

<b>COURSE:</b> Robotics & Automation I	<b>UNIT OF STUDY:</b> Introduction to Robotics	<b>TEACHER:</b> Rick Ortiz
<b>PROJECT SCOPE:</b> 29-AUG-2017 – 8-SEP-2017	<b>STANDARDS ADDRESSED:</b> HS.CTE.O.RA: 5.A, 5.B, 5.C, 5.D, 9.A, 9.C,	
<p><b>STUDENT OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>▪ Ss will identify the various components and features of the RobotC Integrated Development Environment. (IDE)</li> <li>▪ Ss will understand RobotC programming fundamentals: variables, functions, syntax, naming conventions, punctuation, etc.</li> <li>▪ Ss will understand the connection between software and hardware behaviors.</li> <li>▪ Ss will apply understanding of programming fundamentals to an active robot testbed.</li> <li>▪ Ss will create commands to manipulate the behavior of robot system hardware using software.</li> </ul>	<b>PROJECT TITLE:</b> RobotC Programming Fundamentals	
<p><b>ASSESSMENT:</b></p> <p>T: Direct observation; observation checklist. T: Observation of working code in real time. S: Engineering notebook reflection and documentation. S: Submission of working code to teacher.</p>	<p><b>INSTRUCTIONAL MATERIALS:</b> VeX Educational Robotics Design System, Student workstations, Internet Access, Robotics Toolkit, RobotC IDE</p>	
<p><b>INSTRUCTIONAL STRATEGIES:</b> Hands-on training, Technology, Collaborative Learning</p>	<p><b>PROJECT BRIEF:</b> Students will become familiar with the RobotC Integrated Development Environment (IDE) by utilizing it to manipulate hardware components on their VeX testbed.</p> <ul style="list-style-type: none"> <li>▪ T will model use of RobotC IDE for students.</li> <li>▪ S will practice writing code in RobotC IDE.</li> <li>▪ T will guide Ss through set-up and calibration of RobotC IDE for use with hardware components.</li> <li>▪ Ss will complete various challenges of increasing complexity to scaffold and solidify learned skills.</li> <li>▪ Ss will practice running active programs on their VeX testbed.</li> <li>▪ Ss will practice debugging their programs in real time using software and hardware problem solving strategies.</li> </ul>	
<p><b>INSTRUCTIONAL STRATEGIES:</b> Hands-on training, Technology, Collaborative Learning</p>	<p><b>DIFFERENTIATED INSTRUCTION SUPPORT:</b></p> <p>Provide accommodations to students in accordance with IEP. Instructional aides (videos, graphic organizers, etc.) provided for ELL students.</p>	