

## Career and Technology Studies (CTS)

Occupational Areas: [Electro-Technologies \(ELT\)](#)

Course: **Robotics**

Rationale/Description: students learn about engineering and engineering problem solving. They will be given introductions to the VEX Robotics Design System and Autodesk® Inventor® while learning key STEM principles through a process that captures the excitement and engagement of robotics design, construction/building, testing and manipulation.

Electro- technologies: Students provide technical support and services in the design, development, testing, production, service, repair and operation of electrical and electronic equipment and systems.

Courses (some call these modules) to equal 3 credits are:

<p>ELT1010: <b>ELECTRO - ASSEMBLY 1</b> Students apply basic fabricating and servicing techniques to construct and test electronic and electromagnetic devices and cables.</p>	<p>COURSE ELT1130: <b>ROBOTICS 1</b> Level: Introductory Prerequisite: None Description: Students apply the fundamentals of robotics systems and basic robotics functions.</p>	<p>ELT1140: <b>ROBOTICS APPLICATIONS</b> Students apply the fundamentals of robotics systems and basic robotics functions. Prerequisite: ELT1010: Electro-assembly 1</p>
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## Assessment

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<b>Assignments</b>	<b>40%</b>	
<b>Projects</b>	<b>50%</b>	
<b>Tests/Quizzes</b>	<b>10%</b>	<b>=100%</b>

## Resources and Course Materials

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VEX Robotics Design System Building Guides and Manuals

VEX Robotics Kit                      Storage Containers

Paper                                      Online Resources

Pencils                                    Large Container

Rulers                                    (Empty Plastic Bottles or Aluminum Cans)

Internet Access                      (Engineering Notebooks)

Dictionaries                          Protractor

VEX Robotics Kit                      Compass

Computers (with Autodesk Inventor)

<http://curriculum.vexrobotics.com/home>

## Timeline

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You have the *Quarter* to complete all course work. (Approx. 10 weeks)

Respect all due dates. November 7, 2014 to January 26, 2015

## Expectations

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- **Be on time – Attendance is taken at the beginning of every class. If you are late you will miss the instructions of the day, which are very important. If you are late because you were with another teacher, I need a note to verify it. You are responsible for missed days. You need to see me if you will be away for a number of days. Don't expect me to find you!**
- **Be prepared – This will help you utilize your class time to the fullest. You will not waste time going to your locker to find your supplies. Come to class prepared everyday with your duotang and writing tool. If you need to leave the classroom for whatever reason, you ask first.**

- **Be ready to work – use the class time that is given to you wisely.**
- **Be respectful – This is a big one. If you want to be treated in a well-respected manner, be expected to act in one. You need to respect not only me, your teacher, but your fellow classmates as well. Inappropriate behavior will not be tolerated, whether it is in a joking manner or not. Also, respect yourself.**
- **No horseplay! Workshops are no place for irresponsible behavior such as running around, “swordfights,” throwing parts, or pushing people.**
- **\*Respect the environment and space around you. Don’t write or sit on the tables or leave big messes for the caretakers to clean up. They are not responsible to clean up after you – you are.**
- **Keep the VEX parts out of your mouth, ears, nose, etc. It’s a robot, not a snack.**
- **\*If it’s not yours, don’t touch! Be respectful of not only your classmate’s work/property, but your own. Every piece you do will be unique and created by you! You never know, it could be worth a lot someday!**
- **\*Respect all supplies. Borrowing is a privilege not a right. If you are seen misusing supplies in any way, you will lose that privilege and will have to finish your projects by some other means.**
- **Be responsible – Keep everything that is given to you, handouts, notes, exercises etc. In case there is a mistake on marks, or perhaps an assignment was not marked, you have the evidence to prove otherwise. Handouts are given to you for a reason, so when you get them put them straight into your duotang/folder for safe keeping.**
- **Personal electronic devices are allowed, however, only for educational purposes. Misuse will result in confiscation/disciplinary actions. Don’t let it get to that, show manners and respect. No one should ever touch your electronic device unless you agree to it.**
- **MOST OF ALL BE – kind, gentle, helpful and understanding TO EVERYONE AND EVERYTHING**

