 4</th>
<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description:** Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | **Description:** Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | • Aerospace Engineers (Bachelors)  
• Agricultural Engineers (Bachelors)  
• Agricultural Technicians (HS Diploma, Certificate or Bachelors)  
• Anthropologists (Graduate)  
• Archeologists (Graduate)  
• Astronomers (Graduate)  
• Atmospheric Scientists (Bachelors)  
• Automotive Engineers (Bachelors)  
• Biochemical Engineers (Bachelors)  
• Biochemists and Biophysicists (Graduate)  
• Bioinformatics Scientists (Graduate)  
• Biological Technicians (Bachelors)  
• Biomedical Engineers (Bachelors)  
• Biostatisticians (Graduate)  
• Chemical Engineers (Bachelors)  
• Chemists (Bachelors)  
• Civil Engineers (Bachelors)  
• Computer Hardware Engineers (Bachelors)  
• Computer Programmers (Bachelors)  
• Computer User Support Specialists (Certificate, Associates or Bachelors)  
• Dietitians and Nutritionists (Graduate)  
• Economists (Graduate)  
• Electrical Engineers (Bachelors)  
• Electronics Engineers (Bachelors)  
• Energy Engineers (Bachelors)  
• Environmental Engineers (Graduate)  
• Environmental Scientists and Specialists (Bachelors)  
• Statisticians (Graduate)  
• Survey Researchers (Graduate)  
• Transportation Engineers (Bachelors)  
• Water Resource Specialists (Bachelors)  
• Water/Wastewater Engineers (Bachelors)  
• Wind Energy Engineers (Bachelors)  
• Zoologists and Wildlife Biologists  
• Epidemiologists (Graduate)  
• Family and General Practitioners (Graduate)  
• Fire-Prevention and Protection Engineers (Bachelors)  
• Fuel Cell Engineers (Bachelors)  
• Geneticists (Graduate)  
• Geoscientists, Except Hydrologists and Geographers (Bachelors)  
• Geospatial Information Scientists and Technologists (Bachelors)  
• Hydrologists (Bachelors)  
• Industrial Engineers (Bachelors)  
• Manufacturing Engineering Technologists (Bachelors)  
• Manufacturing Engineers (Bachelors)  
• Marine Engineers (Bachelors)  
• Materials Engineers (Bachelors)  
• Materials Scientists (Graduate)  
• Mathematicians (Graduate)  
• Mechanical Engineering Technologists (Associates or Bachelors)  
• Mechanical Engineers (Bachelors)  
• Medical Scientists (Graduate)  
• Microbiologists (Graduate)  
• Molecular and Cellular Biologists (Graduate)  
• Nuclear Engineers (Bachelors)  
• Petroleum Engineers (Bachelors)  
• Photonics Engineers (Bachelors)  
• Physicists (Graduate)  
• Product Safety Engineers (Bachelors)  
• Quality Control Analysts (Bachelors)  
• Remote Sensing Scientists and Technologists (Graduate)  
• Remote Sensing Technicians (Bachelors)  
• Sociologists (Graduate) |
| **Grade 12 Implications:**  
Student is exempt from developmental course work. Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while still in high school. | **Grade 12 Implications:**  
Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school. |  |
| **Postsecondary Education and Training:** Requires a postsecondary degree. | **Postsecondary Education and Training:** Requires a postsecondary degree. |  |
Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
### Achievement Level 2

**Description:** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness.

#### Exemplar Occupations
- Architectural Drafters (Associates)
- Automotive Engineering Technicians (Associates)
- Bioinformatics Technicians (Associates)
- Chemical Technicians (HS Diploma, Certificate or Associates)
- Civil Drafters (Certificate or Associates)
- Dietetic Technicians (HS Diploma)
- Electrical Drafters (Certificate)
- Electrical Engineering Technicians (Certificate or Associates)
- Electronic Drafters (Certificate or Associates)
- Electronics Engineering Technicians (Certificate or Associates)
- Food Science Technicians (HS Diploma)
- Fuel Cell Technicians (Associates)
- Geographic Information Systems Technicians (Associates)
- Industrial Engineering Technicians (Associates)
- Mapping Technicians (Certificate or Associates)
- Non-Destructive Testing Specialist (HS Diploma)
- Nuclear Equipment Operation Technicians (Certificate)
- Surveying Technicians (HS Diploma)

### Grade 12 Implications:
Student needs support to meet college content-readiness standard.

### Postsecondary Education and Training:
Requires a certificate and/or on-the-job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition.

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*Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.*
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<tr>
<th>Achievement Level 1</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description.</strong> Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness.</td>
<td>• No Positions</td>
</tr>
<tr>
<td><strong>Grade 12 Implications:</strong> Student needs substantial support to meet college content-readiness standard.</td>
<td></td>
</tr>
<tr>
<td><strong>Postsecondary Education and Training:</strong> Requires on the job training only.</td>
<td></td>
</tr>
</tbody>
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Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
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<tr>
<th>Achievement Level 4</th>
<th>Achievement Level 3</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| Description: Student demonstrates thorough understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | Description: Student demonstrates adequate understanding of and ability to apply the knowledge and skills described in the Common Core State Standards in [math/English]. | • Aerospace Engineering and Operations Technicians (Associates or Higher)  
• Avionics Technicians (Associates or Higher)  
• Industrial Safety and Health Engineers (Bachelors)  
• Administrative Services Managers (Associates or Higher)  
• Chief Executives (Graduate or Higher)  
• Logisticians (Associates or Higher)  
• Storage and Distribution Managers (Bachelors)  
• Transportation Managers (Bachelors)  
• Aerospace Engineering and Operations Technicians (Associates or Higher)  
• Air Traffic Controllers (Associates or Higher)  
• Airfield Operations Specialists (Associates or Higher)  
• Airline Pilots, Copilots, and Flight Engineers (Bachelors)  
• Aviation Safety Inspectors (Bachelors)  
• Commercial Pilots (Bachelors)  
• Freight and Cargo Inspectors (Associates or Higher)  
• Occupational Health and Safety Specialists (Bachelors)  
• Traffic Technicians (Bachelors)  
• Transportation Planners (Bachelors or Higher)  
• Supply Chain Managers (Bachelors or Higher) |

Grade 12 Implications:  
Student is exempt from developmental course work. Within each state, students may be required to satisfactorily complete Grade 12 English and/or mathematics courses to retain the exemption from developmental course work. Students are encouraged to take appropriate advanced credit courses leading to college credit while still in high school.

Grade 12 Implications:  
Student is conditionally exempt from developmental course work, contingent on evidence of sufficient continued learning in Grade 12. Students are encouraged to take additional 4th year courses as well as appropriate advanced credit courses leading to college credit while in high school.

Postsecondary Education and Training: Requires a postsecondary degree.

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Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
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<th>Achievement Level 2</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
</table>
| **Description.** Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with college content readiness. | • Aircraft Mechanics and Service Technicians (Certificate)  
• Automotive Body and Related Repairers (Certificate)  
• Automotive Service Technicians and Mechanics (Certificate)  
• Bus and Truck Mechanics and Diesel Engine Specialists (Certificate)  
• Electrical and Electronics Installers and Repairers, Transportation Equipment (Certificate)  
• Electronic Equipment Installers and Repairers, Motor Vehicles (Certificate and/or OJT)  
• Mobile Heavy Equipment Mechanics, Except Engines (Certificate)  
• Motorcycle Mechanics and Service Technicians (Certificate)  
• Motorcycle Mechanics (Certificate)  
• Rail Car Repairers (Certificate and/or OJT)  
• Signal and Track Switch Repairers (Certificate and/or OJT)  
• Locomotive Engineers (Certificate and/or OJT)  
• Railroad Brake, Signal, and Switch Operators (Certificate and/or OJT)  
• Billing, Cost, and Rate Clerks (Certificate and/or OJT)  
• First-Line Supervisors of Office and Administrative Support Workers (Certificate and/or OJT)  
• Captains, Mates, and Pilots of Water Vessels (Certificate)  
• Ship Engineers (Certificate)  
• Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation (Certificate and/or OJT)  
• Customs Brokers (Certificate or Higher)  
• Freight Forwarders (Certificate and/or OJT)  
• Production, Planning, and Expediting Clerks (Certificate and/or OJT) |

| **Grade 12 Implications:** Student needs support to meet college content-readiness standard. |

| **Postsecondary Education and Training:** Requires a certificate and/or on-the job training. These programs do not require that students are prepared at entry for credit-bearing, transferable courses in mathematics or statistics, or English or composition. |
Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.
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<thead>
<tr>
<th>Achievement Level 1</th>
<th>Exemplar Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description.</strong> Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with college content readiness.</td>
<td>• First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators (OJT, Associates, and/or Bachelors)</td>
</tr>
<tr>
<td></td>
<td>• Flight Attendants (OJT)</td>
</tr>
<tr>
<td></td>
<td>• Hoist and Winch Operators (OJT)</td>
</tr>
<tr>
<td></td>
<td>• Industrial Truck and Tractor Operators (OJT)</td>
</tr>
<tr>
<td></td>
<td>• Commercial Divers (Varies by Classification)</td>
</tr>
<tr>
<td></td>
<td>• Heavy and Tractor-Trailer Truck Drivers (Varies by Classification)</td>
</tr>
<tr>
<td></td>
<td>• Laborers and Freight, Stock, and Material Movers, Hand (OJT)</td>
</tr>
<tr>
<td></td>
<td>• Light Truck or Delivery Services Drivers (OJT)</td>
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<tr>
<td></td>
<td>• Rail-Track Laying and Maintenance Equipment Operators (OJT)</td>
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<tr>
<td></td>
<td>• Locomotive Firemen (OJT)</td>
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<td></td>
<td>• Rail Yard Engineers, Dinkey Operators, and Hostlers (OJT)</td>
</tr>
<tr>
<td></td>
<td>• Railroad Conductors and Yardmasters (OJT)</td>
</tr>
<tr>
<td></td>
<td>• Motorboat Operators (OJT)</td>
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<tr>
<td></td>
<td>• Operating Engineers and Other Construction Equipment Operators (OJT)</td>
</tr>
<tr>
<td></td>
<td>• Parking Lot Attendants (OJT)</td>
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<tr>
<td></td>
<td>• Sailors and Marine Oilers (OJT)</td>
</tr>
<tr>
<td></td>
<td>• Subway and Streetcar Operators (OJT)</td>
</tr>
<tr>
<td></td>
<td>• Taxi Drivers and Chauffeurs (Certification/OJT)</td>
</tr>
<tr>
<td></td>
<td>• Shipping, Receiving, and Traffic Clerks (OJT)</td>
</tr>
<tr>
<td></td>
<td>• Tank Car, Truck, and Ship Loaders (OJT)</td>
</tr>
</tbody>
</table>

**Grade 12 Implications:** Student needs substantial support to meet college content-readiness standard.

**Postsecondary Education and Training:** Requires on the job training only.

- Aircraft Structure, Surfaces, Rigging, and Systems Assemblers (OJT)
- Automotive Glass Installers and Repairers (OJT)
- Bicycle Repairers (OJT)
- Cleaners of Vehicles and Equipment (OJT)
- Construction Carpenters (OJT)
- Engine and Other Machine Assemblers (OJT)
- Outdoor Power Equipment and Other Small Engine Mechanics (OJT)
- Painters, Transportation Equipment (OJT)
- Recreational Vehicle Service Technicians (OJT)
- Tire Repairers and Changers (OJT)
- Statement Clerks (OJT)
- Cargo and Freight Agents (OJT)
- Parts Salespersons (OJT)
- Reservation and Transportation Ticket Agents and Travel Clerks (OJT)
- Aircraft Cargo Handling Supervisors (OJT)
- Automotive and Watercraft Service Attendants (OJT)
- Boilermakers (Apprenticeship)
- Bridge and Lock Tenders (OJT)
- Bus Drivers, School or Special Client (OJT)
- Bus Drivers, Transit and Intercity (OJT)
- Crane and Tower Operators (OJT)
- Dispatchers, Except Police, Fire, and Ambulance (OJT)
- Excavating and Loading Machine and Dragline Operators (OJT)
- First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand (OJT, Associates, and/or Bachelors)
Some occupations require completion of a degree or certificate and/or passage of a licensing or certification examination in order to practice.