

# Increasing Industry Involvement: A Sustainable Solution

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## WHAT?

### INTRODUCTION

Many engineering employers are finding that graduates are not sufficiently equipped to begin contributing productively when they exit a 4-year institution and enter the workforce.

The Intern Professional Development Center (IPDC) is a proposed business model that exposes engineering undergraduates to industry-relevant knowledge, while providing them with working experience during their degree. Using a tri-stage approach, the IPDC engages with students early in their academic careers, provides continuous training and development opportunities, and finally connects the students with potential employers.

### FOCUS TOPICS

The two topics most commonly under-represented in engineering programs are:

- Familiarity with drafting software
- Knowledge of relevant codes and standards.

The table below demonstrates core topics relevant to the 3 example engineering disciplines:

Field	Software	Codes and Standards
CE	AutoCAD Map AutoCAD Civil 3D	ASCE, ACI, IBC, UBC
ME	AutoCAD MEP, Plant 3D Revit MEP, SolidWorks	ASME, NFPA, ASTM, ISO
EE	AutoCAD Electrical Revit MEP	IEEE, ICC NFPA NEC

## HOW?

The Intern Professional Development Center (IPDC)  
A tri-stage solution for recruiting, training, and encouraging the workforce of tomorrow

### STAGE 1: ENGAGEMENT

**Objective:** Encourage students to get involved with industry

- Recruit local students for the IPDC
- Focus on students interested in careers in engineering, drafting, STEM

### STAGE 2: EDUCATION

**Objective:** Help students grow as professionals by providing training and relevant work experience.

- Students are employed by the IPDC
  - Facilitated growth in technical and professional areas, segmented by:
    - Technical training
    - Drafting experience
    - Ongoing personal and professional growth
- See additional information below...

### STAGE 3: EMPLOYMENT

**Objective:** Connect students with local employers for extended internships

- Students are placed with local engineering firms for continuous employment
- Nearly guarantees post-graduate employment

### Technical Training

- Students receive software and codes training from industry professionals
- Project-based learning – not a “textbook” approach

### Drafting

- Commercial/municipal entities provide drafting work for students to work on
- Students perform supervised drafting
- Fulfills local drafting needs

### Professional Growth

- Resume and portfolio enhancement
- Quarterly showcase nights
  - Students interact with local employers
  - Mock interviews

High School Seniors

Undergraduate Freshmen, Sophomores

Undergraduate Juniors, Seniors

## WHY?

### THE IMPACT

An IPDC allows students to be active members of industry during their undergraduate careers, leading to...

- Improved local talent retention
- Improved graduation and academic performance statistics
- Near-guarantee for post-graduation employment

### RESULTS

In March of 2019, the first IPDC prototype began operating in the Tri-Cities, Washington. Since then, 3 undergraduate students have entered the IPDC at Stage 2, beginning with the standard training and professional development. Of those 3 students, 2 have already moved on to Stage 3, with successful ongoing internships with local employers.

At a performance review for one of the IPDC’s Stage 3 students after 90 days of employment, the direct manager said:

“How soon can we get another one?”

### CONTACT INFORMATION

Connect with AYB Drafting LLC, the company that is implementing the IPDC in the Tri-Cities.



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