Purdue University: Purdue Polytechnic High School
ABOUT PURDUE POLYTECHNIC HIGH SCHOOL

Across the country, high school graduates are entering college ill-prepared for the rigors of post-secondary education. The traditional classroom experience – centered around prescribed schedules and teacher lectures – leaves many students without the ability to navigate the collaborative, self-directed pace of post-secondary education. Many students also lack the necessary technical aptitudes, on-the-job experience, and life skills employers demand.

In an effort to shift high school outcomes in Indiana, Purdue Polytechnic High School (PPHS) opened its first location in downtown Indianapolis in 2017. PPHS is a free public charter high school that encourages learning outside the box – and the traditional classroom – through the lens of science, technology, engineering, and mathematics (STEM). Introducing one class per year beginning with Freshman, its first graduating class will be in 2021 (photo).

The mission of PPHS is to increase the number of underrepresented students that are qualified, and hopefully choose, to attend Purdue University. Despite being one of the largest and most diverse school districts in the state, Indianapolis Public Schools (IPS) has sent only 38 underrepresented minority students to Purdue University over the last 5 years and only 16% of college-bound IPS graduates choose a STEM major.

In 2019, PPHS opened its second campus in Indianapolis and is scheduled to open a third campus in South Bend in 2020 and a fourth in southeast Hamilton County. PPHS is a unique collaboration between Purdue University and industry and community partners to provide students with the tools and skills they need to excel not only in the classroom but also in high-demand, high-paying jobs, and education beyond high school. Students are inspired, engaged, immersed, and in charge of their learning. They leave high school with college credit and in-demand industry credentials to high-paying careers.

PPHS was designed from the ground up with this mission in mind. We realized that traditional education was not adequately preparing our students. We started from scratch, got rid of the master schedule, the bells, the textbooks, the rows of desks,
and the idea that all students learn the same content at the same time. PPHS students visit local industry partners and are tasked with solving the problems that face industry every day. For example, students answered the challenge “How can we use emerging technology to reshape an industry?” Students work for six weeks in small groups to come up with solutions, prototypes, and pitches to present their ideas to key stakeholders, with pitch winners presenting their ideas to the industry partner. This learning method – called the PPHS Design Process – is at the center of everything we do.

Our students learn core academic principles and skills needed in the 21st century economy through an immersive STEM experience. Our students graduate with a well-rounded education, possessing the critical thinking and problem-solving skills needed to succeed in college and the workforce. Last year, 52% of freshmen met College Board’s college-ready benchmark compared to 40% nationally. All subgroups outscored their national counterparts. Additionally, our sophomores took the ISTEP assessment in the spring of 2018 and their scores were at or above the state average in both Math and English.

At PPHS, just about everything is different. There are no bells, there is no master schedule, and there is no “right way” to learn. Students are encouraged to follow their passions, fail forward, and learn by doing. Students collaborate with fellow classmates, coaches, and industry mentors to successfully complete projects that are designed by our industry partners. PPHS delivers the courses and credits that relate to an Indiana Core 40, Academic, or Technical Honors diploma.

Our industry partners – from Eli Lilly and Company to Citizens Energy Group and more – serve as our guides. They partner with our teachers to design projects and curriculum that will prepare students for success. They also mentor and support our students, teaching them about career opportunities available in the Indianapolis market, opening their workplaces for student tours and internships, helping students complete their projects, and providing feedback on student work.

Learning happens best when students must apply their knowledge in a “real-world” context. Every student at PPHS participates in authentic project work from the very first week of their enrollment. The projects fall into two categories. First, industry challenges are designed to arc over the first two years of the students’ experience to give them an exposure to a broad set of industry contexts and a wide variety of careers and problem-solving techniques.
Second, students participate in passion projects, which are co-designed by school staff, students, or community businesses or organizations. These learning opportunities allow students to have more voice and choice in how they apply and use their knowledge. Students use their skills in creative and innovative ways to solve problems they are passionate about solving.

Every student has a personalized learning coach (the PPHS word for “teacher”) and is assigned to an advisory group of 15 to 17 students with whom they start and end each day. Students work with their coaches and fellow students to set goals, review progress, discuss current events, and plan their learning activities to build their own schedules for the week. Students have ownership of their learning schedule, seek mentoring and support when they need it, and learn how to manage their workload and schedules.

PPHS is an initiative under the university’s affordability and accessibility goals, and included in the University’s strategic plan. Under one University initiative, Polytechnic Institute professors are scheduled to train six PPHS teachers to facilitate teaching the college-level course Tech 120, enabling enrolled students to earn Purdue credit. Through another initiative, 11th-grade students meeting Purdue’s admission criteria will live on campus at least one summer week, all expenses paid, to facilitate the transition to college.

At PPHS, students are inspired, engaged, immersed, and in charge of their learning. They leave high school with college credit and in-demand industry credentials as well as preferred admission to the Purdue Polytechnic Institute at Purdue University. PPHS students are the next-generation change-makers and innovators that we know will leave a lasting impact in their community.
LINKS TO FURTHER INFORMATION

Purdue Polytechic High School Locations
• Englewood Campus
• North Campus
• South Bend Campus
• Hamilton SE Campus

Partnering Organizations:
• Purdue University
• Eli Lilly and Company
• Citizens Energy Group
ABOUT APLU

The Association of Public and Land-grant Universities (APLU) is North America’s oldest higher education association. APLU is a research, policy, and advocacy organization dedicated to strengthening and advancing the work of public universities in the U.S., Canada, and Mexico. The association's membership consists of public research universities, land-grant institutions, state university systems, and affiliated organizations.

APLU's mission is to: expand access and improve student success to deliver the innovative workforce of tomorrow; advance and promote research and discovery to improve society, foster economic growth, and address global challenges; and build healthy, prosperous, equitable, and vibrant communities locally and globally.

Based in Washington, DC, the association's work is furthered by an active and effective advocacy arm that works with Congress and the administration as well as the media to advance federal policies that strengthen public universities and benefit the students they serve.

ABOUT THE IEP UNIVERSITIES PROGRAM

APLU and its Commission on Economic and Community Engagement (CECE) established the Innovation and Economic Prosperity (IEP) Universities Program to help higher education institutions codify, elevate, and advance their campus enterprise supporting economic and community development.

The IEP designation program recognizes institutions that have demonstrated a meaningful, ongoing and substantial commitment to economic and community development, growth, and economic opportunity.

The IEP awards program recognize exemplary and innovative projects in university-based economic and community engagement:

- **Talent** and workforce development
- **Innovation**, entrepreneurship, and tech-based economic development
- **Place** development through public service, outreach, and community engagement

Learn more at: [www.APLU.org/IEP](http://www.APLU.org/IEP)