



Thank you for choosing to apply to the Academy of Science and Engineering at Stratford High School.

Please complete and return pages 6-8 of this packet, which includes the Application and Memorandum of Understanding.

In addition, please submit:

1. A **TYPED** paragraph explaining “Why I want to apply to the Academy of Science and Engineering”
2. Copy of latest report card (or printout from Skyward), including conduct grades

Lastly, please give the recommendation forms to two teachers, one science teacher and one teacher of another subject.

You should keep pages 3-5 for your records.

The application and all other documents are due by **23 March 2016** to room 339.

If you have any questions, stop by room 339 or 345 or email charles.avis@springbranchisd.com.

Thank you,

Mr. Dave Avis
Administrative Director

Mr. Davy Barrett
Academic Director

Stratford High School
Academy of Science and Engineering

APPLICATION GUIDELINES
2016-2017

Academy of Science and Engineering Description

The Stratford Academy of Science and Engineering provides an educational experience that encourages students to pursue a career in science and engineering. This is accomplished by: innovative technology; in-depth, real life lab experiences; active problem solving and analytical thinking; and teamwork and communication.

Application Procedure

The Application and all other requested items must be completed and returned to Mr. Avis (**room 339**) by **23 March 2016**. Incomplete applications will not be considered. Applications will be considered in the order they are received. Any applications received after the due date will be considered only if space is available in the Academy.

Student Eligibility Criteria

Academy enrollment is limited to an average of 25 students per class period who meet the following criteria:

1. Applicants must be a current sophomore (Class 2018). If you meet the requirements, but are not yet a sophomore, speak to one of the directors to see if you may apply.
2. Applicants must be on a track to complete Physics, Pre-Calculus, and Chemistry by the end of 11th grade.
3. Applicants must have and maintain a minimum of a B average in each of the four core classes (Science, English, Math, Social Studies) on their report cards.
4. Acceptable letters of recommendation from one science teacher and one non-science teacher.
5. An application with essay question will be filled out by the applicant and returned by the due date.
6. The applicant cannot have any suspensions during the school year they apply to the Academy or assignments to DAEP during high school.
7. If the applicant has received any ISS assignments, the ISS assignments will be reviewed by Academy leadership.
8. The applicant cannot receive a U in conduct on a report card during the school year in which they apply. If an N in conduct is received on the report card, an interview with Academy directorship will be required.
9. Applicants may be subject to an interview as deemed necessary by Academy directors.

Academy of Science and Engineering Recognition

All students who earn a grade average of “B” or better in the two (2) Academy specified courses and meet all state and district graduation requirements will receive an ASE designation on the student’s transcript showing prospective colleges that the student has gone above and beyond in their academic work.

Deadline for this completed application is **23 March 2016**.

Return to Mr. Avis in room 339.

Academy of Science and Engineering Typical Course Schedule

9th and 10th grades:

- Complete 2 of Biology, Chemistry, and Physics (PreAP level suggested for all 3)
- Complete Algebra 2 or higher (PreAP level suggested)

11th grade:

- Complete the 3rd course of Biology, Chemistry, and Physics (PreAP level suggested for all 3)
- Complete Pre-Calculus or higher (PreAP level suggested)
- Complete the ASE course “Science Research and Design”.
- Some students will choose to take an AP science course this year.
- Earn a grade of 80 or higher in Science, Math, English, and Social Studies classes. Earn 70 or higher in all electives.

12th grade:

- Complete the ASE course “Senior Research and Design”. This course meets during Spartan Time (9th period).
- Complete at least one AP science course. You may choose from AP Biology, AP Chemistry, AP Physics 1, AP Physics C, and AP Computer Science.
- Complete a math course (AP Calculus, AP Statistics, or AP Computer Science are preferred).
- Earn a grade of 80 or higher in Science, Math, English, and Social Studies classes. Earn 70 or higher in all electives.
- With prior director approval, AP Computer Science or AP Psychology may count as a second AP science course.

Academy Lab Class – Scientific Research and Design - 11th grade year

In this hands-on lab class, the students are exposed to Engineering, Forensics, Alternative Energy, Genetics and Microbiology, and Nanotechnology. Within the class, students work in groups to complete projects, hands-on lab activities, and give presentations. They are also exposed to career scientists through guest speakers who visit Stratford and several field trips that tie in to the curriculum.

Senior Research & Design - 12th grade year

As a team, students will identify 3-4 topics during the last six weeks of the junior level Academy lab class and will narrow down the topic choices to one main project. Each team will work with a community mentor (i.e. engineer from a local company) who will meet with and communicate with the team throughout the period of research.

This course meets during 9th period (Spartan Time). There will be deadlines throughout the year that must be met. Meeting these deadlines will contribute to the grade received for this course. **Students who choose to begin a senior project must complete the project in order to earn a passing grade for this course and remain a member of ASE.** This applies even if the student is taking 2 AP Science courses.

Students may take 2 AP science courses during their senior year in lieu of completing a senior project. Students must maintain an 80 average to remain in ASE.

At the end of the year, the teams will present their project to an audience of students, parents, and teachers/principals.

The course fee for this class will be \$100 each year. Scholarships are available for those students on the free and reduced lunch plan. Please speak to one of the directors if you qualify.

Academy of Science and Engineering Additional Service Criteria

Students must earn 12 points while a member of ASE. These may be earned any time after you've been accepted into ASE until May 1st of your senior year. Proof of completion of each activity must be submitted to Mr. Avis once you complete it.

The following are examples of acceptable ways to earn points. If you're not sure if something will count, or how much it will count, please speak to a Director ahead of time.

At least 8 of the 12 required points must be in the categories of Internship and Job Shadowing.

Internship:

Work as an intern in a role related to science or engineering. This may take place over the summer or during the school year. Each week counts as 2 points.

Job Shadowing:

Meet with someone involved in science or engineering (i.e. engineer, doctor, science professor). You will go to their office and learn about what their job entails. Each day (minimum 2 hours) counts as one point. The SHS HOSA program can count in this category.

Engineering/Science Camps:

Each camp counts as a point. Area museums and universities often have camps during the summer related to science and engineering. Multi-week camps may count for more points. See a director for your specific situation.

Community Service:

Participate in some form of community service. This category encompasses a wide range of possibilities. This is volunteer work; you may not be getting compensation for the hours you claim. Each 2 hours of service counts as one point. Examples include the SHS Big Day, Houston Marathon volunteer, pick up trash along the bayou, etc.



APPLICATION

Applicant Information (Please type or print)

Last Name First Name MI

Home Address Apt # City State Zip

Grade Level School ID # Birth date

Home Phone # Other Phone #

Student e-mail address

Parent/Guardian Name: Phone Number

Email

If a current ASE student encouraged you to apply, please give their name: _____

Work experience, if any (briefly describe)

Volunteer experience (briefly describe)

Club memberships and extracurricular activities

Hobbies and special interests

Check or list each of the following courses successfully completed.

Biology

Algebra 1

Pre-Calculus

Chemistry

Geometry

Statistics

Physics

Algebra 2

Calculus

Other Science or Math Classes taken in high school:

If absent more than 5 days during the fall semester, briefly explain:

Attach a typed paragraph explaining “Why I want to apply to the Academy of Science and Engineering.”

Return your completed application, Memorandum of Understanding, grades, and paragraph to Mr. Avis in room 339 by 23 March 2016.

Applications will be considered in the order they are received.

I have attached all items requested, understand the requirements of the Academy of Science and Engineering program and approve of this applicant’s participation in this educational program.

Applicant’s Signature

Date

Parent/Guardian Signature

Date

Stratford High School Academy of Science and Engineering
Memorandum of Understanding

Student Name: _____
Last First MI

As a member of the Academy program, I understand that:

1. I am making a commitment to two years of the program that includes completing the courses as outlined.
2. I must report for Academy activities in appropriate attire.
3. I must display appropriate behavior at all school related activities.
4. To remain a member of the Academy I must:
 - a. Complete 12 activities during my time in the Academy.
 - b. Successfully complete and pass the Academy Lab Class, Scientific Research and Design.
 - c. At the end of each six weeks, the average in each of the 4 core classes (science, math, English, social studies) must be greater than or equal to an 80 average and all other classes must be greater than or equal to a 70 average. Failure to meet requirements will result in probation for the next six weeks. A student on probation failing to meet the criteria at the end of the next six weeks will be removed from ASE.
 - d. Achieve an excellent record of attendance and punctuality (no more than five absences per semester; no more than three unexcused absences per semester). Probation may result if absences are deemed excessive.
 - e. Refrain from assignments to ISS or suspensions: 1 assignment will result in probation. On the second assignment, the student must to appeal to the Board of Directors to remain in the Academy. The appeal will include a formal presentation at a Board meeting in order to present the reasons for the student to remain in the Academy. On the third assignment, the student will be unable to remain in the Academy. Placement to DAEP will result in immediate removal from ASE.
 - f. Have no conduct grade lower than "Satisfactory" in any class during the first semester or year of the Academy. A conduct grade of N or U will be reviewed by the Academy Directorship to determine eligibility and potential probation.
5. If I have questions or problems with regard to any aspect of ASE, I will contact an Academy Director.
6. By signing this memorandum, my parent/guardian gives me permission to take trips with my class. Additional permission slips will still need to be completed for each field trip.

I understand that there is an annual class fee of \$100.

I understand that I will receive an ASE designation on my transcript if I have earned a grade average of "B" or better in the two Academy specific classes and have met all state and district graduation requirements.

I understand that in being accepted into this program, I am committing myself to complete the Academy Lab Class (Scientific Research and Design), one science AP class and the Academy Senior Research and Design Class. My acceptance commits me to be an Academy participant during my entire junior and senior years.

Failure to follow the standards set forth in this document will result in removal from the Academy program.

Student Signature Date

Parent/Guardian Signature Date

**Stratford Academy of Science and Engineering
Non-Science Teacher Recommendation**

Applicant's Name: _____

DIRECTIONS FOR APPLICANT: Have a teacher complete the following form on your behalf and have the teacher return it to either Mr. Avis (room 339) or his mailbox **by 23 March 2016**.

Teacher's Name: _____ Subject taught: _____

Our campus is in the process of selecting current students for the Academy of Science and Engineering and we need your help. The Academy of Science and Engineering will introduce students to many aspects of careers in science and provide opportunities to put theory into practice. This is a specialized program designed for students interested in a career in science or engineering. Our expectation is that students will spend time during their junior and senior years obtaining knowledge and skills that will greatly benefit them in their continuing education/college and career. They will be expected to handle theoretical concepts and apply these concepts in the field. We are interested in knowing how you feel about this student as a candidate for the Academy.

To provide feedback, circle the number which best corresponds with your observations of this student.

1 = Never 2 = Rarely 3 = Sometimes 4 = Often 5 = Almost Always

- | | |
|---|-----------|
| The student completes all assignments, demonstrating superior task commitment and motivation. | 1 2 3 4 5 |
| The student demonstrates superior organization in planning and completing of work and duties. | 1 2 3 4 5 |
| The student demonstrates good character and honesty. | 1 2 3 4 5 |
| The student accepts responsibility for his/her own behavior and learning. | 1 2 3 4 5 |
| The student demonstrates leadership qualities in the classroom. | 1 2 3 4 5 |
| The student demonstrates cooperative and appropriate behavior in the classroom. | 1 2 3 4 5 |
| The student demonstrates creative thinking. | 1 2 3 4 5 |
| The student communicates well. | 1 2 3 4 5 |
| The student has good attendance. | 1 2 3 4 5 |

Letter grade received in my class: _____

Do you recommend this applicant be accepted in the Academy of Science and Engineering? **YES NO**

Any additional information you would like us to know?

Signature

Date

**Stratford Academy of Science and Engineering
Science Teacher Recommendation**

Applicant's Name: _____

DIRECTIONS FOR APPLICANT: Have a teacher complete the following form on your behalf and have the teacher return it to either Mr. Avis (room 339) or his mailbox **by 23 March 2016**.

Teacher's Name: _____ Subject taught: _____

Our campus is in the process of selecting current students for the Academy of Science and Engineering and we need your help. The Academy of Science and Engineering will introduce students to many aspects of careers in science and provide opportunities to put theory into practice. This is a specialized program designed for students interested in a career in science or engineering. Our expectation is that students will spend time during their junior and senior years obtaining knowledge and skills that will greatly benefit them in their continuing education/college and career. They will be expected to handle theoretical concepts and apply these concepts in the field. We are interested in knowing how you feel about this student as a candidate for the Academy.

To provide feedback, circle the number which best corresponds with your observations of this student.

1 = Never 2 = Rarely 3 = Sometimes 4 = Often 5 = Almost Always

- | | |
|---|-----------|
| The student completes all assignments, demonstrating superior task commitment and motivation. | 1 2 3 4 5 |
| The student demonstrates superior organization in planning and completing of work and duties. | 1 2 3 4 5 |
| The student demonstrates good character and honesty. | 1 2 3 4 5 |
| The student accepts responsibility for his/her own behavior and learning. | 1 2 3 4 5 |
| The student demonstrates leadership qualities in the classroom. | 1 2 3 4 5 |
| The student demonstrates cooperative and appropriate behavior in the classroom. | 1 2 3 4 5 |
| The student demonstrates creative thinking. | 1 2 3 4 5 |
| The student communicates well. | 1 2 3 4 5 |
| The student has good attendance. | 1 2 3 4 5 |

Letter grade received in my class: _____

Do you recommend this applicant be accepted in the Academy of Science and Engineering? **YES NO**

Any additional information you would like us to know?

Signature

Date