

Berrien Springs Partnership Lab Syllabus and Instructor Qualifications

LABS (CLASSES) ARE PROVIDED AS AN EDUCATIONAL SOURCE FOR PBL (PROJECT BASED LEARNING)

COMMUNITY CLASS TITLE: VEX RoboTZ - Robo Tech Zone

GRADE OR AGE LEVELS: 7-12 (6th grade by invitation/application/interview)

FORMAT: IN-PERSON

DAY AND TIME OF THE WEEK: Thursdays 4pm - 8pm

TOTAL REQUIRED HRS: 36

ADD'L POSSIBLE HRS (OPTIONAL TIME): Competition dates/times TBD

TOTAL SEMESTER HOURS POSSIBLE: 60+

LOCATION: SMC Niles Campus. 33890 US-12, Niles, MI 49120. Rm 157

INSTRUCTOR: Chris Kimmey, Bob Smith

CONTACT INFORMATION: 269.783.9333 GoTeamRoboTZ@gmail.com

RoboTechZone.org

ADDITIONAL REGISTRATION AT SITE REQUIRED? Yes

INSTRUCTOR QUALIFICATIONS: Instructors have 20 plus years combined engineering and technical experience. Instructors have 3 years experience coaching award winning VEX Competitive Robotics Teams at the local, State, National, and World level.

COURSE DESCRIPTION (OVERVIEW): VEX RoboTZ course is centered around learning VEX V5RC, robotics. Students work in small groups to design, build, and program/code a robot to participate in a new game-based engineering challenge every year.

STEM concepts are put to the test as students learn lifelong skills in teamwork, leadership, and communication.

***RECOMMENDED:** Robo Tech Zone also offers a LABZ for LEADERZ course to take in conjunction with this course, specifically for students looking to strengthen their communication skills.

***NOTE:** Students may participate in several competitions including 4-5 league nights on Thursday evenings in Grand Rapids, and possibly two all day Saturday events. For teams progressing beyond the regular season, to State, Nationals, or Worlds, the season may continue through April. Nationals and World events take place out of state, typically Wednesday through Saturday. Travel/hotel expenses will be the responsibility of each family. Families will be encouraged to participate in fundraising events throughout the season, which may help to offset some of these costs. *Our program also accommodates R&D and in-house scrimmage teams for

those not able to travel/participate in competitions.

SYLLABUS/OUTLINE: WEEKLY BREAKDOWN OF PROJECT-BASED LEARNING LAB ACTIVITIES

Students work in teams and will follow the engineering design process throughout to build and program a robot capable of meeting the requirements of this year's game challenge. This involves defining the game, including scoring and strategy. Students develop solutions, design, build, test, verify, and continually evaluate and optimize the robots all while documenting the process.

COURSE OBJECTIVES AND APPROXIMATE TARGET DATES: Students will work towards understanding the engineering process while building and programming a robot capable of entering competition within the first six to eight weeks of class.

STUDENT ASSESSMENT - what will be used to evaluate student progress and/or end of semester pass/fail status?

- 1) Student agrees to attend at least 80% of class sessions/lessons offered. Attendance is kept online and tracked by Partnership staff. Failure to meet 80% or be on track to meet 80% may result in program discontinuation.
- 2) The Partnership Student Assessment or Performance Form is filled out by the teacher and turned into Partnership staff. The link to this form is found on the web page for this class. Failing marks for lack of participation, behavior issues, practice time, etc. may result in program discontinuation.

Class-specific assessment: We will evaluate each student using the BSP evaluation form and passing criteria will be based on student attendance and participation in weekly class sessions.

ADDITIONAL RESOURCES: (online, books, video, etc.):

<https://www.vexrobotics.com/v5/competition/vrc-current-game>

CLASS POLICIES: ATTENDANCE, BEHAVIOR, WEATHER, ETC. Attendance: Attendance is required and the instructor is to be notified in advance of any absence.

Behavior: Any behavioral issues will be addressed with the student and parent. If the behavior persists, the student will be referred to the BSPP staff for further recommendations or removal from class.

Weather: Classes will cancel in conjunction with SMC school closings.