

BE PREPARED



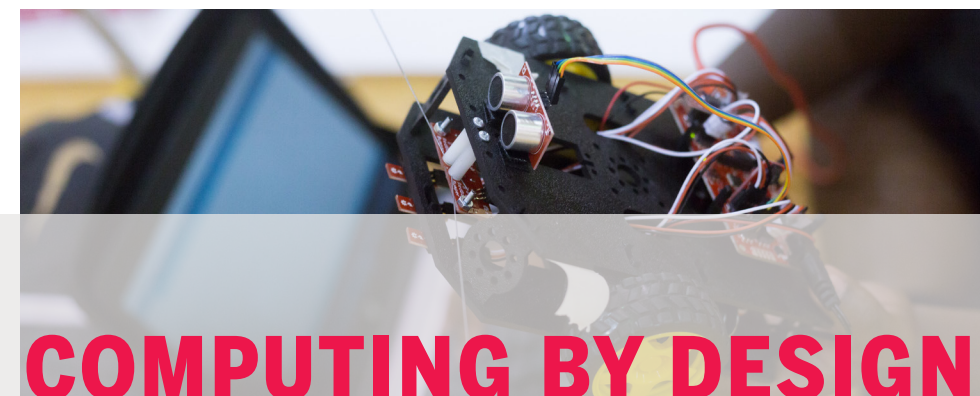
FOR 2021

iDEW

The Informatics Diversity-Enhanced Workforce (iDEW) program is a partnership managed by the Indiana University School of Informatics and Computing at IUPUI. The iDEW program is addressing the talent and diversity gap in technology through an innovative college and career program focused on high school students. The iDEW program's goal is to broaden student participation in computing, especially among minority students, female students, and students from low-income families.

iDEW

INFORMATICS DIVERSITY- ENHANCED WORKFORCE



COMPUTING BY DESIGN

Project-based CS Curriculum for Grades 9–12

I chose to work with the iDEW program staff to enhance the resources available to my students. They have learned how to use technology to solve real world problems, and I have enjoyed the support I have received as I introduce my students to problem solving using technology.

--Ms. A. Jones
Computer Science
George Washington High School

We need students who are interested in science, technology, engineering and math that will be the workforce of our future, and iDEW is actively working to create that pipeline.

--Terry Morris
Director, Global Services
Eli Lilly and Company

One of the things that's really cool about the iDEW program is the work the kids are doing. Most recently that has been in the IoT or Internet of Things space, and the work we are doing at Cummins is directly applicable to what they are doing.

--Sherry Aaholm
Vice President and CIO
Cummins, Inc.

CONTACT US

Vicki Daugherty
Program Manager
and Diversity Coordinator
vdaugher@iupui.edu

Jim Lyst
iDEW Faculty Member
jlyst@iupui.edu

idew.org

 iDEWSolC

 iDEWtweets



Award-Winning CS Program
Aligned to Indiana Standards
Reflects Tech Industry Practices
Free to Adopt or Adapt

soic.iupui.edu/idew

2018
**TECHPOINT
MIRA AWARD WINNER**
Tech Educator of the Year

★★★★★

2017
US2020
STEM MENTORING AWARD
Excellence in Public Private Partnerships

★★★★★

2018
**INDIANA AWARD
FOR EXCELLENCE**
Career and Technical Education

★★★★★



IUPUI
SCHOOL OF INFORMATICS
AND COMPUTING
INDIANA UNIVERSITY

INDIANA BASED



LOCALLY SUPPORTED

COMPUTING BY DESIGN PROJECTS

In each semester-long project, high school students collaborate in small teams to research, design, develop, and test their own technology solution to an authentic challenge. Each project culminates in a public poster presentation and demonstration of the teams' solutions.

PROVEN



RESULTS

Aligned to Indiana Standards and Pathways

- Introduction to Computer Science
- Computer Science I
- Computer Science II

Project-Based Learning

- Authentic and engaging challenge
- Student voice and choice
- Sustained collaborative inquiry

Reflects Tech Industry Practices

- Real-world principles and challenges
- User-centered design
- Agile development

Free Educational Resource

- Project guidebooks available online
- Projects are free* to adopt or adapt
- Students can use free online tools for coding, productivity, and collaboration

Professional Development and Support

- Summer workshop
- Ongoing support during school year
- Access to online teacher community

* Robotics project and Internet of Things project require purchase of reusable electronics kits from any vendor of school's choice

Each project focuses on a particular technology:

- Trivia App (Web App)
- Robotics
- Internet of Things (IoT)
- Video Game
- Chatbot
- Data Visualization

Each project has four phases:

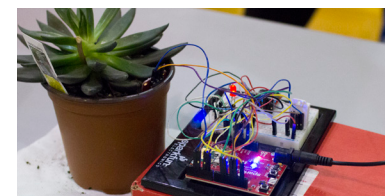
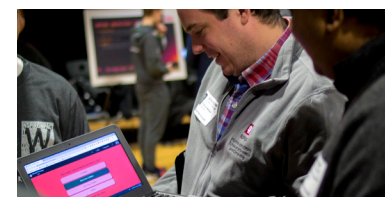
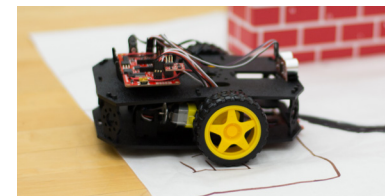
- Discover and Define Problem
- Design and Build Solution
- Evaluate and Refine Solution
- Share Project with Public

Each project emphasizes:

- Computational Thinking
- Design Thinking
- Project Management
- 4Cs: Creative Thinking, Critical Thinking, Communication, Collaboration

In parallel to the project, each student also completes one or more research reports:

- Trends and Innovations in Computing
- Privacy and Ethics in Computing
- Degrees and Careers in Computing



- Started in 2015–2016 school year
- 1000+ students participated
- Currently taught in 8 Indiana high schools
- 646 students currently enrolled in 2018–19
- 94% of iDEW graduates college bound
- 68% of iDEW graduates pursuing STEM degrees

2018–19 PARTICIPATING HIGH SCHOOLS

- Arsenal Technical HS
- George Washington HS
- Herron HS
- McKenzie Center for Innovation & Technology (MSD Lawrence Township)
- Pike HS
- Providence Cristo Rey HS
- Riverside HS
- Southport HS

The iDEW Program has given my students a chance to explore computer science and informatics through a project-based curriculum in a way that is engaging and challenging. Our first group of iDEW students at Pike was 27 in a single class in 2015. Now we have 248 in ten classes, with a total of 443 students to date.

--Justin Smith, Pike High School