

# Arvada West High School

## Concurrent Enrollment Courses

Course	Description	Credits
<p><b>WQM 100</b></p> <p style="text-align: center;"><i>Fall Enrollment</i></p>	<p><b>Introduction to Water Quality Management</b></p> <p><b>High School Instructor: Chris Madsen</b></p> <p>Introduces the water and wastewater treatment field and acquaints the prospective technicians with the applied science concepts that are used to operate, maintain and monitor water quality. Topics include hydrological cycle, water sources, hydraulics, ecosystems, pollution, water chemistry, water calculations, microbiological aspects of water and water quality control.</p> <p><b>Prerequisites: N/A</b></p> <p><b>Plan of Study:</b> This course is part of the Water Quality Management Associate of Applied Science Degree at Red Rocks Community College and may transfer to other colleges.  <a href="https://www.rccc.edu/catalogs/18-19/water-quality-management-aas-degree.htm">https://www.rccc.edu/catalogs/18-19/water-quality-management-aas-degree.htm</a></p>	<p>3</p>
<p><b>WQM 119</b></p> <p style="text-align: center;"><i>Spring Enrollment</i></p>	<p><b>Basic Water Quality Analysis</b></p> <p><b>High School Instructor: Chris Madsen</b></p> <p>Relates the results of laboratory control tests to the chemistry of water and wastewater treatment. Students will gain the skills and techniques to operate within a laboratory. Topics include laboratory equipment and instrumentation identification, written reports and laboratory tests. Laboratory testing includes hardness, alkalinity, dissolved oxygen, fluoride, jar testing, inorganic chemicals, pH and disinfectant residuals.</p> <p><b>Prerequisites: N/A</b></p> <p><b>Plan of Study:</b> This course is part of the Water Quality Management Associate of Applied Science Degree at Red Rocks Community College and may transfer to other colleges.  <a href="https://www.rccc.edu/catalogs/18-19/water-quality-management-aas-degree.htm">https://www.rccc.edu/catalogs/18-19/water-quality-management-aas-degree.htm</a></p>	<p>4</p>

\*Students are encouraged to connect with their preferred college/university advisor to determine transferability of college credit.

<p><b>WQM 216</b></p> <p><i>Spring Enrollment</i></p>	<p><b>Biological and Bacteriological Water Quality Analysis</b></p> <p><b>High School Instructor: Chris Madsen</b></p> <p>Studies microorganisms associated with all phases and concerns of water and wastewater treatment including bacteria, protozoa and algae. Topics include: microorganisms used in treatment, as indicators and the pathogens; regulations, health hazards and laboratory safety. Laboratory work involves media preparation, coliform testing, standard plate count, BOD, and biomonitoring.</p> <p><b>Prerequisites: WQM 119</b></p> <p><b>Plan of Study:</b> This course is part of the Water Quality Management Associate of Applied Science Degree at Red Rocks Community College and may transfer to other colleges.  <a href="https://www.rrcc.edu/catalogs/18-19/water-quality-management-aas-degree.htm">https://www.rrcc.edu/catalogs/18-19/water-quality-management-aas-degree.htm</a></p>	<p>4</p>
<p><b>WQM 187</b></p> <p><i>Spring Enrollment (Pending Spring 2019)</i></p>	<p><b>Special Topics: Water Industry Professional Exploration</b></p> <p><b>High School Instructor: Chris Madsen</b></p> <p><b>Prerequisites: WQM 216</b></p> <p><b>Plan of Study:</b> This course is part of the Water Quality Management Associate of Applied Science Degree at Red Rocks Community College and may transfer to other colleges.  <a href="https://www.rrcc.edu/catalogs/18-19/water-quality-management-aas-degree.htm">https://www.rrcc.edu/catalogs/18-19/water-quality-management-aas-degree.htm</a></p>	<p>1</p>