

# The Governor's School @ Innovation Park Student Application

# **Program Description**

The Governor's School @ Innovation Park (GS@IP) offers selected juniors and seniors from Manassas City (MCPS), Manassas Park (MPCS), and Prince William County Public Schools (PWCS) an advanced and intensive program in science, technology, engineering, and mathematics (STEM). Students selected for the two-year program attend classes at George Mason University (GMU) Science and Technology Campus each morning. At that campus, students follow a sequence of courses designed to integrate mathematics and research with specializations in biology, chemistry, engineering, or physics. Students will select which strand (biology, chemistry, engineering, or physics) they wish to pursue the two-year study. Along with specifically designed coursework in that strand, students will be provided an intensive study in mathematics that supports their scientific and research endeavors. Students will be placed initially in either Advanced Mathematics Models or Calculus I. Students return to their base high schools each afternoon to complete other requirements for graduation.

A unique feature of the program is its emphasis on research. All students will collaborate in designated STEM electives to design and conduct original research. Students working across strands will integrate their knowledge and perspectives to design, conduct, and report their research exactly as scientists at major universities, such as GMU, do. To help students understand the importance of their research and the engineering applications of their learning, each student will complete a mentorship working with STEM professionals on specific projects.

As a continuously accelerated model, only rising juniors may enter this program. Applicants must know that participation in this program carries with it the expectation that registration for courses at their base high school will be restricted. It is strongly recommended that they take the following courses before applying for GS@IP:

Subject Area	Required	Recommended
Science*	• Biology	Physics*
	Chemistry	
Mathematics	• Algebra I	<ul> <li>Precalculus w/Trigonometry</li> </ul>
	Geometry	AP Precalculus
	• Algebra II/Trig	
Electives		Economics and Personal Finance
		Fine or Practical Art
		World Languages ***

\*Advanced/honors level recommended but not required

\*\*Required for all students entering the engineering strand

\*\*\*3 years of one language

#### GS@IP Website: https://governors.pwcs.edu

#### For more information contact:

Division	Office	Name/Email Address	Phone Number
Manassas City Public Schools	Gifted/Talented and	Karima Wesselhoft	571-377-7317
	Advanced Programs	KWesselhoft@mcpsva.org	
Manassas Park Schools	Office for Student	Natalie Teague	
	Success	Natalie.Teague@mpark.net	
Prince William County	Advanced Academics and	Kelly Brown	703-791-7923
Schools	Specialty Programs	AASP@pwcs.edu	

Manassas City, Manassas Park and Prince William County School Divisions do not discriminate in employment or in its educational programs, services, and activities on the basis of race, color, religion, national origin, sex, gender identity, sexual orientation, pregnancy, childbirth or related medical conditions, age, marital status, veteran status, disability, genetic information, or any other basis prohibited by law. Students, this packet is designed to help you understand the application process, timeline, and requirements and to plan your answers before accessing the online application portal. It is important to note that the committee will evaluate only information in the portal as of 11:59 p.m. on February 1. It is strongly encouraged that you submit your application early.

#### **Application Overview**

PWCS students will submit their Demographic and Career Highlight Information on the <u>Specialty Program</u> <u>Application</u> (using ParentVUE). They will submit their Portfolio and Recommendations on the <u>Specialty</u> <u>Program--Supplemental Application</u> (Microsoft Form). Both forms must be completed by February 1, 2025.

Students' potential to succeed in the GS@IP program will be assessed through various means, including, but not limited to, portfolio components, GPA and teacher recommendations. No single assessment disqualifies a student from review. Each school division makes its own decisions about eligibility, but all three school divisions use the same criteria and application process. Students found eligible by the school system must be accepted by GMU before final acceptance into the program.

The following information is collected and reviewed for each applicant.

- Demographic Information
- Career Highlights Activities, participation in organizations, awards, and honors.
- **Portfolio** The portfolio demonstrates the applicant's interest and ability in STEM. The Portfolio is comprised of several parts:
  - Part 1: Research project- Paper and presentation
  - Part 2: Timed Essay
  - o Part 3: Annotated Article
  - Part 4: Podcast/Video
- Recommendations—Each applicant must request recommendations from the current science teacher, the current mathematics teacher, and one other adult (should not be a family member). To request a recommendation, please input the recommenders' name in the application portal. \*It is very important that you input the email address correctly. Recommenders will receive the recommendation form in late January or early February. They will have until March 3, 2025, to complete the application.
- Grade Point Average Each applicant's Grade Point Average (GPA) will be calculated on an unweighted scale for science, technology, engineering, and mathematics courses only. Students must also have an overall GPA of 3.4 or higher for entry into GMU.
- Official Transcript- Your school division can access this information and will submit it on your behalf.

#### **George Mason University Admission Process**

Students selected to attend The Governor's School @ Innovation Park must be eligible for admission as a special Guest Matriculate Student at GMU. The university reviews each student's official high school transcript.

- Students need to have taken or be taking all pre-requisite mathematics and science courses with successful mastery of course content.
- Students should have an overall GPA of 3.4 or higher.
- Students should rank in the top quarter of the class.

#### Application

This section will provide a space to gather the information needed to submit the online application. Paper applications will not be accepted for PWCS students.

#### **Demographic Information:**

Name (First, MI, Last)		Date of Birth	Student Number
Mailing Address			
City, State, and Zip Code			
Student Email		Student Cell Phone	
Parent/Guardian 1 Name	an 1 Name Parent/Guardian 1 Email		Parent/Guardian 1 Cell Phone
Parent/Guardian 2 Name	Parent/Guardian 2 Email		Parent/Guardian 2 Cell Phone

#### **Reference Information:**

Current Math Teacher		Current Math Teacher Email
Current Science Teacher		Current Science Teacher Email
Additional Teacher/Adult Reference	Position of Additional Reference	Additional Reference Email

Activities/Programs: List the three most significant STEM-related activities/programs you have participated in during the past three years. Include the name of the organization, sponsoring agency, or group. Describe the time involved and any leadership positions you have held. Under "Year," indicate the calendar year of the training or activity. Please explain any acronyms you use.

Activity 1	Position Held	Time Involved (hours per week/year)	Year
Activity 2	Position Held	Time Involved (hours per week/year)	Year
Activity 3	Position Held	Time Involved (hours per week/year)	Year

**Honors/Recognitions:** List the three most significant honors/recognitions you have received in your area of interest during the past three years. Please explain any acronyms you use.

Honors/Recognitions 1	Level of Competition (regional, state, national, etc.)	Year
Honors/Recognitions 2	Level of Competition (regional, state, national, etc.)	Year
Honors/Recognitions 3	Level of Competition (regional, state, national, etc.)	Year

# Acknowledgments

To be considered for entrance to GS@IP, applicants must agree to the following acknowledgments, which will be marked in the online application.

Student	Parent/Guardian	Acknowledgement Statements
Initials	Initials	
		I understand that the program requires concerted academic focus, preparation, and
		motivation from all participants and that participants are expected to demonstrate the
		emotional maturity and self-discipline to participate in the activities and to
		demonstrate respect for themself, others, the program, and the school
		I certify that I am a resident of the Commonwealth of Virginia and eligible for a free,
		public education in a public school in Prince William County, Manassas City, and
		Manassas Park City Schools.
		I understand that acceptance letters are communicated through the online portal only
		and will only be released on the date indicated in the "Important Dates" list in this
		packet.
		I understand that, if accepted, I will submit an electronic application to George Mason
		University by the date indicated in the "Important Dates" list in this packet.
		I understand that, if accepted, I will be considered a Guest Matriculate Student at
		George Mason University. I understand that I am responsible for abiding by university
		procedures regarding course registration, academic studies, and conduct.
		I understand that the GS@IP calendar could be different from my home school
		calendar. GS@IP students are required to attend school on all scheduled days.
		I understand that the cost of participation per student is paid by the participating
		school division. I take this commitment seriously and recognize that my family may be
		required to reimburse the school division for the cost if I choose to leave the program
		before graduation.
		I understand that tuition costs for optional dual enrollment courses in which I choose to
		enroll are not covered by my school division, I agree to pay the balance in full and abide
		by George Mason University's registrar calendar for add/drop and payment due dates.
		I have discussed graduation requirements with my parents and my school's point of
		contact; I am aware of the coursework/credits I must successfully complete for the
		diploma I wish to pursue.
		I certify that these are my truthful responses to these expectations.
		The decision to apply to the GS@IP is my own, and I want to participate fully in the
		program. The responses contained in this application are my own work. I have read in
		its entirety the application procedures, including the application forms, and program
		expectations, and am aware of my school division's appeals process.
		GS@IP is a highly competitive program with a strong belief in trust and integrity. All
		applicants are expected to present themselves in the best possible light. All information
		must be complete, accurate, and their own work. Any incident of academic dishonesty
		or cheating may result in removal from the application process or immediate removal
		from the program, regardless of when the infraction was committed. I, affirm that this
		submission represents my own work, without the use of any unpermitted aids or
		resources. I understand that there will be no tolerance towards academic dishonesty
		and that cheating can and will lead to removal from the application process or removal
		from the GS@IP.

#### **Student Portfolio**

The student portfolio is a collection of work produced that will demonstrate your commitment and experience in STEM. All applicants will submit a portfolio which includes these pieces:

- Research project (written and oral presentation)
- Timed Essay (completed after the application deadline and will not be uploaded by the applicant)
- Annotated Article
- Podcast/Video

The portfolio is rated by STEM teachers, who will determine its strength holistically. Task-specific rubrics are included with the description of each component.

#### **Research Project**

Students must submit a detailed project incorporating all aspects of scientific research or engineering design. For reference, students should review the information at the following websites:

- https://student.societyforscience.org/international-rules-pre-college-science-research
- https://www.societyforscience.org/isef/2021-resources/

Students should submit the complete written component of the research project and the oral component. The oral component is usually the PowerPoint or other application used to present the research. Students may place notes in the slides.

#### Option 1:

Students who have participated in the local, regional, or state Virginia Junior Academy of Science (VJAS) or any level of the International Science and Engineering Fair (ISEF) competitions may submit their work for those competitions. **Such research must have been completed after the beginning of grade 9 to be eligible for review.** Such products must include the written documentation of design and the display represented for judging. All forms submitted to the initial competition must be included in this submission for review.

#### Option 2:

Students may design a new project incorporating all aspects of scientific research or engineering design. Students must complete and submit their design's written and oral presentation components. Students may design their experiments and collect and evaluate authentic data if time permits. If the data cannot be collected within the timeframe available, students may create probable data within the existing conditions and present summaries and conclusions around those data. **Students choosing option 2 should limit their experiments to questions that do not require the use of human subjects, recombinant DNA, tissue, pathogenic agents, or controlled substances.** 

# **Research Project Rubric**

Criteria	Expert- 3	Proficient- 2	Apprentice- 1	Novice- 0
Content	Explains and applies relative and accurate content.	Explains or otherwise applies relevant and accurate content.	Identifies or otherwise applied relevant content with minor errors or omissions.	Identifies or makes connections to irrelevant content OR relevant with major errors or omissions.
Hypothesis	Makes hypothesis that indicates the relationship between variables and is supported through scientific understanding and/or the use mathematical relationships.	Makes hypothesis that specify what happens to a dependent variable when an independent variable is manipulated.	Makes hypothesis that is directly related to the question; however the dependent and independent variable is not explicitly indicated.	Makes hypothesis that is indirectly related to the question.
Interpret, Analyze and Evaluate Data	Accurately analyzes or interprets information using a graph and/or table, identifies patterns in the data, and recognizes unusual or unexpected data.	Constructs, analyzes, and interprets graphical displays of data	Analyzes or interprets information using a graph and/or table but makes minor mistakes.	Analyzes or interprets information using a graph and/or table but makes major mistakes.
Evaluate and Synthesize	Constructs or evaluates an explanation based on observations or laboratory evidence, relates it to scientific ideas or principles, and applies explanation to new contexts. Makes quantitative and/or qualitative claims regarding the relationship between dependent and independent variables and can apply these claims to new contexts.	Constructs or evaluates an explanation based on observations or laboratory evidence and relates it to scientific ideas or principles. Makes quantitative and/or qualitative claims regarding the relationship between dependent and independent variables.	Explanation or evaluation of evidence is supported by laboratory evidence. Makes claims about the relationship between dependent and independent variables that are not supported with evidence.	Constructs or evaluates an explanation that includes an irrelevant claim. Claims are not based on the relationship between the dependent and independent variables
Clarity	Communicates accurate, clear, and complete scientific information. Uses scientific terms and concepts accurately to support explanations.	Communicates scientific information that is accurate and clear. Uses scientific terms and concepts accurately to support explanations.	Communicates partially accurate and/or minimal information in explanations. Use of scientific terms in explanations is limited or partially accurate.	Communicates information that reflects inaccurate concepts. Use of scientific terms is inaccurate or absent.
Citations	Cites all sources data obtained from other sources. Citation style is used in both text and bibliography.	Cites most data obtained from other sources. Citation style is used in both text and bibliography.	Cites some data obtained from other sources. Citation style is either inconsistent or incorrect.	Does not cite sources, this is an academic integrity violation.

#### **Timed Essay**

Applicants are required to complete a timed essay after the application deadline. It does not need to be submitted with the portfolio at the time of the application. The committee looks to understand the student's thought process and problem-solving skills through the essay. Students will have 90 minutes to complete the essay.

The timed essay will be administered during two in-person sessions; applicants may choose one session to attend.

Applicants should review the rubric below and consider each area carefully as they begin thinking about the writing process for their essay.

Criteria	Expert- 3	Proficient- 2	Apprentice- 1	Novice- 0
Focus/Main Point	The essay is focused, purposeful, and reflects clear insight and ideas	The essay is focused on the topic and includes relevant ideas	The essay is focused on topic and includes few loosely related ideas	The essay poorly addresses topic and includes irrelevant ideas
Support	Persuasively supports main point with well- developed reasons and/or examples	Supports main point with developed reasons and/or examples	Supports main point with some underdeveloped reasons and/or examples	Provides little or no support for the main point
Organization & Format	Effectively organizes ideas to build a logical, coherent argument	Organizes ideas to build an argument	Some organization of ideas to build an argument	Little or no organization of ideas to build an argument
Language Use, Style & Conventions (Sentence structure, word choice, grammar, spelling, punctuation)	Effective and creative use of elements of style to enhance meaning Uses correct grammar, spelling, punctuation throughout with very	Appropriate use of elements of style Uses correct grammar, spelling, and punctuation with few errors	Some use of elements of style Contains frequent errors in grammar, spelling, and punctuation	Little or no use of elements of style Many errors in grammar, spelling, and punctuation, makes reader's comprehension
	few errors			difficult

#### **Timed Essay Rubric**

#### **Annotated Article**

Students must choose a STEM article that interests them to annotate. They will annotate the article, making it accessible to someone who may not understand the technical language used in it. Please include the original article and the bibliographical information for the article.

Please see the URL pasted below to provide you with guidance on how to annotate an article: <u>https://learningcenter.unc.edu/tips-and-tools/annotating-texts/</u>

#### Criteria **Proficient-2** Expert-3 Apprentice-1 Summary The summary clearly outlines Most of the article is The student does not clearly the main research question, summarized, but the student summarize the main points of methods, results, and may not clearly cover all aspects the article (i.e., the main implications in the student's (i.e., the main research question, research question, methods, own words. methods, results, and results, and implications) and/or implications). includes inaccurate information. The student provides an analysis Analysis The student provides an The student does not clearly of the article, but the ideas insightful analysis of the article. move beyond a summary of the The student articulates novel presented are mostly novel, article to provide an analysis. No ideas that clearly go beyond going beyond what is in the new ideas are contributed what is in the article itself. The article itself. beyond what is in the article analysis is clear and rational. itself, or the analysis is overly confusing. Overall, the student's Writing Overall, the student's Overall, the student's communication of their analysis communication of their analysis communication of their analysis is clear and evidences a general, is somewhat clear and/or is confusing, unclear, and/or suggests some understanding of suggests limited understanding overarching understanding of the issues involved in the article. the issues involved in the article. of the issues involved in the article. Format Paper has consistent formatting Paper has mostly consistent Paper does not have consistent and accurately cites the article formatting guidelines and formatting and either fails to cite in. accurately cites the article. the article or cites in inaccurately. Mechanics Grammatical, punctuation, and Grammatical, punctuation, and There may be a few spelling errors are rare and do grammatical, punctuation, spelling errors significantly not detract from reading the and/or spelling errors, but detract from reading the paper. paper. Basic sentence structure overall, they do not detract too Basic sentence structure often is good (e.g., avoids run-on much from reading the paper. includes poor structure (e.g., sentences, sentence structure is run-on sentences). Basic sentence structure is good solid). (e.g., avoids run-on sentences, sentence structure is solid).

#### **Annotated Article Rubric**

#### Podcast/Video

Create a 5–10-minute podcast or video. In the podcast or video, please address all items below:

- Your name and preferred strand
- Why do you want to attend Governor's School?
- Why did you choose your preferred strand?
- What will you bring to Governor's School?
- What do you expect from Governor's School?
- How do you plan to apply your experiences to your future plans?
- What challenges might arise from being a student at two schools?
- Where do you see yourself in the next five and ten years? What will you be doing?

Please see the URL pasted below, which will provide suggestions on creating a podcast. <u>https://www.npr.org/2018/11/15/662070097/starting-your-podcast-a-guide-for-students</u>

#### **Podcast/Video Rubric**

Criteria	Expert- 3	Proficient- 2	Apprentice- 1
Timing	Podcast/video was 7-10 minutes.	Podcast/video was 5-7	Podcast was less than 5 minutes
		minutes.	or over 10 minutes
Content	The student answered all questions and provided in-depth	The student answered most questions and/or provided	The student answered few or no questions and/or provided little
	explanations.	vague explanations.	or no explanations.

Governor's School Application Score Page
Portfolio Requirements- 75% of total score
Research Project Indicate the score given by each evaluator: Reader 1 score: + Reader 2 score: = Total Score/2 (18 max)
Timed Essay Indicate the score given by each evaluator: Reader 1 score: + Reader 2 score: = Total Score/2 (12 max)
Article Annotation Indicate the score given by each evaluator: Reader 1 score: + Reader 2 score: = Total Score/2 (10 max)
Podcast/Video Indicate the score given by each evaluator: Reader 1 score: + Reader 2 score: = Total Score/2 (8 max)
Recommendations and Achievements- 25% of total score
Teacher Recommendations: Math teacher: + Science Teacher + Other Teacher/Adult = Average/2 = (max 12)
Career Highlights: Activities/Programs + Honor/Recognition = (max 12)
Unweighted GPA in STEM Coursework only x2 = (max 18)
Grade Point Average Points
4.0 9
3.9 8
3.8 7
3.7 6
3.6 5
3.4     3       3.3     2
$\frac{3.5}{3.2}$ 1
Portfolio Requirements x .75 + Recommendations and Achievements x .25 =

# **Important Dates**

# Application Timeline for the 2024-25 School Year

GS@IP Informational Meeting	October 5, 2024, at 8:30 a.m.	GMU SciTech Campus, Room TBD
GS@IP Application Help Sessions	November 12, 2024, at 6-7 p.m. December 17, 2024, at 3-4 p.m. January 14, 2025, at 6-7 p.m.	Zoom
Governor's School Online Application Available	November 1, 2024	Online Application Portal
10 <sup>th</sup> grade tours	November 19, 21, & 23, 2024	GMU SciTech Campus
GS@IP Information Meeting	December 7, 2024, at 8:30 a.m.	GMU SciTech Campus, Room TBD
GS@IP Applications Due	February 1, 2025	Online Application Portal
GS@IP Timed Writing	February 7 & 8, 2025	Location TBD
Acceptance Decisions Released	March 28, 2025	Online Application Portal
Student Deadline to respond to admission	April 7, 2025	Online Application Portal
GMU Application Portal opens	April 25, 2025	
Welcome Meeting #1 -orientation, GMU instructions, scheduling information, course requests and forms	April 26, 2025	GMU SciTech Campus, TBD
Deadline to apply to GMU	May 10, 2025	
Welcome Meeting #2	May 31, 2025	GMU SciTech Campus, TBD
Mandatory New Student Orientation	August 22, 2025, at 8 a.m.	GMU SciTech Campus, TBD
First Day of GS@IP Classes	August 25, 2025	GMU SciTech Campus