# THE GOVERNOR'S SCHOOL for SCIENCE AND TECHNOLOGY

# Virtual Parent Information Session

# Vikki Wismer, Director

- **Director, Governor's School for Science and Technology (GSST)**

# What is
# The Governor's School for Science & Technology?

- ½ day **STEM** based program
- Attend in 11th and 12th grade
- Spend 1/2 at GSST and other ½ day at home school

# What's Unique About Governor's School?

- **Faculty with advanced STEM degrees**
- **Courses that are dynamic, hands-on, and college level**
- **Two year research sequence**
- **Community of high-achieving peers**
- **Extracurricular activities: competitions and clubs**

# Faculty

- All have masters (50%) or Ph.D. (50%) in a math/science discipline
- Several have conducted research at Jefferson Lab, universities or other organizations and/or taught at colleges

# Advanced STEM Courses

- Taught at a college level; many eligible for dual enrollment credit
- Curricula consist of foundational science principles updated with content from emerging STEM disciplines
- Enriched by collaborations with College of William and Mary (research grant) and VT (data science undergrad course content)
- All science courses include extensive labs and hands-on projects

# Two Year Research Sequence

- **Junior year: students master skills required to do STEM research**
- **Senior year: Students engage in an individual or group project of their choice, guided by a Faculty Advisor and Mentorship Coordinator**

# Community of Learners

- 180 juniors and seniors come from twenty-one high schools, seven school divisions
- Students study, collaborate, and socialize with academic peers
- Students engage with faculty who have advanced degrees and have worked in STEM fields

# Extracurricular Activities

- **Competitions:** e.g. Great Computer Challenge; Science Bowl; math competitions, science fairs
- **STEM career interests:** Roots for STEM, FIRST Robotics, Pi Club
- **Clubs:** Student Advisory Board, Yearbook

# Governor's School:  You've Heard It's Challenging

- **Students are adjusting to college level course content**
- **Students are commuting between two high schools**
- **Time management skills are needed**
- **It's rigorous, but…**

# The Governor's School Provides Support

- **ALEKS summer software program**
- **Student Academic Support (SAS) program for struggling students**
- **Faculty advising**

# Preparing to Succeed in Math: ALEKS

- **ALEKS Summer Software Program**
  - **Students take an online diagnostic test that measures their mastery of math concepts from the math course they've just completed**
  - **Diagnostic test is used for math course placement – and is used by the software program to generate an adaptive, online program that students use through the summer to address any weaknesses**

# Student Academic Support (SAS)

- **Students who are identified as having difficulties by teachers, parents, or themselves, are referred to Student Academic Support Program (SAS)**
- **Teachers, student, parent, and GSST administration work together to institute interventions to bolster and monitor student success**

# Faculty Assistance/Advising is Built-In

- **Time set aside for students to make appointments to meet with teachers for help – or to finish a lab, and/or collaborate with other students on homework or projects**

# Applying to Governor’s School

# Admission Process: Factors Considered

- **Overall GPA**
- **PSAT score, *if submitted. SAT or ACT can be submitted instead.***
- **Performance in math and science courses:**
  - **Rigor of math/science courses**
  - **Grades in math/science courses**
  - **Teacher recommendations from current math & science teacher**
  - **SOL scores**

# Admission Process: Prerequisites

- **Math minimum:**
  - **Algebra II/Trig**
  - **PreCalculus/Math Analysis for Engineering strand**
- **Science**
  - **Biology**
  - **Chemistry**

# We ***Don't*** Require or Consider:

- **Essays**
- **Previous research/science fair projects**
- **List of Extracurricular Activities**

# Application Process:
# First Step is Selecting an Academic Strand

**Students apply to one Academic Strand only**

**Each student competes with all other students in his/her district who are applying to that Academic Strand**

**Academic Strand options:**

- **Biological Sciences: Physics, Biology**
- **Computational Sciences: Algebra-based Physics, Programming**
- **Engineering: Calculus-based Physics**

# Online Application: Logistics

- Watch the instructional video – located on The Governor's School website under the Prospective Student tab
- https://nhrec.org/gsst/home/how-to-apply/

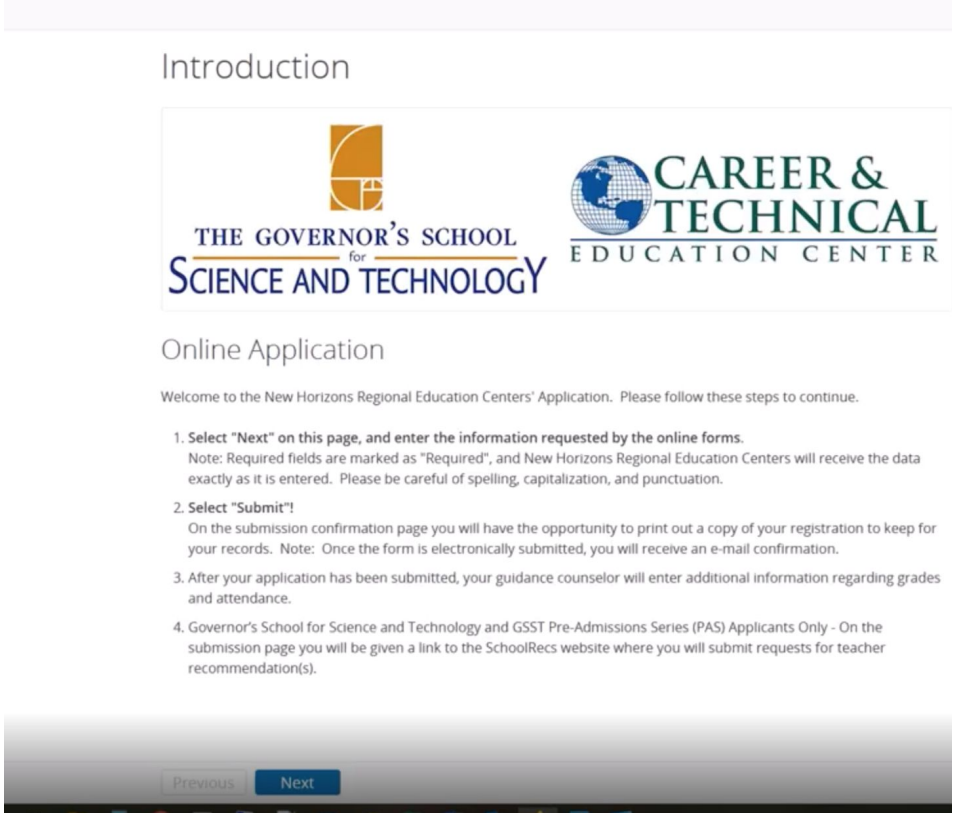
- Click the Apply Now Button to be taken to the online application

# Application Components

- **Students complete a simple online application, providing background information about themselves**
- **Students also provide name and contact information for school counselor plus current math and science teachers**
- **School counselor and teachers receive online requests to complete their application components:**
  - **Counselor: courses, grades**
  - **Teachers: recommendation form**

# Application Timeline

- *December through February 14:* Complete online application
- *February 16:* Recommendations from math and science teachers due
- *Early April:* all applicants will receive a letter notifying them of their admissions decision



# Biological Sciences

- **Appropriate for:**
  - Students considering careers in the health sciences, life sciences, biology, chemistry or physics research or engineering

- **Unique opportunities:**
  - Hands-on experience with college-level lab techniques, including enzyme analysis, PCR, and CRISPR/Cas.
  - Access to specialized equipment and research methods typically found in upper-level undergraduate or graduate programs.

- **Prerequisites**
  - Math: minimum of Algebra II/Trig
  - Science: Biology, Chemistry
  - Recommended to take Physics at home school

# Calculus-Based Physics: Engineering

- **Appropriate for:**
  - Students considering engineering and other STEM careers

- **Unique opportunities:**
  - EDIE (Engineering Design, innovation and Entrepreneurship) Lab, students learn digital electronic systems, CAD (Computer Aided Design) and the engineering design process.
  - This knowledge is applied to keystone engineering design projects, such as the AirDuino, a collaboration with W&M, students constructing and programming microcontroller-based air pollution detector device, and collect data at various locations in the Hampton Roads region.

- **Prerequisites**
  - Math: minimum of PreCalculus/Math Analysis
  - Science:  Biology, Chemistry

# Computational Sciences:  Physics/Programming

- **Appropriate for:**
  - Students interested in computer science, software engineering, data science, and related fields

- **Unique opportunities:**
  - The first year course teaches fundamental principles of physics and computational programming in Python. In the second year, students study C++ programming along with foundational concepts in data science, provided through a landmark pilot collaboration between GSST and the Computational Modeling and Data Analytics program at Virginia Tech.

- **Prerequisites**
  - Math: minimum of Algebra II/Trig
  - Science:  Biology, Chemistry

# Engineering, Design, Innovation, and Entrepreneurship: EDIE Lab

- Mission
  - Immerse students in engineering, design, innovation, and entrepreneurship (EDIE) with a focus on integrating engineering and computer science.
- Year-Long Collaborative Projects
  - Seniors from the Engineering and Computational Science strand work in interdisciplinary teams, applying knowledge from various projects.
- Hands-On Learning
  - Students engage in cutting-edge projects, gaining practical experience and solving real-world problems with practical applications.
- Innovation with Impact
  - Develop and prototype products with market potential or research applications, preparing students for dynamic careers in STEM and beyond.

EDIE Lab Journal

# Get Info about GSST & Application Process: Prospective Student Pipeline (PSP)Newsletter

- Everyone is welcome!
- No age or academic criteria
- Sign up on the Governor's School website
    - Go to Prospective Student tab, click on Information for Prospective Students, complete online form or click here.

GSST Program Overview Video

**GSST Program Overview Video**

**Further Questions?**

**kristin.spires@nhrec.org**