Course Information
CSC-232: Advanced C++ Programming
3 Credits
Spring 2020

Instructor Information

Course Description
This course continues to introduce students to object-oriented programming (OOP) using C++ and Visual C++. It builds on the foundation of CSC 132. Students learn OOP concepts such as classes, friends, and templates and use these to build a program designed to run under a Microsoft Windows environment. Using a hands-on approach, students have the opportunity to design, code, and test object-oriented applications. Additional time outside of class will be necessary to write programs. Course fee required. Total of 45 hours of lecture. *Prerequisite: CSC-132.

Textbook and Course Materials

Student Learning Outcomes
- Define and implement OOP concepts such as classes, inheritance.
- Define and implement abstraction concepts such as friends, templates.
- Design, code, and test object-oriented applications
- Debug programs.
- Develop problem-solving skills
- Identify and implement techniques of top-down design of algorithms and structured programming
- Develop syntactically and functionally correct executable programs
- Create appropriate documentation both inline (comments) and external (documentation).

Definition of Credit Hour
To earn one academic credit at HCC, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute academic hours) of coursework per semester. Those hours of coursework may be completed through a combination of hours in the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of coursework per credit. For most classes, students should expect to complete at least 2 hours of coursework outside of class for each hour of in-class coursework.
<table>
<thead>
<tr>
<th>Classwork type</th>
<th>Student Work Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-class lecture and Final Exam</td>
<td>45 hours</td>
</tr>
<tr>
<td>Reading</td>
<td>12 hours</td>
</tr>
<tr>
<td>Quiz/exam and studying</td>
<td>17 hours</td>
</tr>
<tr>
<td>Programming Projects</td>
<td>32 hours</td>
</tr>
<tr>
<td>Assignments</td>
<td>12 hours</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>118 hours</strong></td>
</tr>
</tbody>
</table>

**Services for students with disabilities:** Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as possible. Students may contact a DSS staff member for an appointment at dss@hagerstowncc.edu or at 240-500-2530.