

PHASE I: Letter of Intent

Created Thursday, February 05, 2015

Updated Monday, February 09, 2015

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Applicant groups and Existing Education Corporations interested in submitting an application to establish Regents-authorized charter schools are asked to complete this brief information sheet. The Department will use this information to plan and coordinate peer review panels with appropriate expertise to evaluate all application materials.

Please indicate whether an Applicant Group or an Existing Education Corporation is submitting this Round 1 Letter of Intent.

Applicant Group LOI to establish a single, brand new charter school

Proposed Charter School Name

(Please write out the formal and full name for the school you proposed, and include the words "charter" and "school" in the proposed name(s)).

School Name	Pythagoras Charter School of Science, Technology, Engineering, and Mathematics (PCS-STEM)
Grades Served (K-5, .6-8, 9-12, etc.) During Initial Term	9-12
Number of Students During Initial Term	300

Proposed or Current Board Chair and Public Contact information, including mailing address, phone number, and email address.

(The entire chart may not be visible on your screen. Use the "tab" key to move from column to column. The first column will remain static as you do so).

	First and Last Name	Best Phone Number (###-###-####)	Email Address
Proposed/Current Board Chair	John Tiliakos	[REDACTED]	[REDACTED]
Public/Media Contact Person	John Tiliakos	917-502-4829	vur501@aol.com

If available, please provide the URL to the website established for the proposed school or existing education corporation.

pythagorascharterstemschools.weebly.com

Proposed Management and/or Partner Organization(s), such as a charter or educational management company or a university, academic program partner, or whole school change partner.

(See pages 45-46 of the application kit for definitions and guidance as only "substantial" partnerships should be listed here).

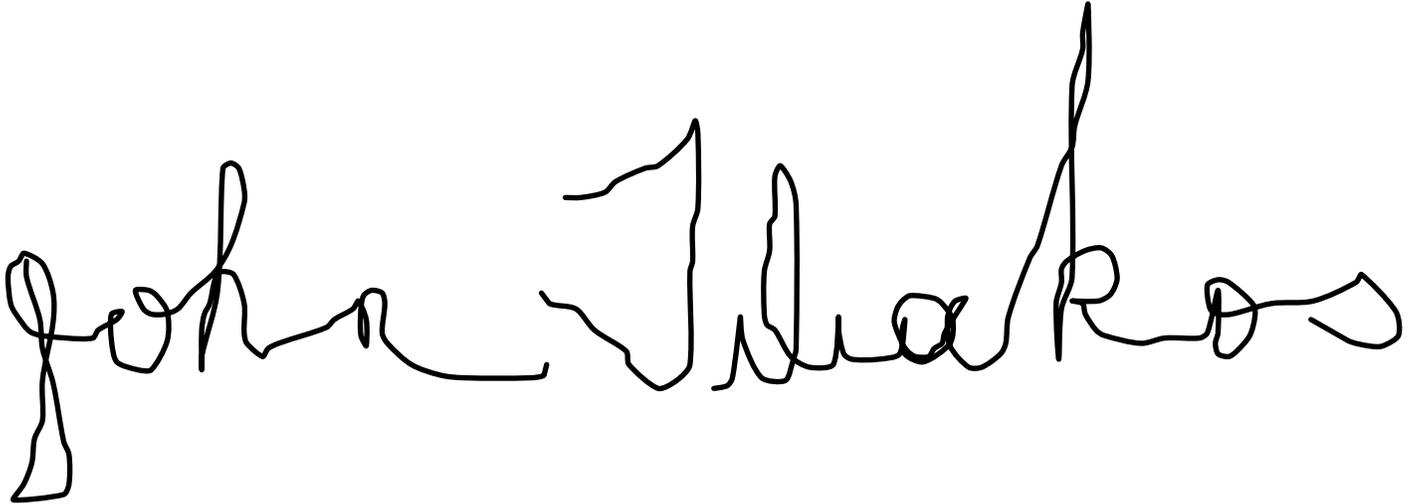
Proposed Management Company	NA
Partner Organization 1	NA

Lead Applicant(s) Signature and Date

Use your PC mouse or your mobile device stylus to sign your name below.

Lead or Co-Applicant listed in section c above.

(Internet Explorer may not support this feature. Open the portal using Google Chrome, Firefox, or Safari).

A handwritten signature in black ink on a white background. The signature is written in a cursive style and reads "John W. Markos". The letters are connected, with a prominent loop at the end of the word "Markos".

Date Signed (Lead or Co-Applicant)

2015/02/05

Thank you for completing this survey so that the Department may plan its review panel accordingly.

I. Applicant Group Information

a-b. Members of the Applicant Group and Initial Board of Trustees: Table1-attachment 5A

c. Public Contact: Name: John Tiliakos • Tel: 917-502-4829 • Email: Vur501@aol.com

d. Application History: 2014 Round 2 - Letter of Intent not accepted

II. Proposed Charter School Information

a. Proposed School Name: Pythagoras Charter School of Science, Technology, Engineering, and Mathematics

b. Proposed School Location: Community School District (CSD) #22, 1724 Avenue P, Brooklyn, NY 11229 (no co-location)

c. Planned Grades and Enrollment in Each of the Years of the Proposed Charter Term:

PCS-STEM will open with 75 ninth grade students in August 2016. In each successive year, 75 ninth graders will be added. The enrollment plan illustrated in the following table provides information on the grades that will be served in each year of the charter term, the number of students to be served in each grade, and the total number of enrolled students for each year of the charter term. A maximum student-faculty ratio of 25:1 and a total enrollment of 300 students at full capacity will ensure that each student receives adequate individualized attention. This will facilitate determination of each student's learning needs, enhancing implementation of necessary tools and programs to help them succeed.

Projected Enrollment Table Over the Charter Term						
Grade	Ages	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
9	13-16	75	75	75	75	75
10	14-17	0	75	75	75	75
11	15-18	0	0	75	75	75
12	16-19	0	0	0	75	75
Totals		75	150	225	300	300

d. Proposed Management and/or Partner Organization(s): N/A

e. Proposed School Mission: The proposed mission of the *Pythagoras Charter School of Science, Technology, Engineering, and Mathematics (PCS-STEM)* is to promote a superior educational experience for students of grades 9-12 by stimulating creativity and innovative thinking through a concentration in Science, Technology, Engineering, and Mathematics (STEM). Students will acquire knowledge and skills in problem solving and teamwork, while exploring STEM careers and developing an appreciation of STEM-related contributions to the development of Western Civilization and human history. PCS-STEM will promote an educational system that closes the achievement gap between learners, fosters academic success, prepares each student for acceptance into institutions of higher learning, and places the next generation in an advantageous position to respond to the growing demand for STEM-related careers.

f. School Overview: Based on Education Law § 2850 (2), the founding group of PCS-STEM believes that all students can attain their maximum capability given the appropriate opportunity. The faculty and staff of PCS-STEM, in collaboration with parents, will provide this opportunity by creating an atmosphere conducive to learning where each student will learn how to maximize their potential. Our diverse student population will realize their full potential through a curriculum addressing their individual learning styles. Upon graduation from PCS-STEM, all students will be equipped with a superior math and science background, and will have developed essential academic and social skills through our character education program, as well as the ambition necessary to pursue a higher education at the university level. Pythagoras' instructional

philosophy and practices constitute a paradigm shift in secondary school education from teacher-centered to student-centered. PCS-STEM will combine nationally accepted instructional methodologies that have been proven successful, including problem-based learning, direct instruction, and collaborative learning to close the achievement gap by increasing learning opportunities for all students, with special emphasis on those who are at-risk of academic failure. By offering any needed intervention services throughout a longer school year (190 days) with extended school days (7:50am-4:30pm: ten 45-minute periods and a 30-minute lunch period), small class sizes (maximum 25), after school programs, and extra-curricular programs, our students will meet and exceed all NYS standards. By utilizing diverse instructional approaches to teach advanced concepts and cognitive skills in science and mathematics, as well as other disciplines, PCS-STEM will positively engage each individual in their dominant learning style and foster collaboration among students. The school believes that all students are to be treated with dignity and respect in accordance with the NYSED Dignity Act: they have the right to learn, grow, and achieve their full potential without limitations in a safe nurturing environment. PCS-STEM also believes that collaboration among all stakeholders is vital in serving the individual needs of all students.

Students will be dismissed 1½ hours earlier on Fridays to allow the staff to have regular meetings and professional development opportunities to review and adjust instructional and/or operational practices using Pearson’s data-driven Student Information System. This will allow teachers to engage in reflective practice, individual planning, and collaboration with their colleagues within and across grade levels. In addition, Pythagoras will hold a mandatory three-week Summer Teacher Academy every August, where expanded professional development will be provided so that teachers are familiar with the latest requirements and new programs and methodologies that lead to individual student success. PCS-STEM knows that a highly qualified staff is directly related to student success and is accountable for meeting measurable student achievement goals.

A comprehensive professional development plan involving all staff members will be an important element of PCS-STEM. The combination of collaboration, professional growth, professionalism, support, and participation in a STEM school that will successfully lead all students to higher levels of learning will have a positive impact on teachers’ job satisfaction and overall staff retention. Greater teacher satisfaction, increased teacher skills, more teacher engagement with students, and lower teacher attrition will contribute to a better, more effective learning environment for our students.

g. Target Population and the Community That the School Intends to Serve:

High School <i>*requires screening for special programs</i>	School Perfor- mance Grade	Avg. Class Size	% 4 Yr. Grad Rate	% College Ready	% Attended College	% SWD	% ELL
Midwood*	B	32.3	84.9	78.9	81.7	7.3	3.8
James Madison	C	30.0	74.7	60.5	56.7	15.1	12.3
Sheepshead Bay	D	28.3	44.3	38.7	43.1	17.0	24.5
Leon M. Goldstein*	A	31.4	96.4	92.4	88.5	11.4	1.1
Brooklyn College Academy*	B	28.2	96.9	89.3	88.7	3.8	0.2

Pythagoras will target and enroll students in Community School District (CSD) #22 students with learning disabilities (SWDs), English Language Learners (ELLs), students eligible for free and reduced-price lunch (FRPL), and the economically disadvantaged. According to the 2013-2014 NYC DOE Demographics Snapshot¹ of Community School District (CSD) #22, 13.8 % of students were designated as SWD, 9.9% of students were classified as ELL, and 70% were

eligible for FRPL. We will meet or exceed enrollment and retention targets for these students established by NYSED under New York Education Law § 2852 (9)(b)(i). ***CSD #22 students are exiting 8th grade with the following scores²***: ELA (Level 1: 26%, Level 2: 41%, Level 3: 24%, and Level 4: 9%) and Math (Level 1: 32%, Level 2: 38%, Level 3: 17%, and Level 4: 13%).

According to the 2012-13 NYCDOE High School Progress Report³ data in the above table, CSD 22 has only two schools that do not require screening for special programs and they are both low-performing schools: James Madison and Sheepshead Bay. Therefore, the proposed charter school is an excellent option for the parents and students, as Pythagoras' special STEM programs will be open to all students without screening or testing.

h. Replication or Network Information: N/A

III. Enrollment and Retention of Students with Disabilities, English Language Learners, and Students Who Are Eligible Applicants for the Free and Reduced-Price Lunch Program

Recruitment and Enrollment: By using lottery preferences, we plan to enroll special student populations in proportions that reflect their representation in CSD #22, and we will meet or exceed enrollment and retention requirements. Pythagoras will conduct a vigorous outreach program aimed at recruiting and enrolling a student body that is representative of all SWD, ELLs, FRPL students, learners at risk of academic failure, and economically disadvantaged students from the general population residing in the district. CSD #22 serves the southeastern Brooklyn neighborhoods of Sheepshead Bay, Madison, Midwood, Flatlands, Marine Park, Mill Basin, and parts of Flatbush. The ethnic makeup of the district's students is⁴: 30% White, 37% Black or African American, 15% Hispanic or Latino, and 18% Asian. The student population has 10% ELLs and 70% of the student population is eligible for the Title I and FRPL programs.

Recruitment

We held information sessions in the local community to elicit public comment and petition signatures in support for PCS-STEM. In regards to recruiting a student population representative of CSD 22, we led specific efforts to recruiting SWD, ELLs, and FRLP-eligible students:

SWD: To recruit Students With Disabilities (SWDs), we aimed our direct advertising and other recruitment efforts at a broad range of neighborhood and community programs that serve both special education and non-special education students. We met with Arlene Rosenstock and members of CSD 22 committee on special education to discuss the district's needs and provide materials. We provided a qualified special education teacher at information sessions to present the academic programs and resources that *PCS-STEM* will provide to meet those needs.

ELLs: To recruit English Language Learners (ELLs), we canvassed CSD 22 neighborhoods and distributed recruitment marketing materials in the community's pre-dominant languages. We also provided translators at information sessions and other events, and purchased local newspaper advertisements in multiple languages.

Students Eligible for the FRLP: To recruit FRLP-eligible students, we distributed marketing materials to public housing apartment complexes and Brooklyn food pantries, and conducted information sessions in community centers that offer support to low income families and to those who may be less informed of school options in an effort to recruit these students.

Retention

The founders of the Pythagoras Charter School believe that parents play an integral role in the education of their children, and will work to support and enhance meaningful parental involvement at Pythagoras. The Pythagoras Charter School envisions and expects an active role for parents in the life and governance of the school. To build strong relationships with students and parents, PCS-STEM will communicate with them as follows: (1) Newsletters containing updates on activities and upcoming events will be prepared and distributed; (2) Teachers will utilize a database on a regular basis to provide parents with grades, attendance reports, assignments, and other classroom communication; (3) Parents and students will have real-time access to the curriculum, curriculum maps, and student progress, enabling them to contact the

teacher and address any concerns practically as soon as they arise; (4) Parent surveys will be a tool used on an annual basis to gauge parent satisfaction with many aspects of student learning and school operations. Parent feedback will be sought following student exhibitions and other school events; (5) Counselors/social workers will work to build mentor groups and support groups in order to foster social and emotional support.

In order to retain students until graduation, PCS-STEM will offer an academically challenging STEM-centered, education by using proven, sensible, and flexible teaching strategies, differentiated approaches catered to individual learning styles, Direct Instruction, and Personalized (Individualized) Learning Plans. Small classroom size and innovative instructional methods lead to academic achievement, particularly for at-risk students, and close the achievement gap for all students. The extended school day and year afford the opportunity to provide remediation and tutoring. Research⁵ supports the effectiveness of project-based learning and STEM education. Authentic project-based, inquiry-based learning will enable students to see the connections between subjects, and the connections between what they are learning and the world around them.

We plan to incorporate instructional methodologies that will fulfill our mission to enable all students to achieve optimally, including students with IEP or 504 accommodations:

SWD: All students will have access to tutoring and remediation during the extended school day. For Students with Disabilities, the IEP Team will ensure that, as part of their IEP, they have access to the appropriate programs and support to help them meet graduation requirements in the least restrictive environment

ELLs: Students will initially self-identify when the NYSED Home Language Survey is completed. If a student's need is significant enough, the school will provide appropriate instruction. Literacy support in content areas for all ELLs covering linguistic complexity, content vocabulary, vocabulary usage, and language control will be provided. The Sheltered Instruction Observation Protocol (SIOP) Model⁶ is a research-based instructional model that will be implemented to address the academic needs of ELLs

Students Eligible for the FRLP: Pythagoras will participate in the Federal Free- and Reduced-Price breakfast, lunch, and snack programs and adhere to all applicable requirements. PCS-STEM will make sure all families are informed that the school participates in the FRLP program at the start of school year and will offer assistance in applying to this program.

Student Conduct and Discipline: PCS-STEM is committed to providing a bully-free, safe, caring, respectful, and effective learning environment for students, faculty, staff, parents, volunteers, and visitors. Our founding group requires that the expectations be clearly communicated and the overall school community undertake character education activities designed to foster appropriate conduct. Provide a Student and Family Handbook and the Staff Handbook to ensure all policies and expectations are clearly defined. Utilize PBISApps software to monitor and identify trends in student behaviors. PCS-STEM believes that, as partners, parents play a vital role in instilling and reinforcing skills necessary for appropriate conduct.

Data-Driven Decision-Making: PCS-STEM administrators and teachers will use appropriate technologies and ongoing analysis of a variety of diagnostic, formative, and summative assessments. This will allow for systematic and effective identification of the needs of individual students (especially at-risk students) and the establishment of appropriate instruction and intervention strategies.

School Board: At PCS-STEM, the school board will have an active role in setting the school's direction. The executive committee (President, Vice-President, Secretary, and Treasurer) will be most active in evaluating how the school is functioning to ensure that it continues to meet the policies and overall mission of the school.

IV. Public Outreach and Community Support

Public Outreach: PCS-STEM will target **SWD, ELLs, and FRPL-eligible students**. Our school's educational philosophy, curriculum, and chosen instructional strategies and methods are

designed to meet the needs of all students, including the aforementioned special student populations. Pythagoras recognizes that in order to have its demographics reflective of the surrounding CSDs, it will be incumbent upon the school to conduct extensive outreach and marketing efforts; particularly to families of the aforementioned student populations. The school will serve these special populations with an academic model that has the staffing, programs, and interventions in place to truly meet their needs, along with a school culture that welcomes these student populations and their families. PCS-STEM has designed such an academic environment and school culture, and it will resonate with these families and their children. Pythagoras has actively solicited input from leaders, parents, and individuals in the community with respect to the application to open the proposed school. PCS-STEM has used a variety of methods to encourage the involvement of local stakeholders and seek feedback for the proposed school.

Outreach included: Our website (<http://pythagorascharterstemschools.weebly.com>), surveys, petitions, and flyers; Notices were placed in local newspapers, libraries, faith-based organizations, community centers, and apartment complexes; Information sessions were held at after-school programs and youth centers; Canvassing neighborhoods in CSD 22 and close collaboration with the CEC and parent advocates to represent SWD, ELLs, and student eligible for FRPL. Pythagoras will ensure that its materials are understandable to those of diverse backgrounds and whose primary language is not English. All promotional materials will be translated into the predominant languages of the community. Outreach meetings: Kalli Koutsoutis, Vaughn College-Assistant Vice President, Strategic Planning and Assessment, Discussed curriculum; Dr. Ben Esner, NYU-Polytechnic Director, K-12 STEM Education Center, Discussed STEM curriculum; Dean Nada Anid, NYIT-Engineering & Computing Science, Letter of Support; Glynis O'Leary, Discussed program implementation with Project Lead the Way; Prof. Duks Koschitz, Pratt Institute, Discussed Design and Technology curriculum; Eric Hofmann, CUNY College Now Program; CEC 22 President Deborah Perkins, Provided building tour and discussed school plans; Toirey Smith, Pearson Education, Discussed educational resources; discussed plans with Deputy Brooklyn Borough President Ms. Diana Reyna, Letter of Support; held information sessions at the proposed school site; presented at CEC 22 Public Meeting and gained full support; Peter Williams, BMCC College Now Program; We will continue with our outreach efforts as we progress.

Community Support: PCS-STEM's outreach has led to positive feedback, support, and interest in the proposed school from stakeholders and community leaders: Kings Borough President Adams and NYS Senator Golden. We obtained over 300 signatures indicating that parents want their children to be provided with expanded choices; including prospective students showed interest at high school fairs. Pythagoras will be the only school in CSD 22 to offer: (1) more technology and engineering courses (including a STEM program) compared to other CSD 22 high schools. (2) additional high-level science and mathematics courses, as well as more opportunities to take college-level courses via collaboration with other colleges.⁷ (3) increased opportunities to participate in various STEM competitions (4) a consistent program that focuses on preparing students for academic and social success in college. Pythagoras will be a charter school that increases the number of low-income and minority students that are accepted into higher education and prepared to pursue careers in STEM.

¹ <http://schools.nyc.gov/Accountability/data/default.htm>

² <http://www.p12.nysed.gov/irs/ela-math/2014/201314-ELAandMath-UnmatchedStudents.pdf>

³ <http://schools.nyc.gov/Accountability/tools/report/default.htm>

⁴ <http://schools.nyc.gov/NR/rdonlyres/2E15D48F-21A5-47CE-984C-208C416EC259/0/DemographicSnapshot20078to201314Public.xls>

⁵ <http://docs.lib.purdue.edu/ijpbl/vol7/iss2/6/>

⁶ <http://www.cal.org/siop/>

⁷ <http://www2.ed.gov/about/offices/list/ocr/docs/crdc-college-and-career-readiness-snapshot.pdf>



John Tiliakos, Board Chair

Date: 02/05/15

NAME OF APPLICANT GROUP MEMBER	EMAIL ADDRESS	CURRENT EMPLOYMENT
John Tiliakos	[REDACTED]	Franklin Career Institute

Anastasios Koularmanis	[REDACTED]	Saint Demetrios School

Leonidas Eracleous	[REDACTED]	Zeaccounting

Adam Wittenstein	[REDACTED]	Saint Demetrios School

Stamatina Hatzimichalis		P.S 169 K

Christopher Tripoulas	[REDACTED]	Saint Demetrios School, Saint John's University
		LaGuardia Community College
		The National Herald

