### PWCS Secondary Mathematics Course Sequence Examples**

**Leading to an ADVANCED Studies Diploma**

#### Advanced Placement (AP)

<table>
<thead>
<tr>
<th>Grade</th>
<th>4 High School (HS) Math Credits</th>
<th>5 HS Math Credits</th>
<th>6 HS Math Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Functions/Trig† or AP Statistics*</td>
<td>AP Calculus BC* or AP Statistics*</td>
<td>AP Calculus BC* or AP Statistics*</td>
</tr>
<tr>
<td></td>
<td>Algebra II Algebra II SOL Test</td>
<td>or Functions/Trig† or AP Statistics*</td>
<td>or AP Statistics*</td>
</tr>
<tr>
<td>11</td>
<td>Algebra II Pre-AP Algebra II/Trig</td>
<td>Pre-AP Algebra II/Trig or Algebra II</td>
<td>Functions/Analytic Geometry† or Functions/Trig†</td>
</tr>
<tr>
<td></td>
<td>Algebra II SOL Test</td>
<td>or Algebra II</td>
<td>or Functions/Trig†</td>
</tr>
<tr>
<td>10</td>
<td>Geometry Pre-AP Geometry</td>
<td>Pre-AP Geometry or Geometry</td>
<td>Pre-AP Algebra II/Trig</td>
</tr>
<tr>
<td></td>
<td>Geometry SOL Test</td>
<td>or Geometry</td>
<td>or Algebra II</td>
</tr>
<tr>
<td>9</td>
<td>Algebra I Pre-AP Algebra I</td>
<td>Pre-AP Algebra I or Algebra I</td>
<td>Pre-AP Geometry</td>
</tr>
<tr>
<td></td>
<td>Algebra I SOL Test</td>
<td>or Algebra I</td>
<td>or Geometry</td>
</tr>
<tr>
<td>8</td>
<td>Math 8 Pre-Algebra</td>
<td>Pre-AP Algebra I or Algebra I</td>
<td>Pre-AP Algebra I</td>
</tr>
<tr>
<td></td>
<td>covers 8th grade standards</td>
<td>or Algebra I</td>
<td>includes extensions</td>
</tr>
<tr>
<td></td>
<td>Math 8 SOL Test</td>
<td>or Pre-Algebra I</td>
<td>Geometry SOL Test</td>
</tr>
<tr>
<td>7</td>
<td>Math 7</td>
<td>Math 7 Extended half of Grade 7 and all of Grade 8</td>
<td>Pre-AP Algebra I</td>
</tr>
<tr>
<td></td>
<td>covers 7th grade standards</td>
<td>Math 8 SOL Test</td>
<td>with Alg II extensions</td>
</tr>
<tr>
<td></td>
<td>Math 7 SOL Test</td>
<td>Math 6 SOL Test</td>
<td>Algebra I SOL Test</td>
</tr>
<tr>
<td>6</td>
<td>Math 6</td>
<td>Math 6 Extended all Grade 6 and half of Grade 7</td>
<td>Math 7 Extended half of Grade 7 and all of Grade 8</td>
</tr>
<tr>
<td></td>
<td>covers 6th grade standards</td>
<td>Math 6 SOL Test</td>
<td>Math 6 SOL Test</td>
</tr>
<tr>
<td></td>
<td>Math 6 SOL Test</td>
<td>Math 7 SOL Test</td>
<td>Math 8 SOL Test</td>
</tr>
</tbody>
</table>

2015-16 Grade 6 enrollment: 58% in Math 6, 39% in Math 6 Extended, and 3% in Math 7 Extended

**Many other sequences are possible with additional math electives, such as Trigonometry; Discrete Math; and Probability/Statistics (all semester courses); Computer Mathematics; and AP Computer Science. Students in Cambridge or International Baccalaureate Specialty Programs take comparable courses.**

* These courses offer possible college credits w/ a qualifying score on external exams and college acceptance.

† These courses are Pre-Calculus Courses.

Note: Multiple courses at a grade level are listed from lower level to higher level course w/ higher level on top.
### PWCS Secondary Mathematics Course Sequence Examples**

Leading to an ADVANCED Studies Diploma

**International Baccalaureate Programme**

<table>
<thead>
<tr>
<th>Grade</th>
<th>4 High School (HS) Math Credits</th>
<th>5 HS Math Credits</th>
<th>6 HS Math Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>IB Math SL I or AP Statistics* or Advanced Math</td>
<td>IB Math HL II* or IB Math SL II* or AP Statistics*</td>
<td>IB Math HL II* or IB Math SL II*</td>
</tr>
<tr>
<td>11</td>
<td>Algebra II Pre-IBDP or Algebra II/Trig</td>
<td>IB Math HL I or IB Math SL I or IB Math SL I</td>
<td>IB Math HL I</td>
</tr>
<tr>
<td></td>
<td>Algebra II SOL Test</td>
<td>Algebra II SOL Test</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Algebra, Functions, and Data Analysis</td>
<td>Algebra, Functions, and Data Analysis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-IBDP Algebra II or Pre-IBDP Algebra II</td>
<td>Pre-IBDP Algebra II or Pre-IBDP Algebra II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-IBDP Algebra II SOL Test</td>
<td>Algebra II SOL Test</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Geometry or Pre-IBDP Geometry or Geometry</td>
<td>Pre-IBDP Algebra II or Pre-IBDP Algebra II</td>
<td>AP Statistics*</td>
</tr>
<tr>
<td></td>
<td>Geometry SOL Test or Geometry SOL Test</td>
<td>Pre-IBDP Algebra II SOL Test</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Algebra I SOL Test</td>
<td>Algebra II SOL Test</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Pre-IBDP Algebra I or Pre-IBDP Algebra I</td>
<td>Pre-IBDP Geometry or Pre-IBDP Geometry</td>
<td>Pre-AP Algebra I or Pre-IBDP Algebra I</td>
</tr>
<tr>
<td></td>
<td>Pre-IBDP Algebra I SOL Test</td>
<td>Pre-IBDP Algebra I SOL Test</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-IBDP Geometry SOL Test</td>
<td>Geometry SOL Test</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Math 8 Pre-Algebra covers 8th grade standards</td>
<td>Pre-AP Algebra I or Pre-IBDP Algebra I</td>
<td>Pre-AP Geometry or Pre-IBDP Geometry includes extensions</td>
</tr>
<tr>
<td></td>
<td>Math 8 SOL Test</td>
<td>Pre-IBDP Algebra I SOL Test</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Math 7 covers 7th grade standards</td>
<td>Math 7 Extended half of 7 and all of 8</td>
<td>Pre-AP Algebra I or Pre-IBDP Algebra I</td>
</tr>
<tr>
<td></td>
<td>Math 7 SOL Test</td>
<td>Math 8 SOL Test</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Math 6 covers 6th grade standards</td>
<td>Math 6 Extended all of 6 and half of 7</td>
<td>Math 7 Extended half of 7 and all of 8</td>
</tr>
<tr>
<td></td>
<td>Math 6 SOL Test</td>
<td>Math 8 SOL Test</td>
<td></td>
</tr>
</tbody>
</table>

**2015-16 Grade 6 enrollment: 58% in Math 6, 39% in Math 6 Extended, and 3% in Math 7 Extended**

* These courses offer possible college credits with a qualifying score on external exams and college acceptance.

**Many other sequences are possible with additional math electives, such as Trigonometry; Discrete Math; and Probability/Statistics (all semester courses); Computer Math; and AP Computer Science. Students in Cambridge or Specialty Programs with Advanced Placement courses take comparable courses.

Note: Multiple courses at a grade level are listed from lower level to higher level course with higher level on top.
PWCS Secondary Mathematics Course Sequence Examples**
Leading to an ADVANCEDED Studies Diploma

Cambridge Programme

<table>
<thead>
<tr>
<th>Grade</th>
<th>4 High School (HS) Math Credits</th>
<th>5 HS Math Credits</th>
<th>6 HS Math Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>AICE Math I* or Functions/Trig†</td>
<td>AICE Math I* or Func/Analytic Geo†</td>
<td>AICE Mechanics* (Level A) or AP Calculus AB*</td>
</tr>
<tr>
<td></td>
<td>or Advanced Math</td>
<td>or Functions/Trig†</td>
<td>or AP Statistics*</td>
</tr>
<tr>
<td>11</td>
<td>Algebra II IGSCE Algebra II/Trig or Algebra II</td>
<td>IGSCE Algebra II/Trig or Algebra II</td>
<td>AICE Math I*</td>
</tr>
<tr>
<td></td>
<td>Algebra, Functions, and Data Analysis</td>
<td>Geometry SOL Test or Functions/Trig†</td>
<td>AICE Math II*</td>
</tr>
<tr>
<td>10</td>
<td>Geometry IGCSE Geometry</td>
<td>IGSCE Algebra II/Trig or Algebra II</td>
<td>AICE Math I*</td>
</tr>
<tr>
<td></td>
<td>Geometry SOL Test</td>
<td>or Algebra II</td>
<td>or Functions/Trig†</td>
</tr>
<tr>
<td>9</td>
<td>Algebra I IGCSE Geometry</td>
<td>IGCSE Geometry</td>
<td>AICE Math I*</td>
</tr>
<tr>
<td></td>
<td>Algebra I SOL Test</td>
<td>or Algebra II</td>
<td>or Functions/Trig†</td>
</tr>
<tr>
<td>8</td>
<td>Math 8 Pre-Algebra</td>
<td>Pre-AP Algebra I with Alg II extensions</td>
<td>Pre-AP Geometry</td>
</tr>
<tr>
<td></td>
<td>covers 8th grade standards</td>
<td>or Algebra I</td>
<td>includes extensions</td>
</tr>
<tr>
<td></td>
<td>Math 8 SOL Test</td>
<td>Algebra I SOL Test</td>
<td>Geometry SOL Test</td>
</tr>
<tr>
<td>7</td>
<td>Math 7</td>
<td>Math 7 Extended</td>
<td>Pre-AP Algebra I with Alg II extensions</td>
</tr>
<tr>
<td></td>
<td>covers 7th grade standards</td>
<td>half of Grade 7 and all of Grade 8</td>
<td>Algebra I SOL Test</td>
</tr>
<tr>
<td></td>
<td>Math 7 SOL Test</td>
<td>Math 8 SOL Test</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Math 6</td>
<td>Math 6 Extended</td>
<td>Math 7 Extended</td>
</tr>
<tr>
<td></td>
<td>covers 6th grade standards</td>
<td>all Grade 6 and half of Grade 7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Math 6 SOL Test</td>
<td>Math 6 SOL Test</td>
<td></td>
</tr>
</tbody>
</table>

Note: Multiple courses at a grade level are listed from lower level to higher level course w/higher level on top.

2015-16 Grade 6 enrollment: 58% in Math 6, 39% in Math 6 Extended, and 3% in Math 7 Extended

*These courses offer possible college credits w/a qualifying score on external exams and college acceptance.

**Many other sequences are possible with additional math electives, such as Trigonometry; Discrete Math; and Probability/Statistics (all semester courses); Computer Math; and AP Computer Science. Students in Advanced Placement or International Baccalaureate Programs take comparable courses.

† These courses are Pre-Calculus courses.

The Programme
The Governor's School @ Innovation Park (Grades 11 and 12)

<table>
<thead>
<tr>
<th>Grade 12</th>
<th>Grade 11</th>
<th>Grade 10</th>
<th>Grade 9</th>
<th>Grade 8</th>
<th>Grade 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 HS Math Credits and 6-10 George Mason Credits</td>
<td>6 HS Math Credits and 6-13 George Mason Credits</td>
<td>6 HS Math Credits and 6-14 George Mason Credits</td>
<td>6 HS Math Credits and 6-14 George Mason Credits</td>
<td>6 HS Math Credits and 6-14 George Mason Credits</td>
<td>6 HS Math Credits and 6-14 George Mason Credits</td>
</tr>
<tr>
<td>GS Calculus Spring (GMU Math 116) and GS Calculus I Part B* (GMU Math 124)</td>
<td>GS Multivar. Calculus* (GMU Math 215) and GS Calculus Spring (GMU Math 116)</td>
<td>GS Linear Alg. Spring* (GMU Math 203) and GS Multivar. Calculus* (GMU Math 215)</td>
<td>GS Calculus I, Part A* (GMU Math 123) and GS PreCalculus Fall (GMU Math 105)</td>
<td>Pre-AP Algebra II/Trig and Functions/Analytic Geometry †</td>
<td>Functions/Trig</td>
</tr>
<tr>
<td>Pre-AP Geometry includes extensions and Geometry SOL Test</td>
<td>Pre-AP Algebra II/Trig and Functions/Analytic Geometry †</td>
<td>Pre-AP Algebra II/Trig and Functions/Trig</td>
<td>Pre-AP Geometry includes extensions and Geometry SOL Test</td>
<td>Pre-AP Algebra I with Alg II extensions and Algebra I SOL Test</td>
<td>Pre-AP Algebra I include Alg II extensions and Algebra I SOL Test</td>
</tr>
<tr>
<td>Math 7 Extended half of Grade 7 and all of Grade 8 Math 8 SOL Test</td>
<td>Math 7 Extended half of Grade 7 and all of Grade 8 Math 8 SOL Test</td>
<td>Math 7 Extended half of Grade 7 and all of Grade 8 Math 8 SOL Test</td>
<td>Math 6 Extended all Grade 6 and half of Grade 7 Math 6 SOL Test</td>
<td>Math 6 Extended all Grade 6 and half of Grade 7 Math 6 SOL Test</td>
<td>Math 6 Extended all Grade 6 and half of Grade 7 Math 6 SOL Test</td>
</tr>
</tbody>
</table>

2015-16 Grade 6 enrollment: 58% in Math 6, 39% in Math 6 Extended, and 3% in Math 7 Extended

The Governor’s School (GS) Math Placement test will determine junior year math placement.

* Courses are also offered as dual enrollment. The school system will pay GMU tuition for one course during the junior year and two courses in the senior year. Two of the three courses paid for must be math.

† These courses are Pre-Calculus courses with Functions/Analytic Geometry being the most advanced.

The Pre-Governor School provides the option to concurrently enroll in Pre-AP Geometry and Algebra II.

Note: GS courses for a given grade identify the courses to be taken in Semester 1 (lower) and Semester 2. (upper)
A diagnostic test will be administered to all students in the latter part of the TJ Stats 1 course, to help confirm the most appropriate course in which students will begin the sequence (TJ Math 1, TJ Math 2, TJ Math 3, etc).

† Course is also offered as dual enrollment. Other non-dual enrollment electives are available after completing Calculus.

**PWCS Secondary Mathematics Course Sequence Examples**

Leading to a STANDARD Diploma

<table>
<thead>
<tr>
<th>Grade</th>
<th>Math Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Algebra II</td>
</tr>
<tr>
<td></td>
<td>or AP Statistics*</td>
</tr>
<tr>
<td></td>
<td>or Advanced Math</td>
</tr>
<tr>
<td>11</td>
<td>Geometry</td>
</tr>
<tr>
<td>10</td>
<td>Algebra I</td>
</tr>
<tr>
<td></td>
<td>or Algebra I, Part II</td>
</tr>
<tr>
<td>9</td>
<td>a math elective (not math credit) that covers half of Algebra I curriculum.</td>
</tr>
<tr>
<td>8</td>
<td>Math 8 Pre-Algebra</td>
</tr>
<tr>
<td></td>
<td>covers 8th grade standards</td>
</tr>
<tr>
<td>7</td>
<td>Math 7</td>
</tr>
<tr>
<td></td>
<td>covers 7th grade standards</td>
</tr>
<tr>
<td>6</td>
<td>Math 6</td>
</tr>
<tr>
<td></td>
<td>covers 6th grade standards</td>
</tr>
</tbody>
</table>

2015-16 Grade 6 enrollment: 58% in Math 6, 39% in Math 6 Extended, and 3% in Math 7 Extended

*The Standard Diploma requires three math credits as specified in the Graduation Requirements. Students earning a Standard Diploma are encouraged to take mathematics all four years of high school. Many other sequences are possible with additional math electives, such as Trigonometry; Discrete Math; and Probability/Statistics (all semester courses); Advanced Computer Math; and AP Computer Science.

**These courses offer possible college credits w/a qualifying score on external exams and college acceptance. Note: Multiple courses at a grade level are listed from lower level to higher level course with the higher level on top. Students are better prepared for taking the SAT or taking a Math Placement exam after high school if they have completed or are enrolled in Algebra II.