



The Governor's School @ Innovation Park

A STEM Initiative

(Science, Technology, Engineering, Mathematics)

City of Manassas Public Schools

City of Manassas Park Public Schools

Prince William County Public Schools

in Collaboration with George Mason University

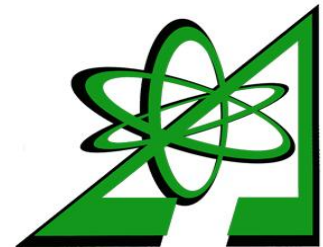
General Information

- ▶ 3 participating school divisions: Manassas City Public Schools, Manassas Park City Public Schools and Prince William County Public Schools
- ▶ 118 slots:
 - 88 PWCS
 - 20 MCPS
 - 10 MPCS



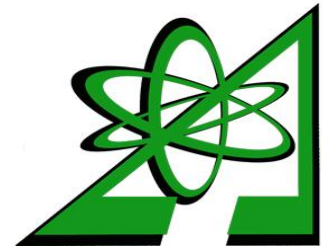
The Learning Environment at GS@IP

- ▶ Advanced level courses in which students must synthesize information and apply knowledge
- ▶ Projects based on student interests and talents
- ▶ Positive learning environment
- ▶ Team-based learning
- ▶ Flipped approach to learning
- ▶ Prepares students for college and the 21st Century workforce



Weekly and Daily Schedule

- ▶ **Monday, Wednesday, Friday**
 - Science and Math
- ▶ **Tuesday and Thursday**
 - Principles of Technology and Engineering (PTE) Classes
 - Research or Engineering Projects
- ▶ **1st Period – 7:30 to 9:20 am**
- ▶ **2nd Period – 9:30 to 11:15 am**



Course Sequence

Year	Mathematics	Science	Engineering/ Technology	Research
Junior Year	Precalculus/ Calculus I or Calculus I/II	Biology I or Chemistry I or Physics I	Principles of Technology and Engineering I (select from multiple course offerings)	Intro to Science Research or Engineering Project Design and Methodology
Senior Year	Calculus I/II or Calculus III/ Linear Algebra	Biology II or Chemistry II or Physics II	Principles of Technology and Engineering II (select from multiple course offerings)	Hands-on research or engineering project in area of interest
All courses are weighted as AP/Dual Enrollment or Honors				

Math Courses Offerings and Options for College Credit

Governor's School Course Names	George Mason Dual Enrollment Option	Advanced Placement Examination Option
Pre-Calculus	Math 105	
Calculus I (Part A and B)	Math 124 – Math 125	Calculus AB
Calculus I-II Honors	Math 115 – Math 116	Calculus BC
Calculus III/ Linear Algebra	Math 203 - Math 215	

School Divisions pay for **one** 3 or 4 credit course for dual enrollment in the junior year and **two** 3 or 4 credit courses in the senior year. **TWO of the THREE courses paid for must be mathematics.**

Science Course Offerings and Options for College Credit

Governor's School Course Names	George Mason Dual Enrollment Option	Advanced Placement Examination Option
Advanced Biological Studies I	Biology 103 – 104 + labs General Biology	Advanced Placement Biology
Advanced Biological Studies II	Biology 124 + lab and 246 Anatomy and Physiology Microbiology	
Advanced Chemistry I	Chemistry 211-212 + labs General Chemistry	Advanced Placement Chemistry
Advanced Chemistry II	Chemistry 104 and 155 + labs Introduction to Organic Chemistry and Environmental Chemistry	
Advanced Physics I	Physics 243-245 + labs College Physics	Advanced Placement Physics B (both exams)
Advanced Physics II	Physics 160 – 260 + labs University Physics	Advanced Placement Physics C (both exams)

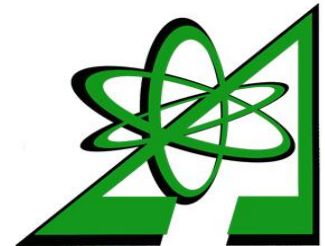
PTE Course Offerings and Options for College Credit

Governor's School Course Names	George Mason Dual Enrollment Option	Advanced Placement Examination Option
Introduction to Engineering	ENGR 107	
Geomatics and Engineering Graphics	CEIE 203	
Introduction to Bioengineering	BENG 101 (online; DE only)	
Programming I and II (JAVA)	CS 112 CS 211	Computer Science
Introduction to Research/Project Design and Methodology I / II	COS 120	
Innovations		

Courses fulfill the CTE elective requirement for an advanced studies diploma

Mentorship Research Program

- ▶ Students spend time developing and engaging in authentic research projects during senior year.
- ▶ Projects may be developed and research conducted at the George Mason Campus or with a business or industry mentor off campus.



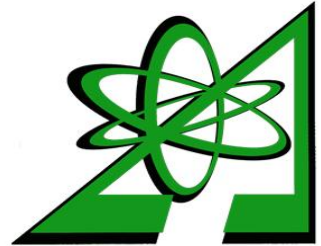
Applicant Eligibility and Pre-requisites

- ▶ Applications are submitted to the school division in February during the tenth grade year of studies
 - **MCPS – 2/2/15**
 - **MPCS – 2/3/15**
 - **PWCS – 2/6/15**
- ▶ Math: Students should **complete (at minimum) Algebra II/Trig before applying**
- ▶ Science: Students should complete 1 year of both **Biology and Chemistry** before applying; students are also very strongly encouraged to take a Physics course before enrolling



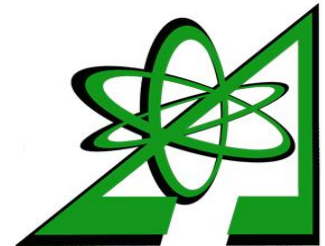
The Application Process

- ▶ The application process and student selection expectations were developed with representation from each school division.
- ▶ The number of students from each school division is pre-established.
- ▶ The application review for the selection of students is conducted by each school division .



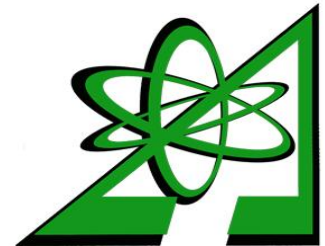
Highlights of the Application

- ▶ Complete Career Highlights relating to science, technology, engineering and/or mathematics
 - Activities and Organizations
 - Honors and Recognitions
- ▶ Complete Student Portfolio
 - Research Project
 - Submit project from previous Science or Engineering Fairs
 - Study Experience
 - Portfolio Reflection



Highlights of the Application

- ▶ Complete Academic Essay
 - 2 Essay Prompts (application and controlled setting)
 - Recommendations – Science and Mathematics Teacher + Other Adult
- ▶ Participate in Interview (as applicable, depending on school division requirements)
- ▶ Score Options will be completed by Selection Committee
 - Unweighted GPA in STEM Courses
 - Aptitude
 - Achievement



Student Selection Process

GOVERNOR'S SCHOOL APPLICATION SCORES PAGE

I. Career Highlights: Activities, Research, and Honors:

Activity/Program
Honor/Recognition

____ (6 max)

____ (6 max)

TOTAL I: (____ Activities) + (____ Honors) x 2 =

(24 max)

Example:

II. Essay Evaluation: (Parts 1 and 2)

Part 1 - Reader One: ____ 6 ____ 5 ____ 4 ____ 3 ____ 2 ____ 1 Reader Two: ____ 6 ____ 5 ____ 4 ____ 3 ____ 2 ____ 1

Part 2 - Reader One: ____ 6 ____ 5 ____ 4 ____ 3 ____ 2 ____ 1 Reader Two: ____ 6 ____ 5 ____ 4 ____ 3 ____ 2 ____ 1

TOTAL II: (____ Average of Reader One + Reader Two) + (____ Average of Reader One + Reader) = (12 max)

III. Teacher Recommendations:

Rating Scale (max 24 points for each teacher):

(____ Math Teacher + ____ Science Teacher + ____ Other Teacher/Adult) divided by 3 = ____ (24 max) [A]

TOTAL III: (____ Rating Scale) =

(24 max)

IV. Applicant Aptitude or Achievement Test Score, and Unweighted GPA in STEM Coursework only

Mark the correct response in each category. Include test information below. Use scale (9 - 4) to assign points to each category.

Test _____ Date Administered _____

Measured Ability OR Measured Achievement and Unweighted M/S/T GPA					
(99-98%) 4.0-3.92	<input type="checkbox"/> 10	(94-90%) 3.83-3.68	<input type="checkbox"/> 8	(84-80%) 3.51-3.44	<input type="checkbox"/> 6
(97-95%) 3.91-3.84	<input type="checkbox"/> 9	(89-85%) 3.67-3.52	<input type="checkbox"/> 7	(<80%) <3.43	<input type="checkbox"/> 5

TOTAL IV: (____ Ability/Achievement Score) + (____ GPA) =

(20 max)

V. Portfolio Assessment including Reflection

Indicate the consensus score given to portfolio by the committee.

Portfolio Assessment	
Superior	<input type="checkbox"/> 10
Excellent	<input type="checkbox"/> 9
Above Average	<input type="checkbox"/> 8
Average	<input type="checkbox"/> 7

(Score V x 2) =

GRAND TOTAL: (Add Totals from I + II + III + IV + V)

(100 max)

Upcoming Events

- Annual **ASTEM** event – **Saturday, January 31** from 10 am to noon at GMU PW Campus in Bull Run Hall (pre-registration required and available in late November)



Points of Contact

Governor's School @ Innovation Park

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