WHAT IS OUTREACH?

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

• Organized effort to influence the conversation about computer science education

• Opportunity to engage in teacher development and support

• Focus on inspiring K-12 students to develop their interest in computing, problem solving, and technology

• Ability to expand the potential recruiting base for Purdue University
MAJOR CHALLENGES
PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

- Improving the understanding of what computer science is
- Finding the right context for computer science in K-12 curriculum
- Defeating the stereotypes that negatively affect the perception of computer scientists
- Developing opportunities for meaningful interventions
Two camps:
- 64 total students
- Middle School – Intro to CS
- High School – Big Data

Student tuition covers about 60% the operating cost.

Support this year from State Farm, Boeing and Ms. Vicki Capadona
• Self-paced online version of Purdue’s first programming course
• Sept. 1: 112 students, 40 female
• Students are able to take AP exam upon completion
• Taught by Debbie Perouli and Phil Sands, supported by UTAs
<table>
<thead>
<tr>
<th>Field</th>
<th>Male</th>
<th>Female</th>
<th>% Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Science Total</td>
<td>2243</td>
<td>1116</td>
<td>33.2%</td>
</tr>
<tr>
<td>Computer Science</td>
<td>833</td>
<td>94</td>
<td>10.1%</td>
</tr>
<tr>
<td>Physics</td>
<td>155</td>
<td>24</td>
<td>13.4%</td>
</tr>
<tr>
<td>Math</td>
<td>197</td>
<td>78</td>
<td>28.4%</td>
</tr>
<tr>
<td>Chemistry</td>
<td>119</td>
<td>56</td>
<td>32%</td>
</tr>
<tr>
<td>Earth, Atmospheric, Planetary Science</td>
<td>51</td>
<td>33</td>
<td>39.3%</td>
</tr>
<tr>
<td>Statistics (w/ actuarial science)</td>
<td>175</td>
<td>116</td>
<td>39.9%</td>
</tr>
<tr>
<td>Biology</td>
<td>155</td>
<td>252</td>
<td>61.9%</td>
</tr>
</tbody>
</table>

Note that not all College of Science students are included above

MAGIC MENTORING

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

- Purdue students mentoring high school women in after-school clubs
- Four participating high schools
- Corporate field trips
- State Farm, Luther Consulting, Boeing sponsoring clubs
- Out-of-box program for all universities to employ

https://www.facebook.com/PurdueMAGIC
REACH OUT FOR COMPUTER SCIENCE

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

- Bring CS to schools without
- Work with youth-serving organizations to engage students in CS
- Provide Purdue students with opportunity to develop leadership skills, and give back to community
CS TEACHER WORKSHOPS
PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

- IBEA Conference CS Track
- Provide for visiting instructors
- Travel costs for teachers
- Support for CSTA which, in turn, supports Indiana’s CS teacher population