



RVGS Emerging Topics in Computer Science Elective Options



Registration must take place through RVGS for these courses and students should NOT complete registration directly through the course website. **To register, the student and parent/guardian must complete the [acknowledgement/agreement form accessible here](#) or use the QR code.**

OVERVIEW

Starting in the fall of the 2023-24 school year, RVGS will be partnering with “The Coding School” (TCS) to provide two elective options which are available outside of the normal school day. These courses are delivered virtually in a structured format by staff from TCS, a well-respected nonprofit focused on providing computer science training and education. RVGS does not typically use external course materials, but TCS has a vetted track record of successfully educating over 40,000 students, educators, and professionals from 125 countries. For the two programs RVGS is offering to our students, TCS partners with IBM Quantum, the US Department of Defense, and highly regarded lecturers.

COURSE OFFERINGS

RVGS is offering two “Emerging Topics in Computer Science” electives:

- **Quantum Computing:** This course will follow curriculum followed by the “Qubit by Qubit” program offered by TCS, developed by quantum researchers at Harvard, Stanford, Oxford, and MIT with support from IBM Quantum. Information is available at: <https://www.qubitbyqubit.org/course-info>
- **Machine Learning:** This course will follow curriculum followed by the “TRAIN” program offered by TCS, developed by experts and engineers at Stanford, Johns Hopkins, and Amazon with support from the Department of Defense. Information is available at: <https://the-cs.org/train-course>

STRUCTURE & EXPECTATION

- Students will complete the “Academic-Year Course” option, which runs from Sept 2023 to April 2024 (orientation is Sept 18). Specifics regarding dates will be provided later.
- The time commitment is 3-5 hours each week. There are three weekly components:
 - o Lecture (delivered live but a recording is available for asynchronous viewing)
 - o Lab (interactive via Zoom, variety of times available to accommodate schedules)
 - o Homework (independent practice of concepts)
 - o Office hours, guest talks and lab tours are also available
- Course materials and assignments are NOT “at your own pace” and students must attend the live labs and complete lecture and assignments as they are assigned, meeting all course expectations.
- RVGS students meet the prerequisites and either elective is available for any of our 10-12th graders.

CREDIT

These courses will be delivered for credit and will apply to student transcripts/GPA as described:

- Students can take one of these two course options each year (not both).
- Each course will count as a half credit/semester credit course for weighted credit. The courses last for the full school year and material is engaging, but the rigor, expectations, and time commitment do not meet the threshold for a full course credit at RVGS.
- Students do not need to take both courses and there is no preferred order.
- Assignments are graded by TCS instructors, which are then vetted and recorded by our teacher of record, Mr. Divers. Mr. Divers will be the instructor on the student’s schedule and will serve as a liaison with TCS staff if needed. However, students are expected to complete the course with minimal intervention from Mr. Divers.
- Grades will be reported numerically and by letter grade on semester report cards.

Participation with these courses is in addition to normal coursework at RVGS and not in lieu of any standard courses. Students will still have a research elective during their course schedule as normal.