

RVGS is excited to share a new
recognition opportunity for our students:



Distinguished Research Scholars

August 2022



What is the purpose of the program?

- The goal is to recognize RVGS students who have worked hard to prepare themselves for careers in **STEM fields related to research focuses at RVGS**.
- This will provide some guidance for future course selections for students interested in the selected focus areas.
- Recognition could help indicate to colleges the student has an increased level of preparation for a particular degree program.

What isn't the purpose of this program?

- This is not intended to increase the workload on students – most of the qualifications for this program come from the students' courses, grades, and research projects.
- This isn't for everyone. This is specifically for students planning to major in certain laboratory or technical fields that benefit from specialized skills and preparation. Recognized students must also meet increased standards for classroom performance.



What if a student doesn't plan to pursue a STEM career?

- Not all RVGS students pursue STEM careers, but our school still provides a strong level of preparation for a variety of future pursuits because of the strong level of rigor. We only offer this recognition in selected focus areas because they are the career paths for which RVGS provides specialized preparatory experiences.

What if student is unsure of what career path they want to pursue?

- That is perfectly normal! Students can aim to be eligible for career paths that interest them, but don't formally request to be considered until they are preparing to apply to colleges. Many colleges ask students to declare a major as part of their application.

What if a student is interested in one of these fields, but doesn't meet the criteria?

- Not all RVGS students interested in STEM fields will meet these criteria, and that's ok. RVGS is already a challenging environment that prepares students well for college and careers. The courses and grades required for this recognition stretch that high standard even further and won't fit within everyone's time constraints, priorities, or capacity during high school.

FOCUS AREAS



Distinguished Research Scholars

This honor is given in one of four focus areas. Remember, this is specifically for students interested in majoring and pursuing a career in the particular field.

- ***Biomedical Research***

- Biotechnology and molecular biology focus with health and medical applications

- ***Research Science***

- Laboratory research focus suitable to a range of scientific research careers

- ***Engineering***

- Design, fabrication, and implementation focus suitable to varied engineering disciplines

- ***Computer Science***

- Program structure and coding focus for programming and software design applications

- ***Mathematical Modeling***

- Applied used of mathematics and abstract modeling [*Note: this option is available for students interested this field. Eligibility requirements will match Computer Science requirements*]



The following criteria are required across all four focus areas:

- Intention to pursue degree and career path related to the focus area
- Specialized coursework and preparatory experiences (listed on following slides)
- Academic excellence, with no more than four semester grades lower than an A in Roanoke Valley Governor's School courses
- Portfolio of research projects from your junior and senior years, reviewed for quality and rigor by RVGS
- Meeting RVGS standards for academic and research integrity and personal conduct

FOCUS AREA CRITERIA



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The following criteria are required for BIOMEDICAL RESEARCH:

- Science coursework including RVGS DE Biology and AP Chemistry
- Math coursework including Accelerated Calculus (ALC) and Multivariable Calculus
- Completion of two or more of the following research electives: Biotechnology, Computational Biology, Directed Study (within focus area), or Mentorship
- At least one off-campus or extracurricular experience (FBRI/other research institution, Summer Residential Governor's School, Hoffman Fellowship, summer RVGS research experience, or other experience approved by the director)

Criteria for RESEARCH SCIENCE is the same except:

- Elective options include Advanced Chemical Research, Environmental Research, Directed study in those classes, or any of the options listed for *Biomedical Research*

FOCUS AREA CRITERIA



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The following criteria are required for ENGINEERING:

- Science coursework including AP Physics C
- Math coursework including Accelerated Calculus (ALC) and Multivariable Calculus
- Completion of two or more of the following research electives: Engineering Design & Fabrication, Product Design Engineering, Python Coding, relevant Directed Study, or Mentorship
- Six one-on-one or small group meetings with industry professionals or collegiate faculty, to provide gain insights and recommendations for future success in the field

Criteria for COMPUTER SCIENCE is the same except:

- Elective options include Python Coding, Engineering electives, Computational Biology, Directed Study (within focus area) or Mentorship

OVERVIEW OF CRITERIA



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CRITERIA FOR ALL FOCUS AREAS

Intention to pursue college major and career path within the field

No more than 4 semesters with a grade below an "A" in RVGS courses

Portfolio of research project materials from junior and senior year

ALC and Multivariable Calculus (alternatives available for current juniors who took Calc AB)

FOCUS AREA-SPECIFIC CRITERIA

Biomedical Research	Research Science	Engineering	Comp. Science/Math Modeling
AP Chemistry in 12 th grade	AP Chemistry in 12 th grade	AP Physics in 12 th grade	AP Physics in 12 th grade
At least two: Biotechnology, Computational Biology, Directed Study, or Mentorship	At least two: Environmental Research, ACR, Biotechnology, Comp. Biology, Directed Study, or Mentorship	At least two: Engineering Design & Fabrication, PDE, Python, Directed Study, or Mentorship	At least two: Python, Engineering, PDE, Computational Biology, Directed Study, or Mentorship
Off-campus or extracurricular research experience		Six meetings with professionals in the field to learn and get advice	

HOW TO APPLY



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- Elective course request forms in the spring will include a space to indicate interest in pursuing this recognition.
- The statement of interest exists to ensure that the students take the proper classes and complete the requirements. Students can opt in or out of program requirement at any point prior to applying in the fall of senior year.
 - *Class of 2024: Students who didn't take ALC as 11th graders can be eligible if they take AP Calculus BC as seniors.*
 - *Alternate course choices may be approved under some circumstances*
- Interested students apply to be considered in the fall of their senior year.
- The research portfolio includes project materials from junior year (and eventually senior year), which are vetted for quality, rigor, and effort and a Curriculum Vitae. This will be useful when applying for future internships or research opportunities in college.

RECOGNITION



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- All applicants who meet each the qualifications and have their research portfolio approved will receive the recognition.
 - Honorees are not selected based on a competitive basis and there isn't a limit to the number of recipients.
- Recognized students will receive documentation of this recognition prior to college applications deadlines.
- Documentation of the recognition and a letter from Mr. Levy will be sent directly to colleges the student is applying to.

QUESTIONS



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As with any program, the requirements, program information, and procedures may adjust in the future. Any changes that occur will phase in based on the posted criteria at the start of the student's junior year.

For more information, please contact Mr. Levy (mlevy@rvgs.k12.va.us) or Mrs. Sebolt (ksebolt@rvgs.k12.va.us)