

Instruction Matters: Purdue Academic Course Transformation

Presentation by
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West Lafayette, IN

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Motivation

- Purdue prides itself on being a leader in STEM fields with one of the top engineering and technology undergrad programs
- But...
- Purdue University has one of the lowest Four year graduation rates in the Big Ten



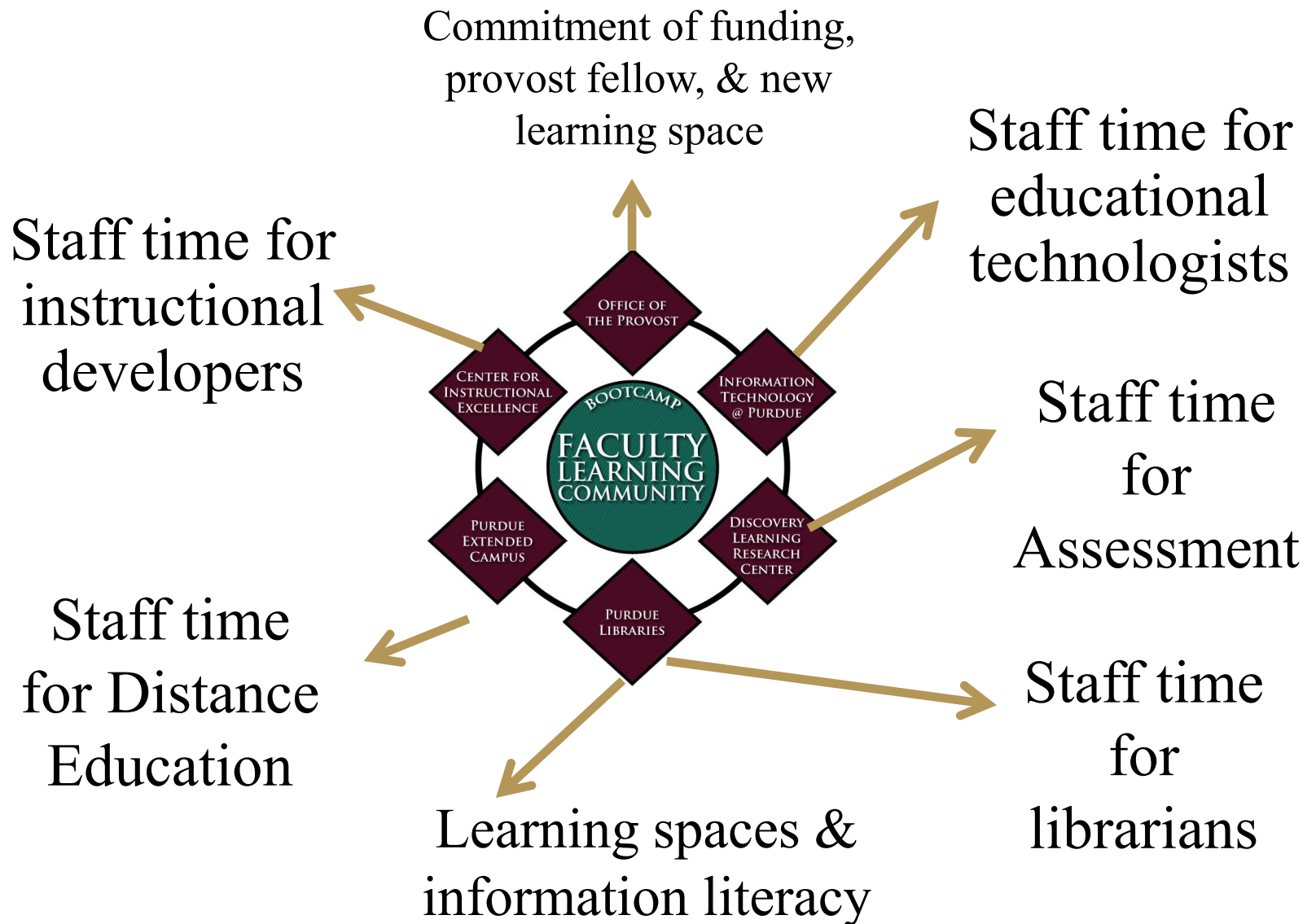
Instruction Matters: Purdue Academic Course Transformation (IMPACT) Initiative

Created to increase retention, help
students learn better and to graduate
within 4 years

IMPACT Goals & Objectives

- Refocus the **campus** culture on student-centered pedagogy and student success
- **Grow and sustain** IMPACT by adding new IMPACT faculty fellows annually
- Enable **faculty-led** course redesign with campus-wide resources
- **Transform 60 courses** over a span of **3 years**
- Network faculty through **Faculty Learning Communities**
- Base course redesign on **best practices** and **sound research**
- **Reflect, assess** and **share results** to benefit future courses and students
- Focus **Institutional Resources** – IMPACT Partners

Partners



How our students Learn

Transforming the way we **teach**.

Enhancing the way we **learn**.

Flipped model

- class for group work and **activities**.

Students prepare by watching **online lectures**.

Studio Approach

combines traditionally separate sections, lab and recitation, to provide hands on critical thinking experience



Just-In-Time Teaching

allows students to obtain feedback on student understanding prior to preparing their in-class materials.

Hybrid/Blended course

combines online content with active, in-class group learning exercises.

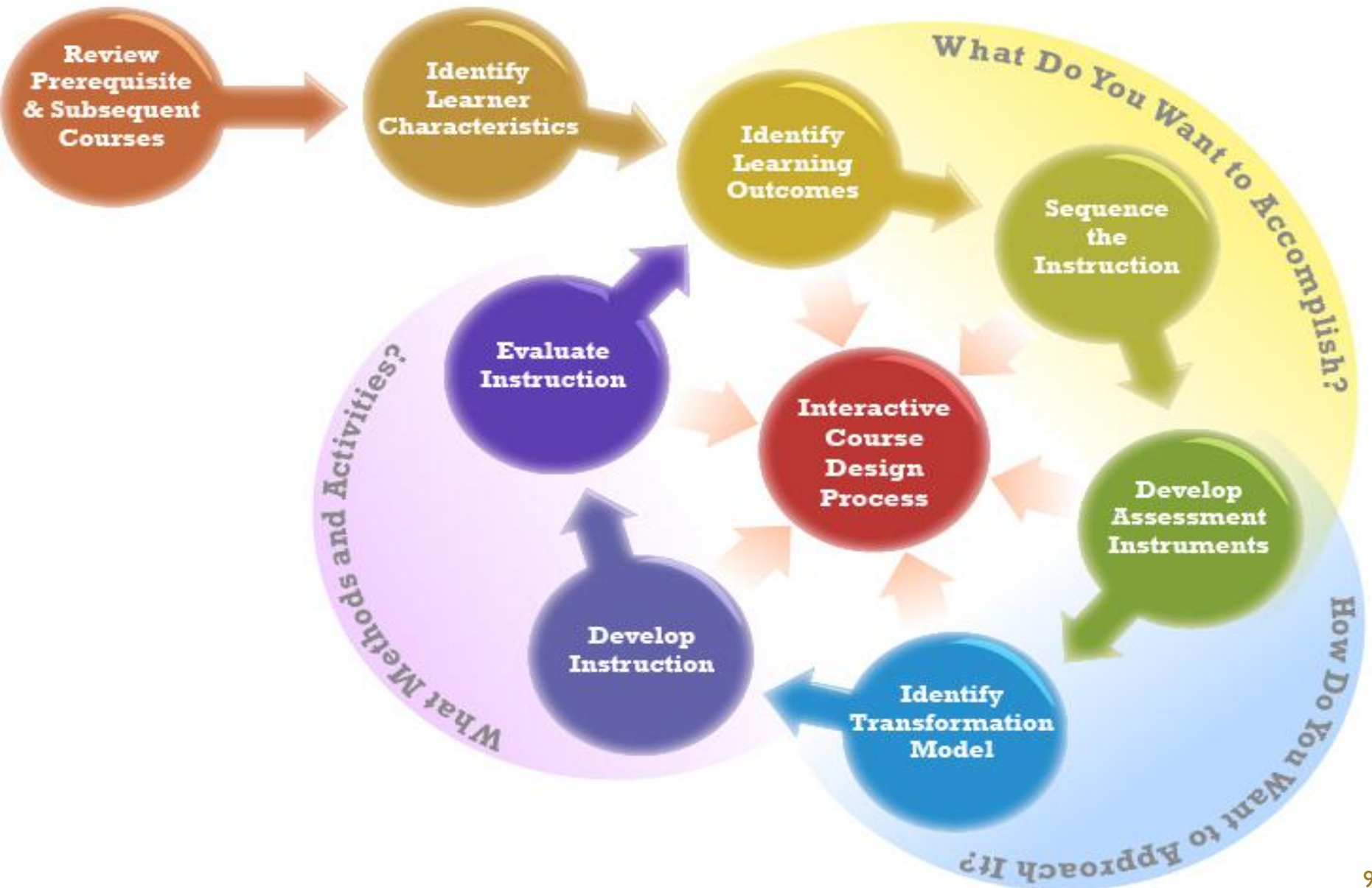
Course redesigns:

1. Have a plan that recognizes that the need of each participant and each course is different.
2. Include innovation, implementation, assessment and institutionalization which are critical to success.
3. Focus on integrating the Chickering and Gamson's "Seven Principles For Good Practice in Undergraduate Education."

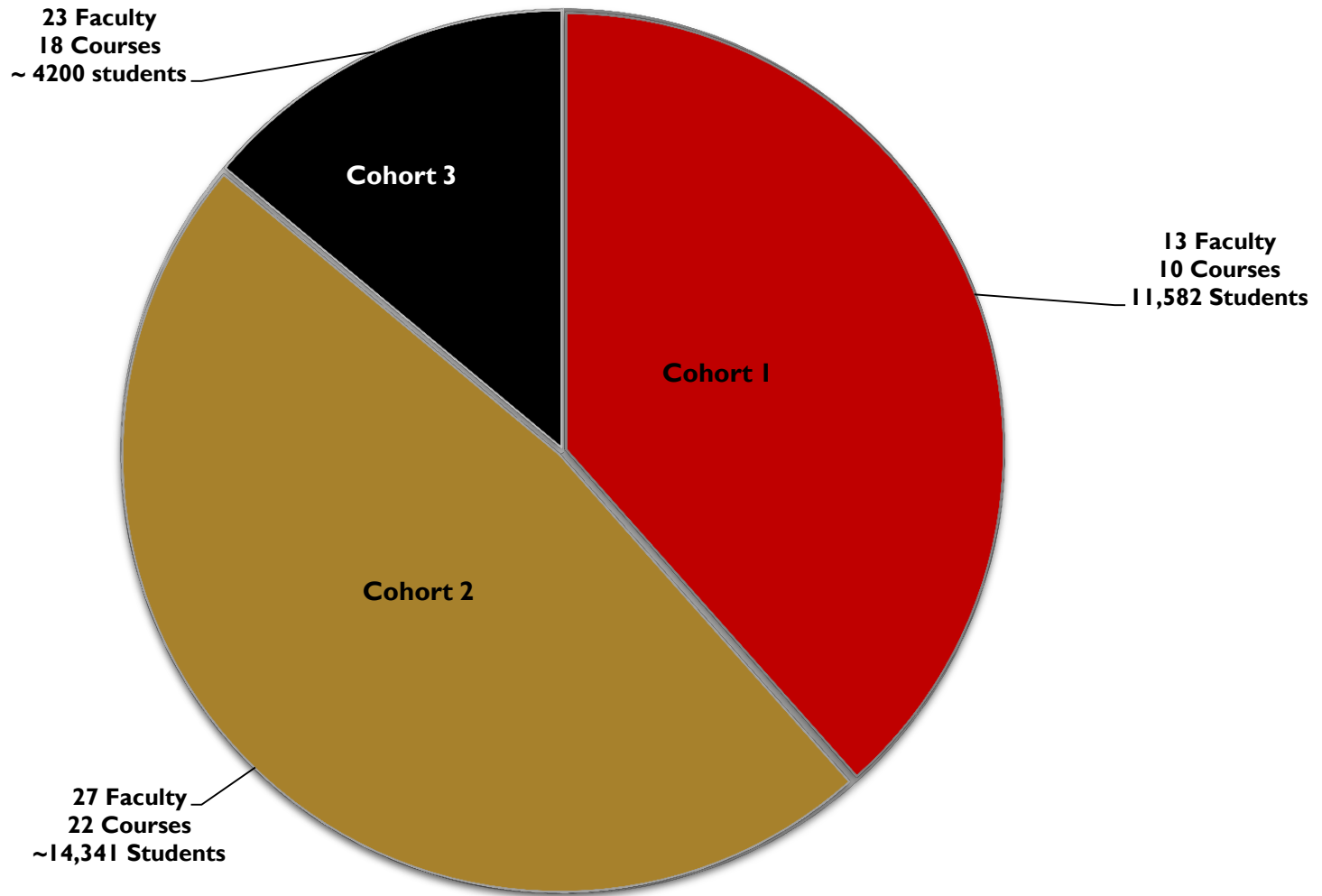
The Course Redesign Curriculum

- Faculty Learning Workshops are a weekly series that will address 3 main topics:
 1. What do you want to accomplish?
 2. How do you want to approach it? and
 3. What methods and activities will you use to get there?
- The workshops run for a semester.
- For each course, we assign a course redesign team of individuals from CIE, ITaP, and possibly the Library.

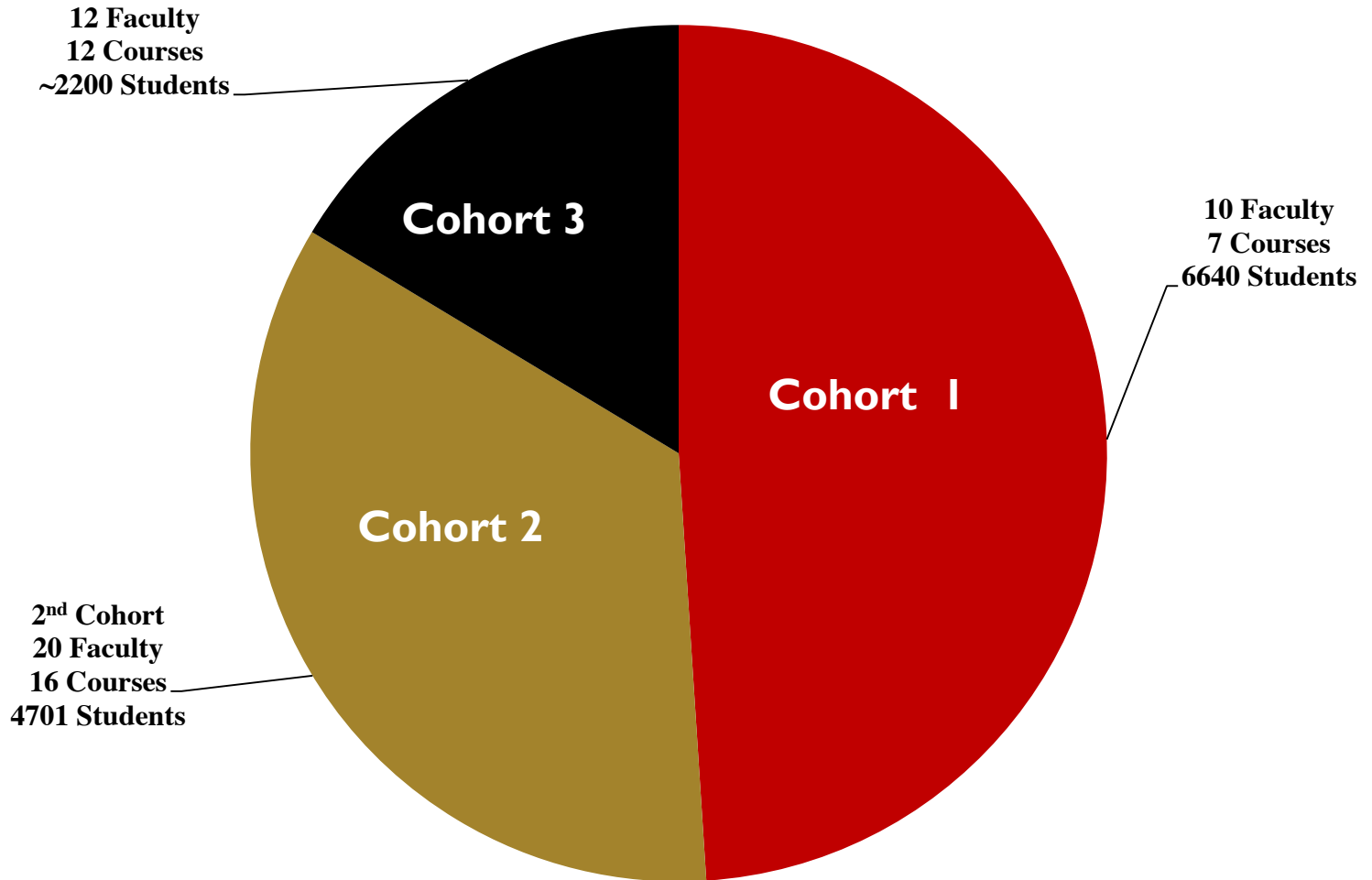
Curriculum Redesign process



49 Courses in 3 Cohorts

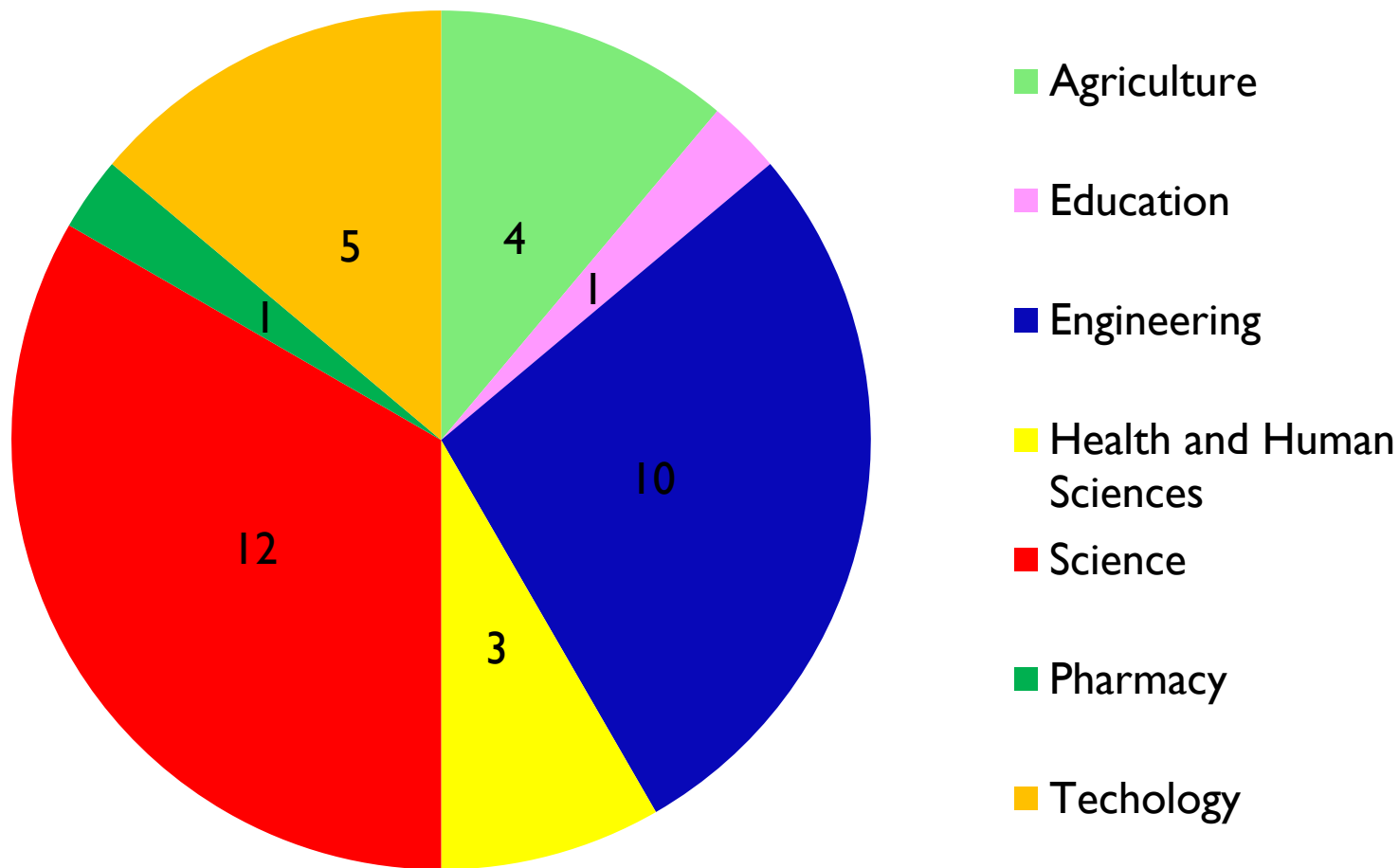


35 STEM Courses in 3 Cohorts



STEM Courses by College

Number of STEM Courses



IMPACT: First Cohort STEM

PROBLEM SOLVING



TIM DELWORTH
MATH 154

Students can opt for a hybrid version of the class that meets once a week for 90 minutes of group work on problem solving. On their own time, students can prepare for the sessions by watching online lectures narrated by Delworth.

ACTIVE LEARNING



NANCY PELAEZ
BIO 131

Students participating in the pilot section will attend a lecture once a week and then engage in an extended active learning session where students will work in groups to solve problem sets which they will share with the rest of the class. Students will also be exposed to experts in the field of biology through the use of online video.

CALIBRATED PEER REVIEW



**BRIAN DILKES
AND CLIFF WEIL**
AGRY 320

As part of the AGRY 320 re-design, students utilize calibrated peer review to enhance their written communication skills, as well as learn how to give and receive feedback on one's work.

Learning Community



This site provides information about IMPACT's mission, goals, faculty, and stories to the Purdue community.

Quick Links:

How does IMPACT work?

What should I expect from IMPACT?

How does IMPACT benefit me?

How do IMPACT faculty get support?



www.purdue.edu/impact

Mission Statement

Our mission is to improve student competency and confidence through redesign of foundational courses by using research findings on sound student-centered teaching and learning.

Recent News

IMPACT mentioned in New York Times, Chicago Tribune, Journal and Courier Online, and Purdue Today

IMPACT 2nd Cohort Kick-off testimonials

Upcoming Events

Ongoing Until May 17 - 2nd Cohort FLC Sessions