

City Polytechnic High School of Engineering, Architecture and Technology
2017 - 2018 GUIDING PRINCIPLES, GOALS AND TARGETS (last updated 9.1.17)

Established Goals (mission-driven):

At the end of the school year, faculty and staff will have demonstrated significant progress towards:

1. Building capacity to work collaboratively as a professional learning community [in a 9-14 P-TECH School](#).
2. Demonstrating a personal commitment to the academic success and socio-emotional and cultural development of each student [without Grade 9 screening for academic preparation](#).
3. Developing strategies for improving academic [and technical skill](#) achievement for each student or a group of students throughout our [six-year CTE program](#).

At the end of the school year, students will have demonstrated significant progress towards:

4. Demonstrating [CPHS RESPECT core values and CTE professional skills](#).
5. Achieving their [individual academic, attendance, and behavior goals](#).

Essential Question:

How do we prepare City Poly scholars to think critically, write effectively and be mathematically proficient as entry-level civil engineers and architects in order to impact their lives and communities?

Theory of Action:

If students are appropriately engaged at their appropriate level of challenge (DOK) through tiered support (UDL and RTI), and a meaningful question to answer or problem to solve (PBL), then student attention, curiosity, interest, optimism and passion for higher learning and career will actualize.

Instructional Focus: PROJECT-BASED LEARNING AND LITERACY

Student Benchmarks and Targets:

Incoming Grade 9 n =	SY15	SY16	SY17
Avg. Attendance Rate (%)			
Credit Status - On Track			
Exam Status - On Track			
Graduation Status - CTE On Track			

Grade 10 n = 84	SY15	SY16	SY17
Avg. Attendance Rate (%)	92.09	91.38	
Credit Status - On Track		30%	
Exam Status - On Track		71%	
Graduation Status - CTE On Track		1%	

Grade 11 n = 69	SY15	SY16	SY17
Avg. Attendance Rate (%)	90.16	88.81	
Credit Status - On Track		32%	
Exam Status - On Track		74%	
Graduation Status - CTE On Track		45%	

Grade 12 n = 78	SY15	SY16	SY17
Avg. Attendance Rate (%)	92.46	90.39	
Credit Status - On Track		55%	
Exam Status - On Track		36%	
Graduation Status - CTE On Track		29%	

Grade 13 and 14 n = 127	SY15	SY16	SY17
Avg. Attendance Rate (%)	88.92	91.90	
Credit Status - On Track		54%	
Exam Status - On Track		20%	
Graduation Status - CTE On Track		15%	

Grade 14 n =	SY15	SY16	SY17
Avg. Attendance Rate (%)	n/a	n/a	n/a
Credit Status - On Track	n/a	n/a	n/a
Exam Status - On Track	n/a	n/a	n/a
Graduation Status - CTE On Track	n/a	n/a	n/a

Yearlong WBL Themes & Targets:

Grade 9: Career Awareness <i>PBL:</i> Systems, Identity <i>Lexile:</i> 900 and above <i>Writing Demand:</i> 3 pages + <i>Student Portfolio:</i> TBD
Grade 10: Career Awareness <i>PBL:</i> Community, Innovation <i>Lexile:</i> 1025 and above <i>Writing Demand:</i> 4 pages + <i>Student Portfolio:</i> TBD
Grade 11: Career Exploration <i>PBL:</i> The Future of NYS, Globalization <i>Lexile:</i> 1100 and above <i>Writing Demand:</i> 5 pages + <i>Student Portfolio:</i> TBD
Grade 12: Career Exploration <i>PBL:</i> Power, Purpose <i>Lexile:</i> 1200 and above <i>Writing Demand:</i> 6 pages + <i>Student Portfolio:</i> TBD
Grade 13: Career Preparation <i>PBL:</i> Opportunity, Overcoming <i>Lexile:</i> 1250 and above <i>Writing Demand:</i> 6 pages + <i>Student Portfolio:</i> TBD
Grade 14: Career Preparation <i>PBL:</i> Logic, Leadership <i>Lexile:</i> 1300 and above <i>Writing Demand:</i> 6 pages + <i>Student Portfolio:</i> TBD

2017 - 2018 Comprehensive Education Plan (CEP) Goals:

Rigorous Instruction*	By June 2018, we will effectively increase the level of student intellectual engagement in project-based learning across classes, as evidenced by a 82% increase in the average number of all students who are on track overall for graduation and college with a CTE endorsed diploma based on both credits and exams , from 27% to 60%.
Supportive Environment	By June 2018, students' sense of belonging and involvement in the Early College Scholarship Program will improve, as evidenced by a 71% increase of all high school seniors enrolled full-time at NYC College of Technology , from 35% to 60%.
Collaborative Teachers*	By June 2018, effective cross-discipline teacher collaboration will lead to increased course proficiency, as evidenced by a 74% increase in average course final marks 80 and above , from 23% to 40%.
Effective Leadership	By June 2018, school leaders will build teachers' capacity to design activities that present students with opportunities for higher-level thinking, as evidenced by a 20% increase in teacher's performance in component 1E (Designing Coherent Instruction), 3C (Engaging Students in Learning) and 3D (Using Assessment and Instruction) , from 25% to 45%.
Strong Family-Community Ties	By June 2018, we will effectively deepen our home-school partnership, as evidenced by a 140% increase in unique family participation at PTA meetings and other parent workshops/events , from 25% to 60%.

*Priority Areas

Maintain/ Expand/ Enhance:

- Academic Intervention Services & Enrichment
- Content-focused Coaching
- Early College Scholarship Program - application process, supports and transition
- Data-Driven Instruction & Guidance
- Interim Assessments
- New Teacher Mentoring
- Parent Engagement
- Periodic Assessments
- Post-secondary Planning
- Student Government Association
- Steering Committee
- Targeted support for SWDs and ELLs
- Target Support for Teachers of SWDs and ELLs
- Teacher Leadership
- Teacher Teams: Cabinet, PD Committee, Subject Team, Grade-Level Teams
- Work Based Learning

Culture Shift:

- 1:1 Technology
- Block Scheduling
- Common Rubrics and Assessments
- Good Academic Standing
- Interdisciplinary Library
- Lexile-Leveled Text Sets
- Personalized Attendance and Behavior Supports
- Peer Tutor Corps
- Professional Learning Communities
- Project Based Learning
- Regent Prep Intensive
- School Wide Grading Policy
- Student Portfolio (online)
- WBL Advisory & Skills Map
- Workplace Challenge

CTE Skills Category	Technical Skills	Professional Skills	Academic Skills
<p>ALL MAJORS AND CAREER PATHS</p> <p>DESIGNING AND DRAWING Example job titles: Designer, Junior CAD Architect, Intern Architect</p> <p>WRITING AND INTERPRETING PLANS Example job titles: Junior Estimator, Field Engineer, Intern Engineer</p>	<p>Complete understanding of AutoCAD e.g. layering templates, printing protocols, use of general drafting techniques, knowledge of programming codes, exporting to PDF</p> <p>Solid understanding of CAD standards e.g. creating libraries, comparing standards generally to other standards, applying layers across other applications</p> <p>Generate and interpret blueprints, scale and measurements, takeoffs</p> <p>Rendering software (Revit)</p> <p>Ability to draw in 2D and 3D site Survey e.g. plans, sections, elevations, rendered perspectives</p> <p>General understanding of specs for electrical, mechanical, and architectural equipment</p> <p>Converting hand sketches into computer drawings</p> <p>Producing working drawings from directions from engineers</p> <p>Interpreting drawings from Consultants</p> <p>Research and assist with materials and construction methods</p> <p>Perform/assist in review of shop drawings</p> <p>Know procedure for change orders</p> <p>Accompany senior members for site visits</p> <p>Regulatory standards and codes</p> <p>CPM schedules</p> <p>Materials and products knowledge</p> <p>Narrative specifications</p> <p>Quality control</p> <p>Risk management</p> <p>Growing repertoire, staying current</p> <p>Contracts, RFPS, permits</p>	<p>Competent use of AutoCAD software</p> <p>Ability to complete drafting assignments with little supervision</p> <p>Working knowledge of Adobe and Microsoft Office, especially PowerPoint</p> <p>Able to generate conceptual drawings</p> <p>Able to complete preliminary quantity takeoffs</p> <p>Ability to complete assignments independently</p> <p>Ensure consistency of work</p> <p>Attention to detail</p> <p>Understand impact of work on others, work in teams</p> <p>Participate in meetings</p> <p>Understand and satisfy client needs</p> <p>Work to achieve desired goals and milestones</p> <p>Negotiating</p> <p>Problem solving</p> <p>Time management</p> <p>Scheduling and meeting deadlines</p> <p>Knowing when to ask questions and “own the learning”</p> <p>Managing ambiguity</p> <p>Life-long learning</p> <p>Initiative and adaptability</p> <p>Understand impact of work on others</p> <p>Work in teams</p> <p>Ensure consistency of work</p> <p>Understand and satisfy client needs</p> <p>Work to achieve desired goals and milestones</p> <p>Ability to identify and resolve issues using</p>	<p>1 semester of general AutoCAD</p> <p>1 semester of Materials & Methods of Construction</p> <p>1 semester of Estimating Measurements</p> <p>Math: arithmetic, trigonometry, geometry</p> <p>Presentation skills</p> <p>Written and oral communication, listening</p> <p>1 semester of technical writing</p> <p>Outlining and organizing thoughts</p> <p>Research Skills – Library Skills</p> <p>2 semesters of general AutoCAD</p> <p>1 semester of Revit</p> <p>Graphic organizational skills e.g. adobe products: Photoshop, Pages, Illustrator</p> <p>Written and oral communication</p> <p>1 semester of a Building Systems course</p> <p>1 semester of Land Surveying</p> <p>1 semester in Construction codes</p> <p>2 Semesters of Construction Management</p> <p>1 semester of CPM</p> <p>Microsoft Project and PowerPoint</p> <p>Interpret data</p> <p>2 semesters in Materials & Methods of Construction</p> <p>Property and confidentiality</p> <p>Visual literacy</p> <p>1 semester of Quality Control (BT)</p> <p>Problem identification and framing</p> <p>1 semester of Risk Management (BT)</p> <p>Recognizing patterns and system in unfamiliar and new forms</p> <p>Logic</p>

<p>OVERSEEING PROJECTS Example job titles: Construction supervisor, project assistant, project manager, field engineer</p> <p>MONITORING HEALTH, SAFETY AND EQUIPMENT Example job titles: Technician, Health, safety, and environment technician, Field Safety Coordinator</p>	<p>Read and interpret construction drawings Understand basic contract documents Apply engineering principles Field testing for concrete Field surveying Understanding of basic tools, mechanically inclined Some hands-on experience with equipment use Awareness of city building & construction regulations and codes Protocols for safety Useful but not required: technical sketching, basic computer/technology skills (ability to operate/troubleshoot) Familiarity with foundational mechanical engineering concepts Field testing and soil testing Possible physical requirements to lift heavy objects</p>	<p>a log format Able to research codes (City, State & Federal) Able to review documents and shop drawings Ability to create CPM Schedule Ability to use Industry Standard Software Able to research and specify products Budgeting and understanding finances Writing in professional context Ability to review protects and determine risk potential Forward thinking Manners and socialization in business meetings Strategic work towards performance metrics Use of down time Ethics Record keeping and diary Ability to determine construction methods Ability to review construction methods and field operations, logistics Scheduling and planning Prepare work plans Work ethic Be able to make decisions Perform inspections at jobsite and work areas Maintain inventory sheets and logs Raising safety violations to supervisor Safety coordination at meetings Conduct safety orientation and trainings for employees</p>	<p>Office practices 1 semester of Construction Project Management course 1 semester of Construction Management 2 semesters of Materials & Methods of Construction 1 semester in Project Cost Controls Budgets/finance Microsoft Project Understanding of the principles of engineering and construction management Environmental compliance 1 semester of Site Safety OSHA 10 Certification Understanding safety regulations 1 semester of Steel Design 1 semester of Concrete Design ACI Certification – Level 1 1 semester of CPM 1 course Engineering economics (BS) OSHA certification Concrete Inspection certification</p>
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