

# Prepare Students for Certifications and Credentials

Create more opportunity with rigorous courses that teach knowledge and skills for the careers of tomorrow. Courses from Project Lead The Way (PLTW) enable students to earn industry-recognized credentials (IRCs) and build a competitive edge.



## ✓ Ready for Any Future

Learning experiences build the technical depth students need to obtain credentials and open doors to college credit opportunities.

## ✓ Connected to Credential Objectives

Course material and hands-on labs and projects surface knowledge and skills that prepare students for IRCs as they move through lessons.

## ✓ Real-World, Applied Learning

Students use the industry-standard tools, methods, and mindsets employers demand.

## ✓ Scalable for Districts

Schools can implement districtwide CTE credential pathways, expanding access and consistency for students.



## What Are Industry-Recognized Credentials and Certifications?

An industry-recognized credential or certification (IRC) is a tangible asset that demonstrates an individual's content knowledge, technical skills, and job readiness. IRCs are offered by third-party providers within an industry or organization. While some exams offer credit or advanced standing in degree programs, others open the door for internships and employment opportunities.

**PLTW**

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# PLTW Computer Science (CS)

Students are immersed in industry-aligned computing practices through relevant and accessible learning experiences that explore areas such as app development, computational thinking, programming, data analysis, cybersecurity, and artificial intelligence (AI). In the PLTW CS program, students can:

- Build a security mindset through labs that align to threat identification, risk mitigation, architecture, and operations objectives.
- Prepare to pursue credentials and certifications after high school.
- Deepen programming credentials with the Java SE 8 certification.

IRC Connections in PLTW Computer Science			
Certifying Organization	Credential/Certification Name	Linked Courses	Alignment Level
CompTIA	AI Essentials	Principles of AI	Full
Google	AI Essentials	Principles of AI	Full
Knowledge Pillars	Python® Coding Apprentice (PCA)	Computer Science Principles	Full
CompTIA	Security+	Cybersecurity	Partial
Google	Google Cybersecurity Professional	Cybersecurity	Partial
ISACA	Cybersecurity Fundamentals	Cybersecurity	Partial
Knowledge Pillars	Python Coding Foundations	Computer Science Principles	Partial
Knowledge Pillars	Python Coding Specialist (PCS)	Computer Science Principles	Partial
Oracle	Certified Associate, Java® SE 8 Programmer	Computer Science A	Full
Oracle	Certified Foundations Associate, Java	Computer Science A	Full
Python Institute	Python Certified Associate Python Programmer (PCAP)	Computer Science Principles	Partial
Python Institute	Python Certified Entry-Level Python Programmer (PCEP)	Computer Science Principles	Partial

## Alignment Levels

**Partial:** Additional learning on topics not covered by PLTW will be necessary to fully prepare for the exam or certification.

**Full:** This course is designed to address all knowledge areas outlined by the IRC, providing coverage of required topics.

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# PLTW Engineering (ENG)

Students engage with concepts and skills through hands-on learning that mirrors real-world engineering work and provides experience with tools, technologies, and design processes used by professionals. In the PLTW ENG program, students can:

- Connect classroom work to credential bodies of knowledge.
- Gain workforce-ready experience with industry-standard equipment and processes.
- Show evidence of employability and demonstrate transferable skills that industries require.

IRC Connections in PLTW Engineering			
Certifying Organization	Credential/Certification Name	Linked Courses	Alignment Level
Autodesk	Autodesk Certified User	<ul style="list-style-type: none"><li>• Introduction to Engineering Design</li></ul>	Full
NOCTI	Architectural Drafting	<ul style="list-style-type: none"><li>• Civil Engineering and Architecture</li></ul>	Full
NOCTI	CAD	<ul style="list-style-type: none"><li>• Introduction to Engineering Design</li></ul>	Full
NOCTI	CAD Foundations	<ul style="list-style-type: none"><li>• Introduction to Engineering Design</li></ul>	Full
NOCTI	Engineering Technology Foundations	<ul style="list-style-type: none"><li>• Principles of Engineering</li></ul>	Full
Robotics Education & Competition Foundation (RECF)	Pre-Engineering	<ul style="list-style-type: none"><li>• Principles of Engineering</li><li>• Computer Integrated Manufacturing</li><li>• Digital Electronics</li><li>• Civil Engineering and Architecture</li><li>• Aerospace Engineering</li><li>• Computer Science Principles</li></ul>	Full
Robotics Education & Competition Foundation (RECF)	Robotics	<ul style="list-style-type: none"><li>• Principles of Engineering</li><li>• Computer Integrated Manufacturing</li><li>• Digital Electronics</li><li>• Civil Engineering and Architecture</li><li>• Aerospace Engineering</li><li>• Computer Science Principles</li></ul>	Full
The Council for Six Sigma Certification	Lean Six Sigma White Belt	<ul style="list-style-type: none"><li>• Advanced Manufacturing</li></ul>	Full
The Council for Six Sigma Certification	Lean Six Sigma Yellow Belt	<ul style="list-style-type: none"><li>• Advanced Manufacturing</li></ul>	Partial

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# PLTW Biomedical Science (BMS)

Students explore human health, disease, and treatment through hands-on lab work, ethical decision-making, and clinical case studies, building confidence and clarity on careers in more than 30 medical fields. In the PLTW BMS program, students can:

- Learn safety, documentation, and analysis skills tied to credentials in both clinical and lab-style environments.
- Build confidence, boost employability, and stand out for college admissions and scholarships.
- Translate classroom investigations into recognized indicators of college and career readiness in health science, biotechnology, and entry-level lab roles.

IRC Connections in PLTW Biomedical Science			
Certifying Organization	Credential/Certification Name	Linked Courses	Alignment Level
<b>Bioscience Core Skills Institute (BCSI)</b>	Stackable Microcredentials <ul style="list-style-type: none"><li>• Safety: Hazard Assessment</li><li>• Documentation and SOP</li><li>• Numeracy</li><li>• Aseptic Technique: Lab Bench Level</li><li>• Small Volume Metrology</li><li>• Light Microscopy</li></ul>	<ul style="list-style-type: none"><li>• Medical Interventions</li><li>• Biomedical Innovation</li></ul>	Full
<b>National Consortium for Health Science Education (NCHSE)</b>	National Health Science Certificate (NHSC) Stackable Pathway Certificates <ul style="list-style-type: none"><li>• Human Structure, Function, and Disease (A)</li><li>• Human Structure, Function, and Disease (B)</li></ul>	<ul style="list-style-type: none"><li>• Human Body Systems</li></ul>	Full
<b>NOCTI</b>	Biotechnology Credential	<ul style="list-style-type: none"><li>• Medical Interventions</li></ul>	Full
<b>American College of Surgeons</b>	STOP THE BLEED®	<ul style="list-style-type: none"><li>• Principles of Biomedical Science</li></ul>	Partial

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IRC Connections in PLTW Biomedical Science			
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American Heart Association	Heartsaver® Courses <ul style="list-style-type: none"><li>• CPR</li><li>• First Aid</li><li>• AED</li><li>• Bloodborne Pathogens</li></ul>	<ul style="list-style-type: none"><li>• Principles of Biomedical Science</li><li>• Human Body Systems</li></ul>	Partial
American Red Cross	<ul style="list-style-type: none"><li>• CPR</li><li>• First Aid</li><li>• AED</li><li>• Bloodborne Pathogens</li><li>• FAST (First Aid for Severe Trauma™)</li></ul>	<ul style="list-style-type: none"><li>• Principles of Biomedical Science</li><li>• Human Body Systems</li></ul>	Partial
Biability	Biotechnology Aptitude and Competency Exam (BACE)	<ul style="list-style-type: none"><li>• Medical Interventions</li><li>• Biomedical Innovation</li></ul>	Partial
NOLS Wilderness Medicine	Wilderness First Aid	<ul style="list-style-type: none"><li>• Principles of Biomedical Science</li></ul>	Partial

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