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**FOCUS AREA CRITERIA – BIOMEDICAL RESEARCH**

All biomedical research recipients of this honor meet the additional criteria below:

* Science coursework including college-level Biology and college-level Chemistry
* Math coursework including college-level Accelerated Calculus (equivalent to Calculus I & II) and college-level Multivariable Calculus
* Completion of two or more of the following research electives: Biotechnology, Computational Biology, Directed Study (within focus area), or Mentorship
* Minimum of one significant off-campus or extracurricular experience at a research institution, Summer Residential Governor’s School, Hoffman Fellowship, summer RVGS research experience, or other approved experience

**GENERAL CRITERIA FOR DISTINGUISHED RESEARCH SCHOLARS**

All recipients of this honor meet the following qualifications:

* Intention to pursue degree and career path related to their focus area
* Specialized coursework and preparatory experiences (see “FOCUS-AREA CRITERIA”)
* Track record of academic excellence, with no more than four semester grades lower than an A in Roanoke Valley Governor’s School courses and no grades lower than a B
* Portfolio of focus-area specific projects from students’ junior and senior years, reviewed for quality and rigor by Roanoke Valley Governor’s School faculty
* Adherence to high standards of academic and research integrity and personal conduct

**FOCUS AREAS**

This honor can be conferred in one of the following specialties:

* *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 [\* Alternate “Mathematical Modeling” option available; see “Additional Notes”]*
  + Program structure and coding focus for programming and software design applications

**OVERVIEW**

The Roanoke Valley Governor’s School for Science and Technology “Distinguished Research Scholar” program recognizes students who display specialized aptitude for future careers in a selected laboratory or technological research field. In addition to academic success, these students have met specific criteria demonstrating coursework and experiences that uniquely prepare them for collegiate and professional excellence in their chosen laboratory or technological field of study. Honorees present capstone projects which have been vetted for quality and rigor by RVGS faculty.

**ADDITIONAL NOTES:**

* Students interested in pursuing applied mathematics can select an alternate Focus Area of “Mathematical Modeling”. The criteria and guidelines for this Focus Area will match those listed for “Computer Science”. If the student desires adjustments to the course selection criteria, these requests will be consider as is appropriate.
* ”College-level” courses listed above refer to Advanced Placement or Dual-Enrollment courses.
* For course requirements, alternate options may be approved with appropriate rationale.
* Criteria are provided to underclassmen to allow pursuit of proper experiences and courses. Students express interest for recognition by 11th grade and apply at the start of 12th grade.
* Recognition awarded by mid-point of senior year, with re-evaluation during second semester.

**FOCUS AREA CRITERIA –COMPUTER SCIENCE**

All engineering recipients of this honor meet the additional criteria below:

* Science coursework and Math coursework requirements as listed under *Engineering*
* Completion of two or more of the following research electives: Python Coding, Engineering electives, Computational Biology, Directed Study (within focus area) 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

**FOCUS AREA CRITERIA –ENGINEERING**

All engineering recipients of this honor meet the additional criteria below:

* Science coursework including college-level calculus-based Physics
* Math coursework including college-level Accelerated Calculus (equivalent to Calculus I and II) and college-level Multivariable Calculus
* Completion of two or more of the following electives: Engineering Design & Fabrication, Product Design Engineering, Python Coding, relevant Directed Study, or Mentorship
* Six one-on-one or small group meetings with professional engineers or collegiate faculty, to provide gain insights and recommendations for future success in the field

**FOCUS AREA CRITERIA –RESEARCH SCIENCE**

All research science recipients of this honor meet the additional criteria below:

* Science coursework including college-level Biology and college-level Chemistry
* Math coursework including college-level Accelerated Calculus (equivalent to Calculus I & II) and college-level Multivariable Calculus
* Completion of two or more of the following research electives: Advanced Chemical Research, Environmental Research, Biotechnology, Computational Biology, Directed Study (within focus area), or Mentorship
* Minimum of one significant off-campus or extracurricular experience at a research institution, Summer Residential Governor’s School, Hoffman Fellowship, summer RVGS research experience, or other approved experience