

# Application for the 2017 Tennessee Governor's School

for

Scientific Models and Data Analysis

at

East Tennessee State University

#### **General Information**

The Tennessee Governor's Schools offer selected gifted and talented high school students intensive learning experiences on postsecondary campuses. Students in the tenth and eleventh grades who would like to participate in a challenging and high-intensity program in one of the twelve areas should obtain application(s) from their school counselor. 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 counselors or principals. Each Governor's School convenes a review/selection committee which will select the students invited to attend each school.

#### **Submitting the Application:**

Completed applications should be mailed by the school counselor to 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's reference forms and the confidential school counselor's recommendation form; the school counselor should keep one complete copy of the submitted application package.

#### **Application Submission Instructions**

- 1. Ensure applications are complete, arranged in the correct order, and contain all required signatures and documents as outlined below.
- 2. School counselors must submit applications with a postmark no later than the deadline(s) listed on page two of each application.
- 3. Each Governor's School has specific essay and writing sample questions. All questions must be answered and submitted with the application packet.
- 4. Class rank, class size, numerical test scores, etc., must be provided by the counselor, if available. Please note that while PSAT, SAT, and ACT scores are not mandatory, school counselors are strongly encouraged to include this information if available.
- 5. Students are to list two teachers (see school-specific list) to complete the confidential teacher reference forms. The school counselor will need to obtain the completed forms from the respective teachers. There is a space available at the bottom of the teacher reference form to put the name of the school counselor to whom the form is to be returned.
- 6. An official transcript must be included in the application packet.

Additional guidance on completing the required forms can be found on page 2 of the application packet, "Application Checklist."

# Governor's School for Scientific Models and Data Analysis East Tennessee State University May 28 - June 30, 2017

The School for Scientific Models and Data Analysis is a five-week program that will broaden a student's appreciation and knowledge by exposing him or her to a wide range of topics in the biological and statistical sciences, and to scientists who are active researchers in these areas. Model building and data analysis will play a critical role in the school curriculum. Career exploration and choice are woven throughout the program, as are cognate activities such as Science, Technology, Engineering and Mathematics (STEM)-focused field trips. Students will additionally be introduced to practical scientific methodology and data analysis via student directed research projects. Thus, the Governor's School for Scientific Models and Data Analysis at ETSU will provide a series of courses, laboratories, projects, field trips, seminars, lectures and other activities centered on statistics and biology.

**Courses:** Students will take Math 1530, Probability and Statistics, and will earn three (3) college semester credit hours. Students will also take Biology 1110/1111, Biology for Majors I, and will earn four (4) semester credit hours. The activities at the school will cover the approved syllabi for these courses, while extending the scholars' intellect in directions not possible during a regular school year. The ubiquity of mathematical modeling, data analysis and the need for high-level computation will become more evident in the morning sessions, when the statistics class will be based on data and simulations that arise from a scientific, often biological, context. In the afternoon, biological concepts, will be presented covering topics traditionally taught in a college biology class for science majors, with data analysis being woven throughout the course. Biology labs will be taught with relevance to the topics covered in class, including collecting and analyzing datasets.

**Prerequisites:** Applicants should have a grade of 3.0 or higher in all high school mathematics classes taken, and they should have had Algebra II. Applicants should have had two semesters of high school science with a grade of 3.0 or higher in each course. Students who have taken (or plan to take) AP Statistics or AP Biology will find that other Governor's Schools are more suitable for them.

Application deadline: Dec. 2, 2016

Governor 3 3cm	Juis di Territessee – Applica	LIOIT CHECKIISL			
	Is this application complete?				
☐ Applicant Information Form					
☐ Certification of Application					
□Applicant signs					
☐ Parent/guardian sign					
☐ Counselor/principal s					
☐ Student Achievement Inform					
☐ Counselor/principal c	·				
☐ Confidential Counselor Reco	nmendation				
☐ Counselor/principal c	ompletes and signs				
☐ Confidential Teacher Recomm	nendation 1				
☐ Teacher 1 completes	and signs				
☐ Confidential Teacher Recomr	nendation 2				
☐ Teacher 2 completes	and signs				
☐ Official Transcript					
☐ Questions referred to on page 6					
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			
Innovation & Entrepreneurship	Technology or business teacher	Applicant's choosing			
Computational Physics					
Emerging Technologies	Science teacher	Math teacher			
Engineering Science teacher Math teacher					
Humanities	English teacher	Applicant's choosing, preferably			

Please list the two teachers from whom the applicant is requesting confidential teacher recommendations.				
	Name	Subject		
Teacher 1				
Teacher 2				

Social studies or science teacher

Foreign language teacher, if

Science teacher

Science teacher

available English teacher

Sciences

Heritage

International studies

Prospective Teachers

Scientific Exploration of Tennessee

Scientific Models and Data Analysis

in humanities discipline

Applicant's choosing

Humanities or arts teacher

Math teacher

Math teacher

Social studies teacher, if available

### Governor's Schools of Tennessee - Applicant Information Form

Student Information							
Last Name		1	F	irst Name		Mid	dle Name
					TN		
Mailing Add	dress			City	IIN	Zip Code	County
	<u> 000</u>			Zip code   Co			
Home Phone	<u>)</u>		Cell P	hone		Email Ad	ldress
Date of Birth Month/Day/Year	☐ Female ☐ Male  Date of Birth Gender			☐ African-American/Black ☐ Caucasian ☐ Asian ☐ Multiracial ☐ Hispanic/Latino ☐ Other  Race (select all that apply)			
Month Day/ Teal							
		Pare	nt/Guardi	an Information			
		1 0.1 0					
Parent/Guardian Name					Relations	hip to Applicant	
					, TI	N	
Mailing Address				City		Zip Code	
Work Phone	e		Ce	ell Phone		Email	Address
School Information							
Scho	ool Name	1			D	istrict Name	
Counselor Na	me			Phone		Eı	mail
						, T	N
Mailir	ng Address				City		Zip Code

#### Governor's Schools of Tennessee - Certification of Application **Preference Indication** Ranking Any student applying to multiple Governor's **Governor's School Agricultural Sciences** Schools **must** rank the schools in order of Arts preference on this form only (1=most preferred, **Computational Physics** etc.). It is not necessary to rank schools to which the **Emerging Technologies** student will not apply. Engineering Humanities Innovation and Entrepreneurship International Studies **Prospective Teachers** Sciences Scientific Exploration of Tennessee Heritage Scientific Models and Data Analysis **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 2017, and for enrollment in university courses which may or may not allow the student to earn postsecondary credit and grades. Principal/Counselor's Printed Name Principal/Counselor's Signature Date

# Governor's Schools of Tennessee- School for Scientific Models and Data Analysis Application Questions

## Responses should be typed and submitted on a separate sheet of paper. Each question must be answered completely.

1. Attach a detailed, typed resume customized to be appropriate for this school.

2. Write a 300-word essay on how so much of today's science is interdisciplinary and data driven.

#### Governor's Schools of Tennessee – Student Achievement Information

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			Fi	rst Name		Middle Na	me
□ 10 <sup>th</sup>							□ 4.0
□ 11 <sup>th</sup>							□ 5.0
Current Grade		ss Size		s Rank	GPA	Cumulative GPA GPA Scale	
☐ CTE (specify career cluster)	☐ Science a	nd Math 🗆 H	umanitie	es 🗆 Fii	ne Arts 🗆 AP	P/IB Other	
,		Ele	ctive Fo	cus		,	
		□Y€		No			
Does this student meet the G please do not submit an appl			s set for	rth by the s	school in the a	pplication packet? I	f no,
		Achiev	vement	Tests			
Test (list others as appropriate)		Grade Adminis		Score		Percentile Rank	 ing(s)
TCAP Writing Assessment							
<u> </u>							
		Apti	itude Te	ests		·	
Test		Grade Adminis	tered	Score		Percentile Rank	ing(s)
PLAN Composite							
ACT Composite							
PSAT Critical Reading							
PSAT Writing							
SAT Verbal							
SAT Math							
SAT Writing							
SAT II - specify test(s)							
Intelligence Tests or Tests of Cognitive Ability							
Name of Test		Grade Adminis	tered	Total Scor	re / Subscores	Percentile Rank	ing(s)
Name of Task		Any Rele			/ C h	Danasa tila Danala	·(-)
Name of Test		Grade Adminis	terea	Total Scor	re / Subscores	Percentile Rank	ng(s)
Duimain al (Carragalan Carra Carriffication							
Principal/Counselor Score Certification							
I certify to the best of my knowledge the below results are accurately reported.							
Principal/Counselor's Printed	Name						
Principal/Counselor's Signatu	re				Date	e	

Governor's Schools of Tennessee – Confidential Counselor Recommendation				
	Stude	ent Information		
Last Name		First Name		Middle Name
Governor's School(s)		High	School	
To the counselor: the student listed above	ve is apply	ing for selection to a Tennesse	e Govern	or's School. A
complete application requires the following				
application consisting of: Applicant Inform		• •		
Information form, this Confidential Couns				
forms, the applicant's responses to schoo				
on the cover. This form is for confidential			II not be	released.
	Attenda	nce and Discipline		2016 17 (1 1 1 )
		2015-16		2016-17 (to date)
Number of days absent				
Number of disciplinary referrals				
(please explain or attach disciplinary reco	ra on			
separate sheet)				
	Counselo	r Recommendation		
Please provide narrative commen			aluation.	Narrative comments
are extremely helpful to the selec		•		
necessary.		, i		·
2. Have you reviewed the student's a	academic r	records?		□ Yes
2 Door the student most the process	nuicitos of	the Covernor's School(s) to whi	ich thic	☐ No ☐ Yes
3. Does the student meet the prerect application is made?	quisites of	the dovernor's School(s) to will	icii tiiis	□ No
4. In your opinion, how academically School experience?	/ qualified	is the student for the Governor	r's	<ul><li>☐ Highly Qualified</li><li>☐ Qualified</li><li>☐ Marginally Qualified</li><li>☐ Not Qualified</li></ul>
5. Do you recommend this student f application is made?	or the Gov	vernor's School(s) to which this		☐ Yes ☐ No
If the above-referenced students does no		•		•
academically qualified, and/or you would is ineligible and an application should not			nor's Sch	ool, then the student
Principal/Counselor's Printed Name				
Principal/Counselor's Signature			Date	<u> </u>

Governor's Schools of Tennessee – Confidential Teacher Recommendation					
Student Information					
Last Name	First Name	Middle Name			
Governor's School(s)		High School			
Applicant's school counse	elor Deadline to	Deadline to return teacher recommendation			
<b>To the teacher:</b> The above-referenced student is applying to attend one of the Tennessee Governor's Schools, an intensive residency 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 school counselor by the date listed above.

1. How long have you known and	d worked with this applicant?					
2. In what situations have you se	rved as this applicant's teacher?					
3. Please evaluate this applicant you have had in the past:	in the areas below, comparing him c	r her with similar outstanding students				
Ability to learn	Attitude toward work	Dependability/consistency				
<ul> <li>□ Learns very quickly</li> <li>□ Learns readily</li> <li>□ Average</li> <li>□ Must work hard to learn</li> <li>□ Does not learn easily</li> </ul>	☐ Outstanding ☐ Above Average ☐ Average ☐ Can be indifferent ☐ Lacks commitment	☐ Always dependable ☐ Above average ☐ Average ☐ Occasionally unreliable ☐ Usually unreliable  Maturity				
	Judgment	Maturity  ☐ Extremely mature				
☐ Self-directed/motivated						
		<ul><li>□ Above average</li><li>□ Average teenager</li></ul>				
☐ Completes work assigned						
☐ Needs some prodding	, , ,					
,	□ Very hesitant □ Frequent poor judgments □ Very immature					
Relations with others	Quality of work	Quantity of work				
☐ Exceptionally good	□ Excellent	$\square$ Unusually high output				
☐ Above average	□ Very good	☐ Above average				
☐ Average	☐ Average	☐ Average output				
☐ Occasional conflicts	☐ Below average	$\square$ Not a great producer				
☐ Many conflicts ☐ Very poor ☐ Low output, slow						
4. How would you describe the applicant's punctuality?						
☐ High ☐ Average ☐ Lov	N					

Continued on next page

## (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? ☐ Will adapt readily to the changes and challenges and will be a successful participant ☐ Should be able to adapt to the changes and challenges with minimal adjustment ☐ 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 $\square$ 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

Governor's Schools of Tennessee – Confidential Teacher Recommendation

Governor's Schools of Tennessee – Confidential Teacher Recommendation					
Student Information					
Last Name	First Name	Middle Name			
Governor's School(s)		High School			
Applicant's school counse	lor Deadline	to return teacher recommendation			
	<u> </u>				

**To the teacher:** The above-referenced student is applying to attend one of the Tennessee Governor's Schools, an intensive residency 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 school counselor by the date listed above.

1. How long have you known and worked with this applicant?						
2. In substations have seen	n se de ce de la condicación de conde					
2. In what situations have you se	rved as this applicant's teacher?					
3. Please evaluate this applicant	in the areas below, comparing him o	r her with similar outstanding students				
you have had in the past:	, ,	, and the second				
Ability to learn	Attitude toward work	Dependability/consistency				
☐ Learns very quickly	☐ Outstanding	☐ Always dependable				
☐ Learns readily	☐ Above Average	☐ Above average				
☐ Average	☐ Average ☐ Average					
☐ Must work hard to learn	$\square$ Can be indifferent	☐ Occasionally unreliable				
☐ Does not learn easily	☐ Lacks commitment ☐ Usually unreliable					
Initiative	Judgment	Maturity				
☐ Self-directed/motivated	☐ Exceptionally good	☐ Extremely mature				
☐ Usually independent	☐ Above average	☐ Above average				
☐ Completes work assigned	☐ Average for a teenager	☐ Average teenager				
☐ Needs some prodding	☐ Occasional poor judgments	☐ Somewhat mature				
□ Very hesitant	$\square$ Frequent poor judgments	☐ Very immature				
Relations with others	Quality of work	Quantity of work				
☐ Exceptionally good	☐ Excellent	☐ Unusually high output				
☐ Above average	□ Very good	☐ Above average				
☐ Average	☐ Average	☐ Average output				
☐ Occasional conflicts	☐ Below average	☐ Not a great producer				
☐ Many conflicts ☐ Very poor ☐ Low output, slow						
4. How would you describe the applicant's punctuality?						
☐ High ☐ Average ☐ Low						

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### 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? ☐ Will adapt readily to the changes and challenges and will be a successful participant ☐ Should be able to adapt to the changes and challenges with minimal adjustment ☐ 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 This applicant's outstanding personal qualities are: The personal qualities this applicant should strive most to improve are: 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 $\square$ 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