

**SPECTRUM INNOVATES PATHWAY PROGRAM:  
PREPARING AUTISTICS TO ENTER HIGHER EDUCATION AND CAREERS IN  
ADVANCED TECHNOLOGICAL FIELDS**

## **Project Description**

### **Results from Prior NSF Support**

No prior NSF support has been granted to nfpNEXUS, Inc., nor are there any submitted grant applications awaiting approval.

### **Introduction**

This Advanced Technological Education proposal is submitted by nfpNEXUS, Inc. (NEXUS), a 501(c)(3) organization, whose mission is to maximize the potential of autistic individuals through innovative programs and initiatives.

### **Project Overview**

To address the autistic community's employment crisis and the forecast shortage of technicians in the aeronautics industry over the next twenty years, nfpNEXUS, Inc. will develop and implement *Spectrum Innovates Pathway Program* (SIPP). SIPP, a prototypal transition pathway program for those on the autism spectrum who share a common passion for aeronautics. The primary goals of the SIPP program are to prepare students to succeed in higher education and enter the workforce in advanced technician roles. Our partner in this initiative is Vaughn College of Aeronautics and Technology, Inc. (Vaughn), whose vision is to change the world one student at a time with a transformational education that creates a lifetime of opportunity.

### **Motivating Rationale**

The CDC reported in April 2018 that 1 in 59 children born in the US continue to be diagnosed with autism spectrum disorder (ASD) (CDC, 2019). 500,000+ individuals with ASD will age into adulthood over the next 10 years (Roux, Shattuck, Rast, Rava, & Anderson, 2015). Autism Speaks currently reports that the vast majority of autistics are unemployed or underemployed, with estimates ranging to as high as 90% (Autism Speaks, n.d.). These statistics represent an immediate US employment and societal crisis (Gerhardt & Lainer, 2011).

Transition, the move into higher education, the workforce and adult independence, is the single greatest challenge facing the autistic community. Transition is especially difficult for autistics, given the developmental, communicative and social deficits that are characteristic of autism. Compounding these challenges, between 18 and 22 years of age, ASD students age out of service governed by the IDEA, and the social welfare laws mandating specialized services end abruptly — “falling off the cliff”— destabilizing their lives. Families are further overwhelmed and left scrambling to find programs for their children that lead to employment. Existing programs are based on a deficit model rather than capitalizing on strengths and do not facilitate the development of essential social emotional and life skills requisite for sustained competitive employment (Koenig & Williams, 2017) (Fletcher-Watson & Happé, 2019).

Corporate leaders have identified the autistic community as having unique untapped talents, skills and creativity. Microsoft, Ford, SAP, DXC, and JPMorgan Chase, members of the Autism at Work consortium, affirm that companies that can effectively tap into this talent pipeline will hold a competitive advantage.

Airlines, manufacturers of airplanes like Boeing and aircraft engine-makers such as General Electric, are racing to ensure a pipeline of maintenance technicians to fix and maintain their aircraft as a wave of current employees approach retirement (Josephs, 2018). The aviation

industry forecasts the need for 769,000 new highly skilled technicians globally over the next 20 years with over 193,000 in North America alone (Boeing, 2019). This represents a \$2.4 trillion job market over 20 years, the largest segment of growth in aviation (Airbus, 2019). They have recognized training, retirements, technology advancements and competition for talent as the challenge for attracting and retaining talent. To address the challenge significant recruiting efforts will be applied to attract people to the industry and hiring practices will be adapted to use competency-based certification to fill positions.

The key to preparing autistics as technicians for high-tech fields and therefore our goal is the development of transition programs that employ their strengths (Koenig & Williams, 2017) to advance technical and academic learning, while concurrently developing essential social, practical and business skills. Merging these essential components leads them to work and live productively and independently as required in today's job market.

### **Intellectual Merit**

This project has the potential to transform education for autistics. At SIPP's core is the full immersion of autistics in a STEM learning environment as the means for them to acquire the knowledge and certifications for their entry into advanced technical careers. The development of SIPP is informed by the findings of the National Academies of Sciences, Engineering, and Medicine (2018) on best practices for learning. For over three decades, education for autistics has been based on a Theory of Mind model that resulted in a monolithic view of the capabilities of autistics with particular regard to cognition and empathy (Baron-Cohen, Leslie, & Frith, 1985). More recent research has led to modified models as well as the emergence of new cognitive models for autism (Klin, Jones, Schultz, & Volkmar, 2003). The continued evolution of these models reflects a more comprehensive understanding of how empathy and cognition manifest among autistics (Fletcher-Watson & Happé, 2019). SIPP translates this current research into practice in the design of an educational program that prepares students to succeed in higher education and enter the workforce. The program also responds to recent calls for research on the positive effects of engaging special areas of interests (SAI) for individuals with autism spectrum disorder (ASD) in school and workplace settings, and builds on current research by utilizing SAIs as strengths in interventions designed for autistics (Sun San Wong, 2018) (Koenig & Williams, 2017).

### **Broader Impacts**

Many autistics have exceptional abilities that if validated and cultivated would allow them to flourish and contribute to society (Hillier et al., 2007). While some navigate the transition into post-secondary education, employment and adult independence, this is not the case for most with ASD. Demand for programs and services to assist with transition far exceeds availability (Volkmar, Jackson, & Hart, 2017). Almost invariably, the potential of autistics becomes a lost opportunity, and the consequences are pervasive and growing. ASD-related medical, nonmedical and productivity losses are forecast to be \$461 billion for 2025. The researchers noted that these estimates could reach \$1 trillion by 2025 if ASD prevalence continues to increase as it has in recent years (Leigh & Du, 2015).

The project employs a robust recruitment process for students that will increase awareness of the availability of the advanced technician options for autistics. Industry partners serve a dual role as advisors on emergent work force skills as well as identifying and promoting opportunities for autistics in the job market.

Project results will be shared in a fully transparent manner consistent with NSF guidelines. To further the propagation of what is learned in the development, implementation and evaluation of the project, outreach will include conferences, workshops, and consultancy. As a direct result of these outreach efforts, educators, service providers, industry professionals and the wider community will gain a direct understanding of the Spectrum Innovates Pathway Program model and the benefits it can have for individuals with autism spectrum disorder and the aeronautics industry (Wei, Yu, Shattuck, McCracken, & Blackorby, 2013).

## **GOAL, OBJECTIVES, DELIVERABLES & ACTIVITIES**

### **Goal**

The goal of the SIPP program is to prepare students to succeed in higher education and enter the workforce in advanced technician roles.

**Table of Objectives and Activities**

<b>#</b>	<b>Objective</b>	<b>Activities</b>
<b>1</b>	<b>Provide a strength based immersive, integrated, interdisciplinary curriculum responsive to the autistic learner and based upon industry standards for competency based certification.</b>	<b>1.1. Create a Scaffolding</b> 1.1.1. academic 1.1.2. social emotional infusion 1.1.3. life skills <b>1.2. Create Innovation Hub</b> 1.2.1. industry based projects 1.2.2. simulations <b>1.3. Design 12 month curriculum</b> 1.3.1. six week orientation 1.3.2. two semesters 1.3.3. six week residency <b>1.4. Student Evaluations (See activities objective 3)</b>
<b>2</b>	<b>Revision or creation of 3 courses totaling 12 credits incorporating SIPP pedagogy</b>	<b>2.1 New Aeronautics Canvas course (6 credits)</b> <b>2.2 Revised Pre-Calculus course (3 credits)</b> <b>2.3 Revised English course (3 credits)</b>
<b>3</b>	<b>Design student assessment and evaluation system</b>	<b>3.1. Benchmarks</b> <b>3.2. Badges</b> <b>3.3. Certificate</b> <b>3.4. Feedback loop</b>
<b>4</b>	<b>To create a comprehensive plan for admission and exmission for students</b>	<b>1.1. Admissions</b> 1.1.1. development of materials for prospective students 1.1.2. placement officers 1.1.3. events 1.1.4. assess applicants and create cohort <b>1.2. Exmissions</b> 1.2.1. design exit survey

		<p><b>1.2.2. cultivate relationships with industry and other educational institutions</b></p> <p><b>1.2.3. longitudinal tracking of alums</b></p>
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**Program Overview**

The Spectrum Innovates Pathway Program (SIPP) is a bridge year for autistic students who have completed their high school requirements. Working in the Innovation Hub (IH) immersed in the experiential learning process, students acclimate to the collegiate and work environment and develop critical life and practical skills facilitating the unlocking of their fullest potential (Scott et al., 2019). Projects designed to model real world challenges reinforce existing knowledge and skills while fostering their further development.

This program runs for 12 months with a 6-week orientation, two academic semesters and culminates with a 6-week residency experience. Semesters consist of fifteen 30-hour weeks composed of 6 hours of blended classroom instruction and 24 hours in the Innovation Hub. Students will be in a cohort for the duration of the program, creating a supportive learning environment.

**The Innovation Hub**

The Innovation Hub resides at the center of the Spectrum Innovates Pathway Program. The IH informs and drives the program and methodology. Physically comprised of Maker Space, Composite Prototyping Center, Robotics Lab, Flight Simulators and Air Traffic Control Simulators, the IH provides the space and tools for immersive and experiential learning that reinforce and build upon knowledge acquired and generates new knowledge. In addition to its physical assets the IH is imbued with a professional, collaborative, safe, affirming atmosphere that **improves self-regulation, workplace behaviors and increases productivity** (Scott et al., 2019).

**Soft Skills**

Deficits in **executive functioning and social communication**, referred to as “soft skills,” are identified as major challenges to employment success for adults with ASD (Baker-Ericzen et al., 2017). SIPP addresses soft skills both directly and indirectly. The skills of problem solving, goal oriented thinking, asking for help and self-advocacy are infused, explicitly practiced and applied as part of the work in the Innovation Hub and classroom. Skills such as self-regulation, context awareness, perspective taking, collaboration and communication emerge and are utilized as a natural consequence of engaging in work in the IH environment (Martin, Vidiksis, & Koenig, 2019) (Waters, 2016). Preparation and delivery of oral presentations are incorporated throughout the program.

**Orientation**

During the first 6 weeks of the program, workshops and maker activities set the stage for collaboration and communication. Students become familiar with faculty, other students, facilities and safety rules and regulations. Workshops give students the chance to explore the Maker environment and to engage in a wide range of projects and design challenges. Students enhance their social and technical problem-solving skills through interaction and collaboration with peers, mentors and facilitators and experience the camaraderie and creativity inherent in Making. With mentoring and support students work within unifying, theme-driven parameters

based on their specific area of interest (SAI) and participate in daily reflection and sharing about their decision making, goal setting and problem solving processes. In this time faculty identify students' strengths and deficits in practical skills necessary to perform future project tasks and remediate as needed.

### **Academics**

*SIPP's* project-based, experiential learning model drives the three academic courses required by the program. Pre-Calculus is a pre-requisite for advancement into all areas of technical certification as well as satisfying a core curriculum requirement in higher education degree programs. *SIPP* staff co-teach this revised course as a hybrid online/in class course. Time working hands-on in the Innovation Hub on real world challenges manifests concepts of mathematics as intrinsic to aeronautics and engineering.

In the first semester of a new yearlong Canvas course students sample the wide range of opportunities for study and employment in the aeronautics field. Semester two provides deeper exploration of topics and offers the opportunity to learn about ones particular area of interest. The course is led by faculty field experts and complemented by the contributions of industry guest speakers and Vaughn student mentors. This interdisciplinary course integrates competency acquisition across the *SIPP* curriculum. Learning experiences occur in and outside of the Innovation Hub and include fieldwork, simulations, experimentation, design challenges and research.

English Composition (revised) is fundamental to effective communication in business and frequently a challenge for autistics. The use of written communication in the acquisition of a job, to share information, ideas and questions is critical to career advancement. While development of communication skills is interwoven throughout the program, the composition course is an opportunity to focus on the elements of written communication. English Composition assignments are designed to complement the second semester of the Canvas course as well as provide practice in written communication related to Innovation Hub projects.

### **Residency and Final Project**

Upon conclusion of the second academic semester students enter the 6-week residency program, living on campus at Vaughn. Social-emotional and life skills developed throughout the program are applied while students engage in independent living, many for the first time. This supervised living experience gives students the opportunity to live away from home in preparation for college and adult independence. While in residence at Vaughn they will draw on the entirety of knowledge and skills they have internalized throughout the year to conceptualize, design, and execute an industry relevant project galvanized by their SAIs.

### **Student Assessment**

Spectrum Innovates Pathway Program is a credit bearing **certificate program**. Student achievement is evaluated by performance assessments that determine competency. Outcomes are assessed throughout the program's implementation using **novel and existing instruments for formative, ongoing and summative purposes**. These instruments combined with observational assessments denote the achievement of benchmarks and provide real time feedback. Student engagement in this feedback loop ensures understanding and retention of the concepts and skills needed to achieve the desired competency. A virtual badge is awarded for each competency that is achieved. **Requirements for competencies and their representative badges (Yowell, 2018) are developed in concert with industry's emerging needs and Vaughn's competency requirements for degree programs**. Students must acquire the requisite badges

that represent an array of essential and highly valued skills and concepts in order to receive a credit-bearing certificate upon completion of the program.

### **Admissions & Exmissions**

The program is for those on the autism spectrum who have completed their high school requirements and share a common passion for aeronautics. In order to create a cohort of 20 individuals who have the skill sets complementary to SIPP requires the use of multiple methods of assessment. These will include an array of standardized measures to assess executive function and social communications skills as well as novel methods of assessment that will be created to ascertain applicants' interest alignment with SIPP.

Outreach focus will be to NYC, Westchester, Long Island, Eastern NJ public and private schools, autism advocacy groups, service providers, placement consultants and clinical centers. We will do presentations for interested groups subject to availability. Open house recruiting events will be held at Vaughn between September and January each year.

### **Exmissions**

Positive student outcomes will be defined as the pursuit of higher education and / or securing employment in advanced technician roles. Students receive 12 transferable college credits and are eligible for fast-track admission to Vaughn upon completion of SIPP's competency requirements and award of certificate. Students who enter Vaughn via SIPP receive the same extensive career and job placement benefits extended to all Vaughn students as well as a dedicated placement program for those on spectrum.

In their role as a partner in this project Vaughn will facilitate introductions and outreach to industry partners including those who serve on their Industry Advisory Council. The cultivation of relationships with industry leaders will advance the prospects for autistics in pursuit of aeronautics careers.

Establishing connections with other educational institutions serves a dual purpose, it allows us to guide our students and advocate for their acceptance into other institutions and provides collegial relationships to further mutual goals.

## **EVALUATION PLAN**

### **External Evaluator**

External evaluation of the project will be handled by the Office of Assessment and Analytics at Southern Connecticut State University. Evaluation will be led by Scott Luther James Jackson, PhD., Director, Office of Assessment and Analytics, Southern Connecticut State University, Clinical Instructor, Child Study Center, Yale School of Medicine. Dr. Jackson has conducted research and authored multiple scholarly articles on autism funded by NIH and others, including the following recent publications that are highly relevant to the aims of the proposed project:

*Self-reported Academic, Social, and Mental Health Experiences of Post-Secondary Students with Autism Spectrum Disorder* (Jackson, Hart, Brown, & Volkmar, 2018) *Transition Issues and Challenges for Youth with Autism Spectrum Disorders* (Volkmar et al., 2017).

His expertise as an evaluator and body of work in the field of autism as a researcher and clinician uniquely qualify him to evaluate the project. The evaluation is being conducted under the auspices of

SCSU office of Sponsored Activities and Research, which will also be handling the IRB for the project.

The continual evaluation of the students and the curriculum will be used to inform decisions on how to improve and revise SIPP processes and will drive the ongoing success of the program.

### **Evaluation Timeline**

During the curriculum development period in the first year of the grant the External Evaluator will meet with the PIs, curriculum development team and members of Vaughn faculty four times to review the process and content of the work in progress. (May, Aug, Dec 2020, Apr 2021)

Throughout the remaining lifecycle of the grant, project PIs will conduct internal review of all data collected by their collectors, faculty and staff at the intervals outlined in the *Evaluation Questions* section below for quality assurance. The data, all underlying supporting documents and personnel will be available to the External Evaluator. The External Evaluator will review/analyze the data collected and meet with the PI and other staff. (Sept, Dec 2021; Mar, Jul, Oct 2022; January, May 2023) and prepare required NSF reports annually.

### **Evaluation Questions**

Our evaluation questions further existing research in the areas of intervention, education, and preparation for autistics entering the workforce for the purpose of improving outcomes and increasing the efficacy of the program.

#### **1) Does the program methodology result in the acquisition of the required competencies by students?**

Progress toward achieving the competencies required to receive a credit-bearing certificate is measured through formative, ongoing and summative assessments. Students demonstrate growth of concepts and skills that is measured against both program and personal benchmarks. Both existing and novel instruments developed as part of the curriculum design are employed to determine when a competency is achieved. All student evaluation in this program is derived from and is consistent with competency based program methodology. Details on the efficacy of program methodology is informed by data analysis related to the acquisition of required competencies. All students are expected to complete competency requirements within the 12 months. As the time of badge achievement is variable for each student data collection is continuous throughout the duration of the students participation in the program.

#### **2) What is the impact of integrating Social Emotional Learning and life skill components into an advanced technology educational program for autistic students?**

Two components will be examined:

- a) Frequency of engagement in the cognitive and social communication functions of goal-oriented thinking, problem solving, collaborating, self-advocacy and asking for help will be collected through the running record checklist observation. Recorded several times a quarter and tabulated quarterly. Standardized instruments such as the **BRIEF, SRS-2 and Scales of Independent Behavior** will also be utilized to capture these attributes.

- b) Acclimation to the SIPP learning environment in multiple setting/activities (McDonough & Revell, 2010) will be measured over time through a 1 to 5 scale utilizing self-reporting (Mueller, Gaus, & Rech, 2014) and faculty observation. Recorded at the beginning and end of the 6-week orientation, mid-first semester and end, mid-second semester and end. Reviewed mid-August, end of first semester and end of second semester.

### **3) What are the employment and educational outcomes for students who complete the program?**

Outcomes are measured longitudinally by students' success in pursuing higher education and / or securing and sustaining competitive employment. Education and employment participation data will be collected from individuals when they exit the program, and at six months, one-year and three-years after exiting the program. The collected data will include:

- **Employment** - employer, position, level of employment, time in position, job satisfaction, periods of involuntary unemployment.
- **Education** - program (certificate, degree or other continuing education), area of study, estimated completion date and future study plans.
- Did the program contribute to the students continued education or employment and if so, how?

This data will be obtained through a combination of online surveys and interviews at the designated times and used to determine the level of program efficacy and assist in identifying any areas of the program to be modified.

### **4) How do SIPP student outcomes compare to those of control groups?**

- a) Changes in SIPP students' cognitive and social communication function will be compared to those of our waitlisted applicants. SIPP students and a control group comprised of SIPP waitlisted individuals will be administered standardized assessments during the admissions process. Subsequently, SIPP students will repeat the assessment at the end of the program. Those waitlisted will repeat the assessment in the same time frame as SIPP students.
- b) The performance of SIPP students who take the revised Pre-Calculus and English Composition that incorporate the Innovation Hub and strength-based approach will be compared to the performance of Vaughn neurotypical students in the unrevised Pre-Calculus and English Composition courses. Data on course topics as well as the final grades (converted from competency using Vaughn's established method) will be collected upon completion of Pre-Calculus (December 2021) and English Composition (May 2022).
- c) Educational/employment outcomes of SIPP students will be compared to reported national ASD statistics. Collection of SIPP alumni data is performed as part of Question 3.

### **DISSEMINATION PLAN**

It is nfpNEXUS' policy to share the results of all research and project endeavors. In addition to posting results and ongoing project activity on our website, we will openly disseminate results of our program utilizing our outlet network. Autism Speaks, who has been following our progress in bringing this program forward, will announce its availability through its communications network. Other outlets include STEMConnector, Autism Spectrum News, Education Update, The Child Study Center, Yale School of Medicine and Center for Autism and the Developing Brain at

NewYork-Presbyterian. To further the propagation of the projects results, outreach will include conferences, workshops, and consultancy. As a direct result of these outreach efforts, educators, service providers, industry professionals and the wider community will gain a direct understanding of the Spectrum Innovates Pathway Program model.

## **MANAGEMENT PLAN ROLES AND RESPONSIBILITIES**

Achievement of the project goal requires a team consisting of highly qualified educators with extensive experience in bringing all aspects of STEM curriculum design from concept through implementation, evaluation and revision. Over the past three years, PIs Bednarsh, Chafiiian and Waters produced and directed NEXUS' Spectrum Innovates Workshops where ASD participants conceived designed and produced STEM project. Co-PI Lavergne provides expertise in collegiate aeronautics, engineering and mathematics curricula and bridges integration of SIPP with Vaughn's curriculum.

**PI and Project Director Eleanore Bednarsh** is Director of Programs at nfpNEXUS. Among her long list of qualifications she has served as a charter school founding director (managing \$2.4 M annual budget), educational consultant, curriculum developer, administrator, project manager, teacher trainer and educator in the private and public school systems and created and managed strategic plans. In addition, Bednarsh served as a member of the New York State Accreditation Evaluation Team, New York State Association of Independent Schools and worked on project management of publications and editorial services for non-profit organizations. Her breadth of experience makes her an ideal choice as PI and leader of the team. She will actively work on all aspects of the project goal and objectives. She will act as lead interface to NSF during the life of the project and be responsible for the execution of the project plan and reporting to NSF per the grant guidelines.

Bednarsh will utilize the Asana project management system to plan, assign tasks and track and review progress.

**Co-PI Hope Chafiiian** served 20+ years as Director of Technology and Curriculum at The Spence School, NYC. Her expertise and experience in physical computing, developing curriculum in emerging technologies, curriculum design and integration, and education combined with her leadership roles as a board member of the Logo Foundation and founding member for Robo-Expo NYC is highly applicable to the project's goal. Along with being a member of the curriculum development and academic course revision team, she will devise competency assessments, assist with the development of the admissions plan and provide the added support needed for the PI to manage the implementation of the project. **(Objectives 1, 2, 3 & 4)**

**Co-PI Paul LaVergne**, PhD is the Vice President of Academic Affairs at our partner institution Vaughn College of Aeronautics and Technology. He provides content expertise in aeronautics, mathematics and engineering components for SIPP. LaVergne serves as a curriculum developer on the project and is responsible for oversight of revision of two Vaughn courses and creation of new Canvas course. He will collaborate on aligning Vaughn's student evaluation system with SIPP's competency badges. **(Objectives 1, 2 & 3)** As a member of our partner institution's senior administrative team Paul is the faculty coordinator between Vaughn and SIPP.

**Co-PI Patrick Waters** is an educator who pioneered the use of STEM/Maker curriculum with autistic students at the Monarch School in Houston, Texas. He has spoken at national conferences and published on the role of STEM/Maker for Autistics (Waters, 2016) (Waters, 2014). He founded *STEAMworks*, a Houston, Texas makerspace designed for students with neurological differences. Waters' experience provides unique insight into the creation and development of the Innovation Hub at the core of the project. His expertise in developing innovative experiential curricula for those with ASD is invaluable to advancing the project. Additionally, as a member to a member of the curriculum development team Waters serves as a STEM advisor on competency assessment, revision of academic courses, and the admissions process. **(Objectives 1, 2, 3 & 4)**

Vaughn College's finance office will assure all financial expenditures are within the NSF guidelines. All curriculum changes will pass through the college curriculum process. NEXUS and Vaughn's Network Services Department has the capability to provide website and technical support. Southern Connecticut State University's office of Sponsored Activities and Research IRB committee will review the proposal if it is successful.

### PROJECT TIMELINE

May-20	Begin SIPP Curriculum Work
	Meet with External Evaluator
Aug-20	Meet with External Evaluator
Sep-20	Establish Admissions Team
	Develop Admissions Materials
Sep-Dec 20	SIPP Open House at Vaughn
Oct-20	Begin HS & Community Outreach
Nov-20	Admission Evaluation Tools Complete
Nov-Dec 20	Admission Meet & Greet with prospective students & families (on/off campus)
Dec-20	Meet with External Evaluator
	Begin Scheduling Individual Admission Evaluations
Jan-21	Begin Individual Admission Evaluations
	NSF Report Due 1/31
Feb-21	Completed Application Deadline 2/12
Mar-21	Individual Admission Evaluations End 3/12
	Admissions Committee Meets
Apr-21	SIPP Curriculum Work Complete (Objective 1, 2 & 3 Met)
	Meet with External Evaluator
	Admissions Committee Meets
	Notification of Acceptance Sent 4/12
May-21	Enrollment Contract & Tuition Due 5/1
Jul-21	SIPP Orientation Begins
Aug-21	1 <sup>st</sup> Academic Semester – Pre-Calculus, Canvas Part I

	Student Orientation Evaluations Due
Sep-21	Meet with External Evaluator
Oct-21	Begin HS & Community Outreach
Sep-Dec 21	SIPP Open House at Vaughn
Nov-Dec 21	Admission Meet & Greet with prospective students & families (on/off campus)
Dec-21	Meet with External Evaluator
	Begin Scheduling Individual Admission Evaluations
	First Academic Semester Ends
	First Semester Student Evaluations Due
	Begin Exmissions Counseling - Ongoing
Jan-22	2 <sup>nd</sup> Academic Semester – English Comp, Canvas Part II
	NSF Report Due 1/31
Feb-22	Completed Application Deadline 2/11
Mar-22	Individual Admission Evaluations End 3/11
	Admissions Committee Meets
	Meet with External Evaluator
Apr-22	Admissions Committee Meets
	Notification of Acceptance Sent 4/11
	Enrollment Contract & Tuition Due 4/30
May-22	Second Academic Semester Ends
	Second Semester Student Evaluations Due
May-Jun-22	Final Project & Residency Experience 6-Weeks
Jun-22	Exit Survey (Objective 4 Met)
Jul-22	SIPP Orientation Begins 7/11 – 8/19
	Final Student Evaluations Due
	Meet with External Evaluator
Aug-22	1 <sup>st</sup> Academic Semester – Pre-Calculus, Canvas Part I
Oct-22	Meet with External Evaluator
	Begin HS & Community Outreach
Sep-Dec 22	SIPP Open House at Vaughn
Nov-Dec 22	Admission Meet & Greet with prospective students & families (on/off campus)
Dec-22	Begin Scheduling Individual Admission Evaluations
	First Academic Semester Ends
	First Semester Student Evaluations Due

Jan-23	2 <sup>nd</sup> Academic Semester – English Comp, Canvas Part II
	Meet with External Evaluator
	NSF Report Due 1/31
Feb-23	Completed Application Deadline TBD
Mar-23	Individual Admission Evaluations End TBD
	Admissions Committee Meets
Apr-23	Admissions Committee Meets
	Notification of Acceptance Sent TBD
	Enrollment Contract & Tuition Due TBD
May-23	Second Academic Semester Ends
	Second Semester Student Evaluations Due
	Meet with External Evaluator
May-Jun-23	Final Project & Residency Experience 6-Weeks
Jun-23	Exit Survey
	Goal Met

## **SUSTAINABILITY**

Due to this project requiring complete development of multiple original components and revision of two existing courses, more than 75% of the requested project's costs reflect development and initial implementation and occur within the first three years of the grant and are non-recurring. Financial sustainability after the first three years of the grant is limited to discrete line items for increased staffing and direct costs that are solely attributable to the addition of this program to NEXUS' and Vaughn's normal continuing operations. It is anticipated that at the end of the grant cycle, tuition combined with results from fundraising efforts will fully fund the program's continuation.

Delivery of SIPP is fully supported at the highest level by the efforts of NEXUS and the president of Vaughn College, Dr. Sharon DeVivo. NEXUS and Vaughn College in partnership are committed to sustaining the efforts of this project through regular curriculum updates, increased course revisions, faculty development, community outreach, new grant funding and subsidized student tuition. Vaughn has committed to facility and resource availability and faculty and administrative release time during the lifetime of the program and will support class offerings with capped enrollments while these new courses are developed. Additionally, Vaughn has committed to the hiring of faculty and staff experienced in working with those with ASD to support their education at and after Vaughn and assist with future job placement.

NEXUS and Vaughn will actively seek grants from private and public sources to subsidize further development and support of the program as well as scholarships and sliding scale tuition for qualified students. Fundraising efforts will include establishment of an annual fund, industry and corporate sponsorship, major gifts, and employer-based arrangements.

To ensure sustainability and continued relevance of the program, Vaughn and NEXUS will engage with researchers and industry to keep curriculum content current and aligned with industry's emerging needs and best practices.



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Spectrum Innovates  
Spectrum Innovates Program  
Spectrum Innovates Pathway Program  
Spectrum Innovates Pathway Program at Vaughn College

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