

APPLICATION COVER PAGE
(Please Print or Type – All Fields Must Be Completed)

Project Name: Sunset High School Engineering Pathway
Amount Requested: 333,352.76

Project Director: Jason Galbraith			
District, School or ESD: Sunset High School, Beaverton School District			
Address: 13840 NW Cornell Rd			
City: Portland	State: OR	Zip: 97229	
Phone: 503.259.5050		Email: Jason_Galbraith@beaverton.k12.or.us	

Grant Fiscal Agent Contact: John Huelskamp			
District, School or ESD: Sunset High School, Beaverton School District			
Address: 13840 NW Cornell Rd			
City: Portland	State: OR	Zip: 97229	
Phone: 503.259.5050		Email: John_Huelskamp@beaverton.k12.or.us	

Superintendent: Jeff Rose			
District or ESD: Beaverton School District			
Address: 16550 SW Merlo Rd.			
City: Beaverton	State: OR	Zip: 97003	
Phone: 503.591.8000		Email: Jeff_Rose@beaverton.k12.or.us	

	Participating High School or Middle School Name (add additional rows as needed)	Lead Contact Name	Grade Levels	Student Enrollment
1.	Sunset High School	Jason Galbraith	9-12	2300
2.				
3.				
4.				
5.				
6.				
7.				

A. Project Abstract

With this grant we will create a Career Pathway for Engineering. The new pathway will include the alteration of one semester course that already exists at Sunset High School, as well as the creation of three new semester courses. By creating the classes within the school day, we can ensure that all students, regardless of gender, race, or economic means, have equal access to them. These courses will need the support of a new classroom space which includes modern machinery, electronics, and computers. We will create a sustainable Career Pathway that can be replicated in other high schools both in the district and across the state.

B. CTE Revitalization Grant Vision

The importance of Science, Technology, Engineering, and Math (STEM) in education has been clearly shown. However, some areas get more attention than others. Science and Math, as core subjects, are taught in every school. Sunset High School has a very strong Computer Science Career Technical Education (CTE) Career Pathway, so our students are well-served in Technology (See Appendix: Section 5 for Pathway guide). However, there are no Engineering-specific classes as of now. This grant will allow us to add another Career Pathway - Engineering (See Appendix: Section 6 for Pathway guide). The varied fields within engineering are some of the fastest growing, highest paid, and most in demand jobs in our economy. STEM jobs in general are growing quickly, but engineering in particular is in need of new graduates and workers. Colleges and industry alike are starving for more engineering students, but most high school students are never exposed to engineering as a career. There are some elements of engineering within core science classes, but nowhere is it given the attention it needs to interest upcoming students. This new Engineering Pathway will help expand our CTE offerings, reaching a larger pool of students, many of whom may not have been involved in CTE otherwise.

Engineering classes in our pathway will be hands-on, problem solving in focus, and project based. The skills learned will be directly applicable to Oregon industry jobs, future studies, and even other classes. Engineering classes show the practical applications of mathematics, and the principles of engineering design are easily transferable to other scientific disciplines. This type of experiential learning class has a strong appeal among many typically underserved student populations. The Engineering Pathway will draw in minority groups, low-income students, and English Language Learner (ELL) students, much as our project-based Computer Science classes do, perhaps even more so. We expect this to help increase graduation rates within these subgroups as well as lead to more students choosing to pursue Engineering careers or studies after high school.

In addition, our industry partners will continue to support our program in many ways. Their continued input on curriculum and project assessment will make sure our Pathway is up-to-date and focused on relevant skills. Having professionals come into the classroom will increase our college and career ready culture, and providing opportunities for job shadows and internships will give our students applicable, real-world experience that they can take with them into college or straight into high demand careers. In total, this new Engineering Pathway will help not only the future Engineers we inspire, but all those who participate in the program, by teaching them relevant skills and opening their minds to the many possibilities in front of them.

C. Partnerships

We have already started working with community partners in a variety of ways, and this Engineering program will help to strengthen these existing partnerships while fostering more. Daimler Trucks, LLC has been generous to our Computer Science program in the form of grants, and Intel has provided Professional Development opportunities to learn more about the Arduino microcontroller kit at no cost to the school. Tektronix Inc, Electro Scientific Industries Inc, Tosoh Quartz Inc, and Epson Portland Inc have given tours to our CTE students, while Vernier Software & Technology, Intel

Corporation, and MC Laser Labs have given tours to our middle school girls-only technology camp. In addition, Sunset hosted a two-day technology conference in the spring of 2015 called Tech Talks, giving students the chance to hear presentations by many of our community partners, including Daimler, Intel, Nike Inc, Vernier, and a variety of other institutions. (See Tech Talks website capture in Appendix, Section 2)

One important aspect of the Engineering Pathway is to expand our direct partnerships to include helping high school students into the workplace. Industry professionals from the companies listed above have already contributed by participating September 8th in a panel discussion to help determine a series of introductory classes that would prepare students for a career in engineering. A board of professionals including the same members will also meet with our Computer Science and Engineering teachers once the classes are approved to ensure that the curriculum covered in our classes is up-to-date with current industry practices and needs. In addition, our industry partners will provide access for tours and job shadows, which is an important part of our Career Pathway.

Although many of our students may choose the Engineering Pathway as a way to prepare for engineering majors in college, this Pathway will also prepare students to enter the workforce in engineering related jobs, such as high-tech manufacturing as done at Tosoh Quartz, Sunset Manufacturing, and other community partners.

D. & E. Project Outcomes & Evaluation Progress Markers and Results

Area 1 - Improved and sustainable partnerships with business, industry, labor, and educational providers.		
Project Outcome	Progress Markers	Expected Results
1.1 Create partnerships that can advise on curriculum and sequence of classes.	We will have at least seven companies involved with the direction of Sunset’s Engineering Pathway by the completion of the grant in 2017-18.	This is already much stronger than before starting the grant. We currently have at least five companies that are more directly involved with Sunset’s Computer Science and Engineering programs.

1.2 Create industry contacts that can help with job shadows, tours, and internships.	We want to have every student who completes the Engineering Pathway in 2018-19 to have a job shadow or internship.	This is dependent largely on the commitments of our local Engineering companies, but it should be attainable.
Area 2 – Improved student access to CTE programs of study with particular attention to historically underserved students.		
Project Outcome	Progress Markers	Expected Results
2.1 We will increase the number of Latino students who take at least one CTE class.	We will recruit underserved students at ELL Night and the Techwizards after school program, increasing the number of Latino students who take at least one CTE class will increase by 10% in 2016-17 and by 15% in 2017-18.	Latino students often excel in the classes involving physical systems, so we expect an increase in attendance and completion.
2.2 We will increase the number of female students who take at least one CTE class.	We are heavily marketing a class called, “Exploring Technology”, which includes wearable circuits and introductions to robotics, programming, and engineering.	We expect that having a class specifically marketed to females will help increase confidence in taking computer science and engineering classes.
Area 3 – Increased rigor in technical and academic content align to diploma requirements, industry-recognized technical standards such as the Oregon Skill Sets, and employability skills.		
Project Outcome	Progress Markers	Expected Results
3.1 Create a 3D CAD class, as all of our industry partners feel this is a fundamental skill.	Have at least thirty students complete this class during 2016-17 and 2017-18.	We should be able to have at least thirty students complete this class each year.
3.2 Create Electronics, Mechatronics, and Engineering Design classes, which focus on electrical and mechanical engineering. These are focused on the engineering required for physical systems.	Have at least thirty students complete Electronics in the 2016-17 year, and at least fifteen complete Mechatronics in the 2017-18 year. In 2018-19 we would like at least ten students to complete the entire pathway.	Because of scheduling conflicts that are traditional problems, this goal is something that we will gradually need to increase as the classes become part of the school.
Area 4 – Increased student awareness of career opportunities through exposure to employers.		
Project Outcome	Progress Markers	Expected Results
4.1 We would like an increase in the number of industry professionals that come to Sunset, including both our “Tech Talks” conference and our classrooms.	Last year we had twenty-two guest speakers at our “Tech Talks” conference. We would like to have at least that many in 2015-16, and have at least two guest speakers come into the classroom in 2015-16 and 2016-17.	We expect an increase in the number of guest speakers, especially with the number of industry partners we are engaging.

4.2 We would like to take students on tours of engineering and manufacturing companies.	Take at least twenty students on at least two tours of engineering and manufacturing companies during 2015-16 and 2016-17.	We should be able to do this, assuming scheduling and transportation are not issues.
4.3 We will increase the number of internships students will participate in through industry partners.	We will have five students each year participate in internships with industry partners and our College and Career Center.	Through our increased connections to industry and their commitment to our program, we will be able to have internships for our strong high school students.
4.4 We will increase awareness of careers in Computer Science and Engineering	All students who have little knowledge of these careers will have an increase in awareness as measured through surveys.	We expect all students who do not have knowledge of these careers will have greater awareness after participating in our classes.
Area 5 – Improved ability to meet workforce needs in the region with a focus on high wage and high demand occupations.		
Project Outcome	Progress Markers	Expected Results
5.1 We will increase the number of high school students who graduate with skills needed in high wage and high demand occupations	We will view attendance in the new strand of classes as our progress markers. Students must pass our technical skills assessment to complete the pathway. We will offer our 3D CAD class and Electronics class during 2016-17, and our Mechatronics class and Engineering Design class during 2017-18.	We expect to have at least seventy-five students take at least one engineering class during 2016-17, and at least one hundred and fifty during 2017-18.

F. Activities and Timeline

Activity	Outcome(s) addressed	Timeline	Person(s) responsible
Identify Space and begin bids for renovated engineering classroom. Acquire machinery for new classes.	3.1, 5.1	10/2015 – 08/2016	Jason Galbraith and Cady Geer (in partnership with principal, John Huelskamp.)
Change current 3D Design class into 3D CAD class and propose Electronics class.	3.1, 3.2	09/2015.	Jason Galbraith
Market classes for forecasting	2.1, 2.2, 3.1, 3.2, 5.1	10/2015-06/2016	Jason Galbraith, Cady Geer

Design curriculum for 3D CAD and Electronics courses through quarterly meetings with advisory board.	1.1, 3.1, 3.2	01/2016-08/2016	Jason Galbraith, Cady Geer, and advisory board
Prepare information for Online Progress Report #1		05/2016	Jason Galbraith and Cady Geer
Hire teacher for 3D CAD and Electronics classes.	3.1, 3.2	06/2016-08/2016	Jason Galbraith (in partnership with principal, John Huelskamp.)
Prepare information for Online Progress Report #2		09/2016	Jason Galbraith and Cady Geer
Increase number of industry partners who come to "Tech Talks" and into classrooms.	2.1, 2.2, 4.1, 4.2, 4.4	09/2015-06/2017	Jason Galbraith and Cady Geer
Take at least twenty students on tours of manufacturing and engineering companies during the school year.	1.2, 4.2, 4.4	09/2015-06/2017	Jason Galbraith and Cady Geer
Create initial internships for students	4.3, 5.1	06/2016-06/2017	Jason Galbraith, Cady Geer, and industry partners
Offer 3D CAD and Electronics classes during 2016-17 through new part-time engineering teacher position.	2.1, 2.2, 3.1, 3.2, 5.1	02/2016	Jason Galbraith (in partnership with new teacher)
Propose Mechatronics and Engineering Design Courses.	3.2	09/2016	Jason Galbraith
Prepare information for Online Progress Report #3		12/2016	Jason Galbraith and Cady Geer
Complete construction on new engineering classroom.	3.1, 5.1	06/2017-08/2017	Jason Galbraith and Cady Geer (in partnership with principal, John Huelskamp.)
Design curriculum for Mechatronics and Engineering Design courses through quarterly meetings with advisory board.	3.2	01/2017-08/2017	Jason Galbraith, Cady Geer, new teacher, and advisory board
Offer 3D CAD and Electronics classes during 2016-17 by expanding existing engineering teacher position to full time.	2.1, 2.2, 3.2, 5.1	02/2017	Jason Galbraith (in partnership with new teacher)
Prepare information for Online Progress Report #4		03/2017	Jason Galbraith and Cady Geer
Have at least ten students complete the Engineering Pathway, including job shadow or internship.	1.2, 3.1, 3.2, 4.3, 4.4, 5.1	06/2018	Jason Galbraith and Cady Geer (in partnership with new teacher)

Final Report		06/2017	Jason Galbraith and Cady Geer
--------------	--	---------	----------------------------------

G. CTE Program of Study Design

We will start our career Pathway by proposing the first two classes for the 2016-17 school year. Both the 3D CAD and Electronics classes will initially be taught in existing spaces. We will need to purchase the electronics kits and half of the 3D printers, but we can make an existing space work for a year. We will need to hire a teacher for the 0.6 position during the summer of 2016, though we will plan to find a qualified instructor far earlier. Curricula for those courses will need to be completed by the end of summer 2016 in order to ensure that the two new classes will have a strong launch for the 2016-17 school year. Guest speakers, tours, job shadows, and internships with industry partners will become an integral part of the pathway the first year, continuing on into the second year. We will also have at least two meetings with industry partners to ensure that our curriculum matches their needs.

The second year will involve the creation of our new engineering space, which will be required for the Mechatronics and Engineering Design classes. Those courses will be proposed for 2017-2018, and the acquisition of machinery will happen during the 2016-2017. Curriculum design should also happen with industry partners during this year, as well as official bids for the renovation of our current classrooms. Actual renovation will occur during the summer of 2017, allowing us to offer the full Engineering Pathway with a full-time teacher for the 2017-18 school year. While we expect to have strong enrollment in the new Pathway, the demands of six semester courses as well as an internship or job shadow means we expect to meet our initial goal of having ten students complete the full Pathway during the 2018-19 school year.

Our Computer Science program emphasizes practical skills through project-based learning. Students experience learning through large projects that incorporate a variety of skills. This same approach will serve our Engineering Pathway well. In the Computer Science Pathway, students take a

series of entry-level classes, such as Game Design and Robotics, and eventually take a college-level class, Java Programming. In addition, we require students to complete an internship or job shadow as part of the pathway, providing them with a real context for their learning.

We will create a similar program of study that emphasizes engineering, as this is an emphasis that will allow students to expand their STEM knowledge beyond what can be offered in current core classes. While there are some excellent after-school programs that can meet the needs of some students, a truly equitable educational solution must involve integrated curricula as part of the school day. We have met with Engineers from Daimler, Intel, Sunset Manufacturing Inc., and Nike, who propose the following courses as a good foundation for high school. The goal of our Engineering Pathway will include the following sequence of semester classes:

- 3D CAD
- Electronics
- Mechatronics
- Engineering Design

We want to expose students to as many fields of engineering as possible. Sunset has strong chemistry and biology classes, so they would be a logical setting for chemical and biological engineering. Our computer hardware classes are also robust in initial computer engineering skills. Where we need more emphasis is civil, electrical, and mechanical engineering. Some of these disciplines are touched on in physics, but not in enough depth to incite interest. Our new proposed sequence of classes is intended to address this need. The Mechatronics and Engineering Design classes require a new space created specifically to enable the effective teaching of the required skills, while the 3D CAD and Electronics classes will have a smaller footprint in terms of space and material needs. We also need a third full-time teacher for our department. This teacher would be introduced as a part-time teacher the first year, growing to a full-time position the second year.

We currently have a 3D Design class that focuses on the creation of objects for the purpose of video game design, animation, and images. Modifying this class to focus on creation of physical objects and civil engineering will be a smooth transition. We already have some curriculum and a small 3D printer, and can start this class without the creation of an engineering space.

The Electronics class can be taught in an existing classroom, though we require the hardware to teach the class. We have some electronics curriculum and material currently taught in Robotics 2, but both classes will benefit by having more depth in their respective fields. This class will cover some of the basic material needed for electrical engineering and circuit design.

Mechatronics is an engineering discipline that combines mechanical and electrical engineering, and was suggested by our industry partners as an excellent way to cover these essential topics. The combination is something used in many nearby industries. This class will also cover some of the machining required in the creation of physical objects, allowing students to see the difference between additive and subtractive manufacturing processes. This will be the first class that would necessitate a new engineering space, as the students will need access to 3D printers and milling machines to create their physical constructs.

Engineering Design will take students through a complete design process. They will spend the semester creating a physical object or system that will solve a problem that exists in the world. This is a capstone class where students apply all of the skills they have learned to arrive at and implement a solution. We will simulate a working environment, with real deadlines, difficult problems, and an iterative solution process, as well as documentation and communication.

Most engineering requires some ability to program, so two additional classes of computer programming will be required to complete the pathway. Also, much like our Computer Science Pathway, the students will need to complete an internship or job shadow. This is one of the ways that

our industry partners will contribute to the process. Please see our Pathway Diagrams in the Appendix: Sections 5 and 6.

This Career Pathway will offer a broad base of engineering knowledge and approaches to prepare students for the wide range of engineering disciplines they can pursue in industry, college, and beyond. The Engineering Pathway will follow a very similar format to our current Computer Science Pathway, so we are confident in our ability to have it quickly approved by the Portland Area Career Technical Education Consortium (PACTEC). We have already begun the work needed to have this Pathway approved through Portland Community College and PACTEC.

In both Career Pathways, we balance the acquisition of skills that can be used immediately with setting the foundation for future learning. From either Pathway, students will be able to enter the workforce, pursue industry certification, or continue on to higher education in their chosen field. This flexibility allows us to serve the highest number of students possible, no matter what their future goals.

H. High Wage and High Demand Occupations

Computer Science and Engineering fields include some of the highest paid, highest demand fields that require only a bachelor's degree. Section 4 in the Appendix is a report from the State of Oregon's Employment Department Career Explorer. We created the report by selecting high wage, high demand professional careers requiring a Bachelor's degree, and then sorted by average wage. Out of the top eighteen careers, only five are not in Computer Science or Engineering. The remaining thirteen are careers that our current and future Career Pathways lead into. More specifically, there are three areas that are considered high-demand careers shared by CTE and STEM; Engineering & Construction; Advanced Manufacturing; and Computer Science & IT. The entry-level skills needed for both Engineering and Advanced Manufacturing are covered in our new Engineering Pathway, and the Computer Science & IT field is covered in our existing Computer Science Pathway.

One of the ongoing challenges for Computer Science and Engineering programs is communicating their worth to the public at large. With our Computer Science Pathway, we have made it a priority to communicate the breadth of high wage, high demand jobs available in Computer Science careers. As a result, we have seen a constant growth in the program over the past several years. We will now broaden our scope to include information on the future opportunities available in the engineering sector and expect similar results. This is being communicated to parents through the Latino parent night, to teachers through Code.org workshops, and to students through Tech Talks.

I. Equity

We plan to hold our classes during the school day to ensure that all students can access them. After school programs can do amazing things, but not everyone has the same ability to stay after school to access these opportunities. By making the Engineering Pathway a part of our daily schedule, we will be able to reach every student who wants to explore engineering. We have just begun offering a class, called “Exploring Computer Science,” with the goal of showing students how accessible Computer Science and Engineering subjects are to high school students.

Sunset’s Latino population is one of the populations we plan to specifically target. Many Latino students take our Robotics classes, and they perform extremely well, but there are not very many other classes at Sunset that deal with the manipulation of physical systems. Our expectation is that we can serve this community better by offering more classes that use skills that are particularly strong within this community. We already have evidence that our CTE program improves graduation rates among our Latino population (see Table 1 below). The graduation rate amongst Latino students who have taken at least one of our Computer Science Pathway classes is at least seventeen percent higher than Latino students who have not taken any Computer Science classes. In certain years the impact is considerably higher. We expect a similar relationship between graduation rate and Computer Science classes for our economically disadvantaged population, but we do not have access to those data.

Increasing the number of classes available to these populations would allow us to reach even more of these students.

A number of studies (see Appendix: Section 3, p39) have shown that participation in Computer Science, Engineering, and Vocational programs increases attendance and graduation rates. We expect that the graduation rates of all of our students will increase, especially our underserved populations, though this will be a goal we will not be able to adequately measure during the lifetime of this grant.

Year	Tech Classes Total	Tech Classes Graduated	Tech Classes Graduation Percentage	Non-Tech Classes Total	Non-Tech Classes Graduation	Non-Tech Classes Percentage	Graduation Rate Difference
2013-14	36	26	72.22%	55	31	56.36%	17.84%
2012-13	20	16	80.00%	57	29	50.88%	31.67%
2011-12	28	21	75.00%	59	32	54.24%	21.67%
2010-11	27	20	74.07%	51	26	50.98%	24.07%
2009-10	20	16	80.00%	59	25	42.37%	39.02%

Table 1 - Sunset High School graduation rates for Latino students: Those who took one or more Tech classes vs. those who took no Tech classes.

We will also market more heavily to our female population, through signage, social media, counselors, new classes, and new projects in existing classes. We launched a new course this year titled, “Exploring Technology.” We marketed this class very heavily to our females students, and as a result it has about 40% female students, instead of the usual 10-15%. This class includes a survey of various Computer Science and Engineering topics, and the goal is to build enough confidence for these young women to try the more advanced classes. Projects include wearable circuits, Lego robotics, 3D modelling, web design, and computer game design. We will also heavily market to our middle school population, both through forecasting at the middle schools and through our summer middle school girls-only technology camp.

J. Diploma Connections

The Engineering Pathway classes cover the CTE requirement in the Oregon diploma. In addition, there is the possibility that the Beaverton School District could grant mathematics or science credit.

The Next Generation Science Standards have engineering topics incorporated into the standards in many areas, and our new pathway is an excellent place to concentrate on these topics. Another specific requirement of the Oregon Diploma is the Career Related Learning Experience. This is built into our career pathways, though even students that do not complete the Career Pathway could have a number of experiences exploring Computer Science and Engineering

In addition, many of the new Career Pathway classes could become dual-credit classes in Portland Community College's (PCC) Electronic Engineering Technology department. Students could earn up to twelve college credits once we have a teacher who qualifies as part of PCC's dual-credit program. Even without dual-credit, we plan to align our curriculum to their classes to ensure that our students are gaining the necessary skills for a potential career in engineering.

Besides the direct diploma requirements, we mentioned in the Equity section that we expect increases in graduation rates across Sunset. The fact that students have better attendance and graduation rates when taking CTE classes logically leads to the idea that we should offer more CTE classes in our schedule. The more opportunities that students have to succeed in our subject, the more likely they are to succeed at completing high school.

K. Sustainability

We plan to make the program sustainable, and to achieve this we will need to have student enrollment numbers that support a full time teacher. Computer Science and Engineering classes are considered electives, so we must have at least 30 students sign up for a class to offer it. Strong support from Sunset High School administration means that we can have smaller classes in the early stages of the program, but we will need to have at least that number of students to sustain the program beyond the lifetime of this grant. In our Computer Science Pathway, we've found that approximately 50% of students who take an intro class will continue on to intermediate and advanced classes. If these rates hold true for the Engineering Pathway, we will need at least sixty students to sign up for the 3D CAD

and Electronics classes in order to populate the Mechatronics and Engineering Design classes. We do not anticipate this being a problem as our current 3D design class typically forecasts more than eighty students and forecasting for hands-on classes like robotics tends to be equally strong. Our administration is very supportive of this program. Many of our industry partners are parents of current or past Sunset students and our school has a strong history of parent involvement. Our strong Computer Science program will be well balanced by adding a parallel Engineering branch, allowing us to serve a greater portion of the school population.

As for materials, many of our classes charge lab fees in order to offset the cost of consumable goods, and we will certainly need to implement a similar plan. Students who show financial need typically have these fees waived, as we do not want to excluded students who are already experiencing financial hardship. We also try to use Open Source software as often as possible, as this allows students to have software skills they can continue to access after graduation. In addition, we will create a Program of Study, which will qualify for Perkins Federal funds once the process is complete, allowing another avenue of sustainable funding. Finally, the new Career Pathways Funding will be available to the program once it has students who have completed it, which will also help address these on-going needs.

In order to help maintain our industry partnerships we will hold quarterly meetings to which all partners will be invited. These meetings will serve to thank our partners for their continued involvement as well as check in on needed updates to the program or curriculum. We will regularly invite partners to attend our classes, as well as host students at their facilities, to further strengthen these bonds.

L. Communication

We will be communicating with parents and the community through Back-to-School, Curriculum Night, and English Second Language (ESL) Family Night. We will also be promoting the

program through our industry partners and at our Tech Talks event. Throughout the year, we will be promoting the program through our social media platforms for Computer Science and Engineering, as well as through our connections with the Oregon Computer Science Teachers Association (OCSTA). The pathway will also be clearly explained in our forecasting guide, which parents and students use to choose classes for the following year.

Sunset's staff will learn about our program through Sunset's new position, the Library Instructional Technology Teacher (LITT). This position was created to educate staff on how to integrate technology into the classroom in a way that improves student learning, and the newly hired LIT Teacher is very eager to help educate them on the new pathway. Our Computer Science and Engineering department already works closely with both mathematics and science, including integrating Computer Science into the core classes, so our big push will be to educate the rest of the staff through our work with the LITT.

Students will become aware of the new program through the same sources as parents and community members, but will also learn about the pathway through other Computer Science and Engineering classes, where we can present the information on the new pathway and how it can lead to a high-paying, interesting career. One of our biggest tasks will be to educate our counselors on the new classes and how the Career Pathway works, as they will be essential advocates for the new program of study. Both the academic and ELL counselors will be integral to this process, as they directly influence student course selection. They are already excited about this possibility, so convincing them to encourage students should not be a problem. The most effective way to get students excited about this new opportunity is through other students. As with our Computer Science Pathway, students who have taken these classes will be the strongest possible advocates for participation. We expect to see this program grow rapidly and become an anchor of our school community.