



Application for the
2025 Tennessee Governor's School
for
Computational Physics
at
Austin Peay State University

General Information

The Tennessee Governor's Schools offer Tennessee high school students intensive learning experiences virtually or on postsecondary campuses. Each school system is encouraged to share the Governor's School information and applications with strong students who meet the criteria listed below. Nominations for the Tennessee Governor's Schools must be made by high school educators who can speak to the student's potential for success in the program. Each Governor's School convenes an application review committee to select the students invited to attend each school.

Governor's School for Computational Physics

Austin Peay State University

June 8 – June 27, 2025

Description: At the Governor's School for Computational Physics, you will earn four hours of college level credit during three intensive weeks. The coursework will provide you with a rigorous introduction to the computational methods used by scientists and engineers and will cover selected topics in calculus and vector analysis, numerical differentiation and integration, and computational solutions to differential equations. You will develop computational models of physical systems and experimentally test them. Introductory machine learning and artificial intelligence techniques will also be covered. In addition, you will learn more about career options in science and engineering through discussions with scientists and research engineers from facilities such as the National Space Science Technology Center, Oak Ridge National Laboratories, and others.

Courses:

PHYS 2500/2501 - Introduction to Computational Science & Engineering (and lab)

Credit Hours: 3 lecture/1 lab

An introduction to the application of computational solutions to problems in physics and engineering. Includes an introduction to topics in first-year physics, algorithm development, and basic scientific programming skills. Focus is on computational solutions to differential equations (initial and boundary value problems) and their application to physical problems. Physical models will be developed and experimentally tested.

Objective:

Students will develop a basic understanding of computational techniques as a fundamental branch of science and engineering.

Prerequisites: Students applying for the School for Computational Physics must have completed or be scheduled to complete a course in pre-calculus (including trigonometry) prior to the beginning of the program and have an overall GPA of 3.5 or higher.

Application deadline: Friday, December 6, 2024

Submitting the Application:

Nominating educators should electronically submit completed applications following directions provided by the respective Governor's School(s). Applications submitted directly by students will **not** be accepted. The student may keep a copy of the application, excluding the confidential *Teacher Reference* forms and the confidential *Counselor/Administrator Verification* form; the nominating educator should keep one complete copy of the submitted application package.

Application Submission Instructions

Ensure applications are complete, arranged in the correct order (listed in the box below), and contain all required signatures and documents as outlined.

1. Nominating educators (usually the counselor) must submit applications via email (governorsschool@apsu.edu) no later than the deadline listed on page 2.
2. Each Governor's School has specific essay and writing sample questions. All questions must be answered and submitted with the application packet.
3. COUNSELOR or ADMINISTRATOR: GPA, numerical test scores, focus elective, etc., must be included, if available. Please note that PSAT, SAT, and ACT scores are not mandatory, but school administrators are strongly encouraged to include this information if available. **FOR GSCP, MATH SCORES ARE REQUESTED.**
4. Students are to provide two teachers' names to counselor (see school-specific list on page 9) to complete the confidential *Teacher's Reference* forms. The completed reference forms should be returned directly to the counselor. The deadline to return the recommendation is up to the counselor (as long as the entire packet is received by the program by the deadline on page 2).
5. An official transcript must be included in the application packet.
6. Please do not include photos or resumes.
7. Notifications will be emailed to students on February 28, 2025.

Governor's Schools of Tennessee – Application Checklist	
Is this application complete?	
<input type="checkbox"/> Applicant Information Form	<input type="checkbox"/> Completed by applicant/parent/guardian
<input type="checkbox"/> Certification of Application	<input type="checkbox"/> Signed by applicant, RANKING of schools must be completed <input type="checkbox"/> Signed by parent/guardian <input type="checkbox"/> Signed by counselor/administrator
<input type="checkbox"/> Student Achievement Information	<input type="checkbox"/> MUST BE COMPLETED and signed by counselor/administrator
<input type="checkbox"/> Confidential Teacher Recommendation 1	<input type="checkbox"/> Completed and signed by teacher 1
<input type="checkbox"/> Confidential Teacher Recommendation 2	<input type="checkbox"/> Completed and signed by teacher 2
<input type="checkbox"/> Official Transcript	
<input type="checkbox"/> Specific Questions referred to on page 4	<input type="checkbox"/> Student responds to each question

Parent/Guardian Information

School Information

School Name		District Name	
Counselor Name	Phone	Email	
		, TN	
Mailing Address		City	Zip Code

Application Questions

Instructions

Write a 250-500 word personal statement that discusses an area of science, technology, engineering, or mathematics that you are considering as a career. Include your plans for pursuit of that interest, and how participation in the Governor's School for Computational Physics will help you achieve your goals. Also include a short list of extra/co-curricular activities and achievements. Please attach these documents as separate PDFs.

Governor's Schools of Tennessee – Certification of Application

Preference Indication

Any student applying to multiple Governor's Schools **MUST** rank the schools in order of preference on this form only (1=most preferred, etc.). It is not necessary to rank schools to which the student will not apply.

Ranking	Governor's School
	Agricultural Sciences
	Arts
	Computational Physics
	Emerging Technologies
	Humanities
	Innovation and Entrepreneurship
	Integration of Biological & Statistical Sciences
	International Studies
	Prospective Teachers
	Sciences and Engineering
	Scientific Exploration of Tennessee Heritage

Student Assurances

I have not previously attended a Tennessee Governor's School, and I affirm, agree, and/or understand that all statements on this form are true and accurate; any misrepresentation or omission of material facts may result in disqualification or termination should I already be enrolled in a Tennessee Governor's School.

By making this application, I and my parent/guardian agree to the release of any necessary school records to the Governor's School and the respective university for the purpose of determining eligibility. I/we understand and agree that such school records will be kept confidential and used only for determining admissibility to the Governor's School. Students who do not agree to the release of such school records for determining admissibility will not be considered for the Governor's Schools.

I certify to the best of my knowledge all of the information provided in this application is correct. I acknowledge that information about me may be used for publicity purposes if I am selected to attend a Governor's School.

Applicant's Printed Name

Applicant's Signature

Date

Parent/Guardian Assurances

I have carefully reviewed the information on this application and give my permission for my son/daughter to proceed with application procedures. I acknowledge that the Governor's Schools may offer university course credit and grades which will require university enrollment. I authorize the high school and its employees to release any information necessary for this application.

Parent/Guardian's Printed Name

Parent/Guardian's Signature

Date

School Assurances

I nominate the applicant listed above for the Tennessee Governor's School and certify that the applicant meets the criteria and the prerequisites of the Governor's School to which the application is made. I recommend this student for admission to the Governor's School(s), for admission to the hosting university during summer session 2021, and for enrollment in university courses which may or may not allow the student to earn postsecondary credit and grades.

Nominating Educator Printed Name

Nominating Educator Signature

Date

Governor's Schools of Tennessee – Student Achievement Information

To the counselor/school administrator: The student listed below is applying for selection to a Tennessee

Governor's School. A complete application requires the following information and verification from you. While information pertaining to some of the following items may not be available for all students, please include all available information. Use the latest scores available. If your school does not rank, enter "do not rank" or "none."

Student Information				
Last Name		First Name		Middle Name
<input type="checkbox"/> 10 th <input type="checkbox"/> 11 th				
Current Grade	Class Size	Class Rank	"HOPE Scholarship GPA"	Cumulative GPA
<input type="checkbox"/> CTE (specify career cluster) <input type="checkbox"/> Science and Math <input type="checkbox"/> Humanities <input type="checkbox"/> Fine Arts <input type="checkbox"/> AP/IB <input type="checkbox"/> Other (specify)				
Elective Focus				
If the above-referenced student does not meet the prerequisites set forth in the application packet, is not academically qualified, and/or you would not recommend this student for a Governor's School, then the student is ineligible and an application should not be submitted.				

Achievement Tests			
<i>Test (list others as appropriate)</i>	<i>Grade Administered</i>	<i>Score</i>	<i>Percentile Ranking(s)</i>
Current State Achievement Test			
Aptitude Tests			
<i>Test</i>	<i>Grade Administered</i>	<i>Score</i>	<i>Percentile Ranking(s)</i>
PLAN Composite			
ACT Composite			
ACT Math			
PSAT MATH			
PSAT Writing			
PSAT Math			
SAT Verbal			
SAT Math			
SAT Writing			
SAT II - specify test(s)			
Any Additional Relevant Test Scores			
<i>Name of Test</i>	<i>Grade Administered</i>	<i>Total Score / Subscores</i>	<i>Percentile Ranking(s)</i>

Attendance and Discipline		
	2023-2024	2024-2025 (to date)
Number of days absent		
Number of disciplinary referrals (please explain or attach disciplinary record on separate sheet)		

Counselor/Administrator Verification	
1. Please provide narrative comments about this student to help with our evaluation. Narrative comments are extremely helpful to the selection committees during the evaluation process. Use a separate sheet if necessary.	
2. Have you reviewed the student's academic records?	<input type="checkbox"/> Yes <input type="checkbox"/> No
3. Does the student meet the prerequisites of the Governor's School(s) to which this application is made? For the Governor's School of Computational Physics, students must have completed or be scheduled to complete a course in pre-calculus (including trigonometry) prior to the beginning of the program and have an overall GPA of 3.5 or higher.	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. In your opinion, how academically qualified is the student for the Governor's School experience?	<input type="checkbox"/> Highly Qualified <input type="checkbox"/> Qualified <input type="checkbox"/> Marginally Qualified <input type="checkbox"/> Not Qualified

I certify to the best of my knowledge the above results are accurately reported.

Counselor/administrator's Printed Name

Counselor/administrator's Signature

Date

Governor's Schools of Tennessee – Teacher Recommendation Guide

The two confidential *Teacher Recommendation* forms should be completed as follows:

Governor's School	Teacher Recommendation 1	Teacher Recommendation 2
Agricultural Sciences	Applicant's choosing	Applicant's choosing
Arts	Arts area teacher	Applicant's choosing
Computational Physics	Science teacher	Math teacher
Emerging Technologies	Science teacher	Math teacher
Engineering	Science teacher	Math teacher
Humanities	English teacher	Applicant's choosing, preferably in humanities discipline
Innovation & Entrepreneurship	Technology or business teacher	Applicant's choosing
Integration of Biological & Statistical Sciences	Science teacher	Math teacher
International Studies	Foreign language teacher, if available	Social studies teacher, if available
Prospective Teachers	English teacher	Applicant's choosing
Sciences & Engineering	Science teacher	Math teacher
Scientific Exploration of Tennessee Heritage	Social studies or science teacher	Humanities or arts teacher

Please list the two teachers from whom the applicant is requesting confidential teacher Recommendations from.

	Name	Subject
Teacher 1		
Teacher 2		

Governor's Schools of Tennessee – Confidential Teacher Recommendation		
Student Information		
Last Name	First Name	Middle Name
Educator nominating applicant:		Deadline to return teacher recommendation

To the teacher: The above-referenced student is applying to attend one of the Tennessee Governor's Schools, an intensive residency or virtual program for mature, gifted, and talented students. This applicant has designated you as one of his or her teachers of reference. This recommendation form is a critically important part of the student's application and will have a significant role in the selection process. Please provide us with a candid, frank, and complete assessment of this student's maturity, attitude, work commitment, and creativity. This form will not become a part of the student's regular school records; it will be used solely by officials of the Governor's School to aid them in the selection process. The contents of this form will not be disclosed to the applicant or his/her parents/guardians. The Governor's School officials greatly appreciate your help in this selection process.

Please return this completed form to the applicant's nominator by the date listed above.

1. How long have you known and worked with this applicant?

2. In what situations have you served as this applicant's teacher?

3. Please evaluate this applicant in the areas below, comparing him or her with similar outstanding students you have had in the past:

<i>Ability to learn</i> <input type="checkbox"/> Learns very quickly <input type="checkbox"/> Learns readily <input type="checkbox"/> Average <input type="checkbox"/> Must work hard to learn <input type="checkbox"/> Does not learn easily	<i>Attitude toward work</i> <input type="checkbox"/> Outstanding <input type="checkbox"/> Above Average <input type="checkbox"/> Average <input type="checkbox"/> Can be indifferent <input type="checkbox"/> Lacks commitment	<i>Dependability/consistency</i> <input type="checkbox"/> Always dependable <input type="checkbox"/> Above average <input type="checkbox"/> Average <input type="checkbox"/> Occasionally unreliable <input type="checkbox"/> Usually unreliable
<i>Initiative</i> <input type="checkbox"/> Self-directed/motivated <input type="checkbox"/> Usually independent <input type="checkbox"/> Completes work assigned <input type="checkbox"/> Needs some prodding <input type="checkbox"/> Very hesitant	<i>Judgment</i> <input type="checkbox"/> Exceptionally good <input type="checkbox"/> Above average <input type="checkbox"/> Average for a teenager <input type="checkbox"/> Occasional poor judgments <input type="checkbox"/> Frequent poor judgments	<i>Maturity</i> <input type="checkbox"/> Extremely mature <input type="checkbox"/> Above average <input type="checkbox"/> Average teenager <input type="checkbox"/> Somewhat mature <input type="checkbox"/> Very immature
<i>Relations with others</i> <input type="checkbox"/> Exceptionally good <input type="checkbox"/> Above average <input type="checkbox"/> Average <input type="checkbox"/> Occasional conflicts <input type="checkbox"/> Many conflicts	<i>Quality of work</i> <input type="checkbox"/> Excellent <input type="checkbox"/> Very good <input type="checkbox"/> Average <input type="checkbox"/> Below average <input type="checkbox"/> Very poor	<i>Quantity of work</i> <input type="checkbox"/> Unusually high output <input type="checkbox"/> Above average <input type="checkbox"/> Average output <input type="checkbox"/> Not a great producer <input type="checkbox"/> Low output, slow

4. How would you describe the applicant's punctuality?

☐ High ☐ Average ☐ Low

Continued on next page

Governor's Schools of Tennessee – Confidential Teacher Recommendation (cont'd)

5. What is your best judgment about this applicant's emotional maturity and stability to deal with an intensive residency program in which he/she will meet new people, face new situations, and encounter new challenges during the weeks of the program? Could this student adapt to a virtual program?

- ☐ This applicant will adapt readily to the changes and challenges and will be a successful participant.
- ☐ This applicant should be able to adapt to the changes and challenges with minimal adjustment.
- ☐ This applicant should succeed but will have some difficulty dealing with the stress.
- ☐ This applicant may have some difficulty dealing with the stress and may not be successful.
- ☐ This applicant will have great difficulty dealing with new situations and challenges.

6. This applicant's outstanding personal qualities are:

7. The personal qualities this applicant should strive most to improve are:

8. Please indicate your overall judgment about this applicant:

- ☐ Very highly recommended, an outstanding student who will do well in the school.
- ☐ Highly recommended, a very good student who will be successful in the school.
- ☐ Recommended, a good student who will participate effectively in the school.
- ☐ Recommended with reservations, a good student but he/she may present some problems.
- ☐ I do not recommend this student.

9. Summary Comments: We must select a relatively small number of students from a large pool of exceptional applicants. Please tell us something about this student that is not reflected in any of the above ratings which will help us make a decision. What makes this applicant truly exceptional? Summary comments are extremely important to the selection committees, and reference letters are acceptable. **If you need more space, you may attach another sheet.**

Name

Signature

Date

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Student Information		
Last Name	First Name	Middle Name
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Governor's Schools of Tennessee – Confidential Teacher Recommendation (cont'd)

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Signature