

# Adapting Universities for the future of the learning

## *Transition from Education 1.0 to 4.0 Case Study of Chula Engineering*

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# CU Vision

Human Capital

Knowledge &  
Innovation

Local Transformation

Global Benchmarking

- The oldest university in Thailand (founded 1917)
- Public and autonomous research university
- 19 faculties/23 colleges and research institutions
- Over 38,000 students
  - Undergrad -24,951
  - Grad – 13,391 (Master's 10,881 / Ph.D. 2,150)
- Over 2,800 faculty members



## Learning Innovation for ALL

### **Impact #1** **Next Generation of Learning**

**Teaching Techniques**

**Research Grants**

**Authentic Assessment & Evaluation**

**Community & Global Network**

### **Impact #2** **Digital Learning Experiences**

**Smart & Interactive Classroom**

**Media, Instructional Technology & VDO**

**e-Learning & LMS across campus**

**Big data, Business Intelligence & Stats**

### **Impact #3** **University Anywhere Anytime**

**Open Education Resource (OER)**

**Massive Open Online Courses (MOOCs)**

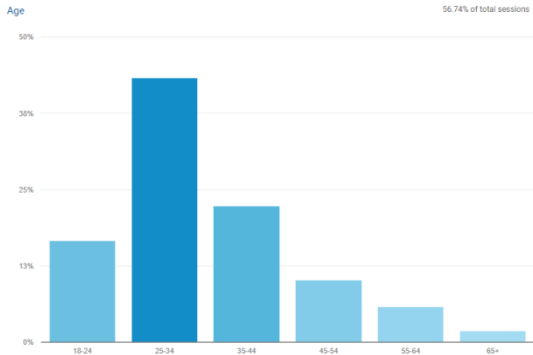
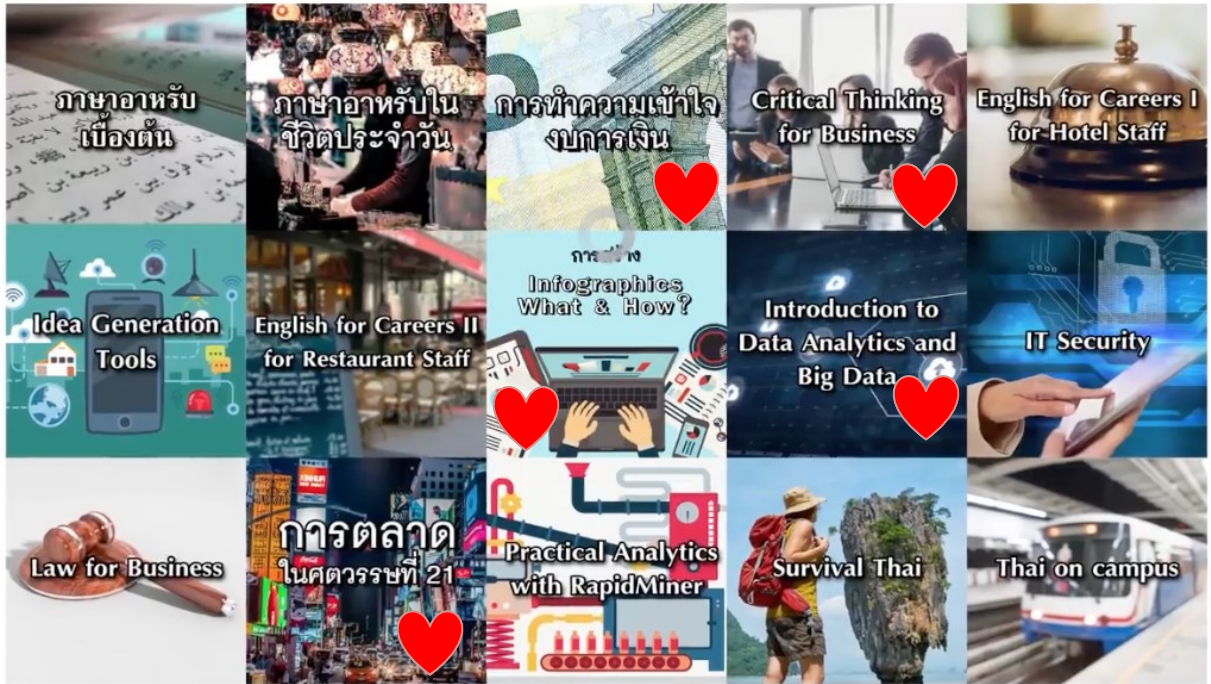
**Nano & Micro degree, Certifications, etc.**

**Virtual University**



Launched Sept 8, 2016

27 Courses  
50,000 registered students



**Education 1.0**

**Traditional learning**

**Education 2.0**

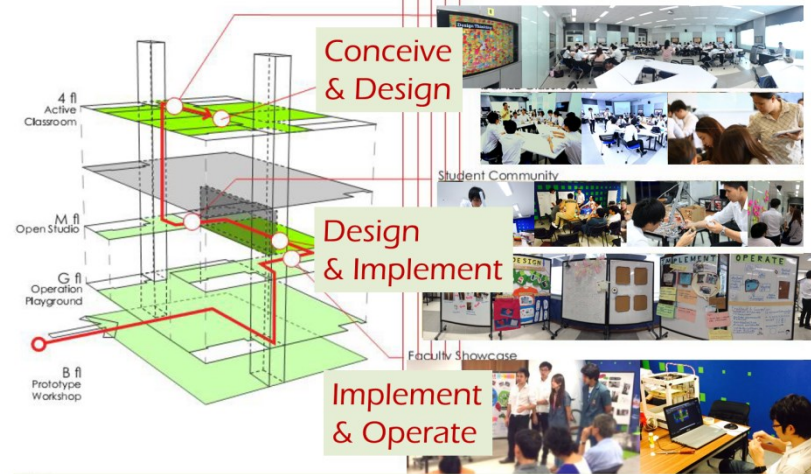
**+ E Learning**

**Education 3.0**

**+ Knowledge creation**

**Education 4.0**

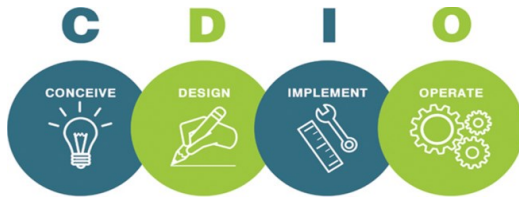
**+ Innovation**

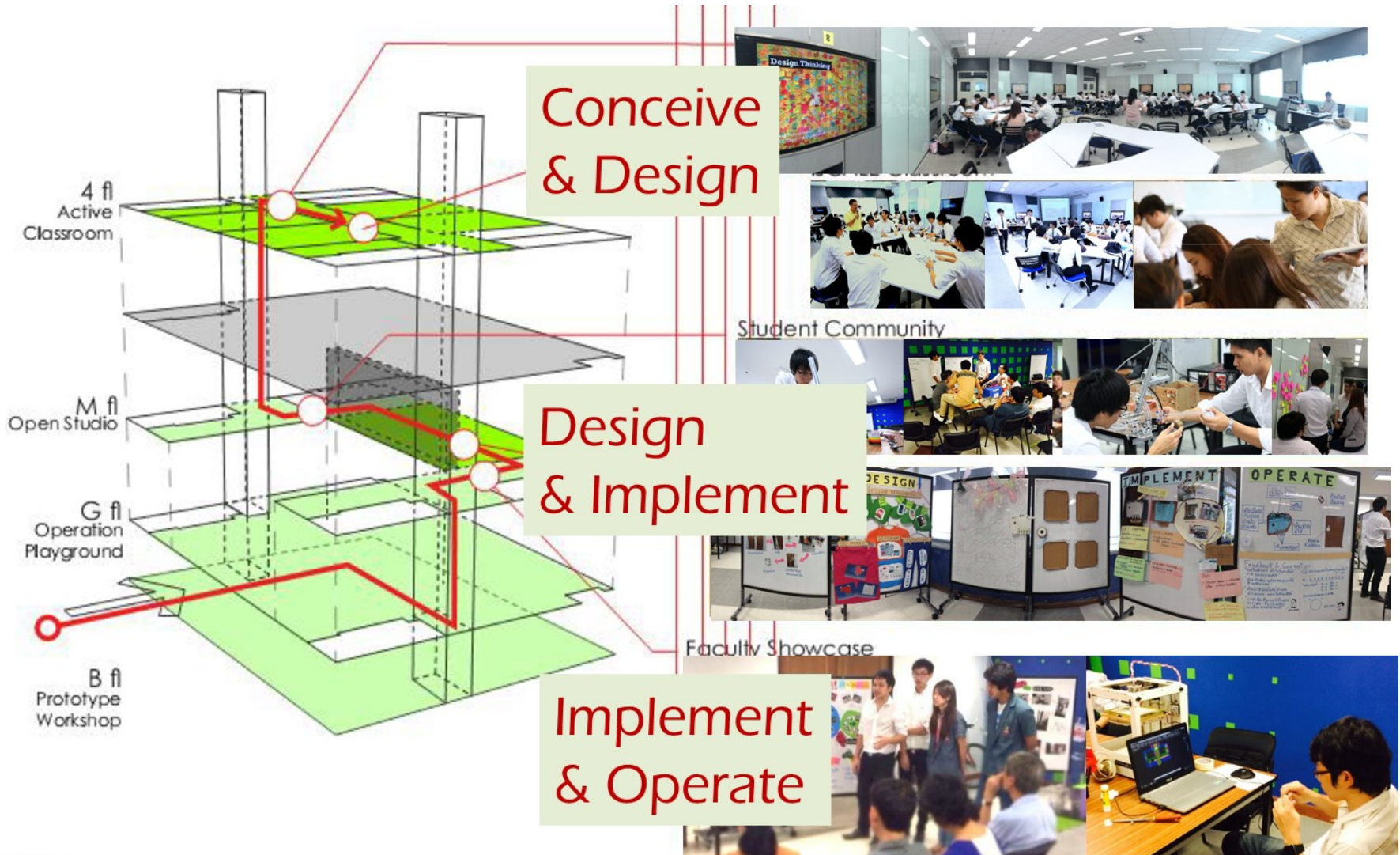


Efficient Graduate: *Conceive-Design-Implement-Operate*



**Jigsaw technique**





Efficient Graduate: *Conceive-Design-Implement-Operate*<sup>7</sup>

## A) *iSCALE* (i-Student-Centered-Active-

Superiority)





**Mantra of the Innovators:  
*Fail early, Fail often***



**Mantra of the i-DW:  
*Failing with styles***

## B) *iDesignWorkspace* Quick realization of student's DREAM Prompt self FEEDBACK & LEARNING



## ACTIVE LEARNING

- Concept Inventories
- Small group activities
  - one-minute papers
  - think-pair-share
- Flipped classrooms



Jigsaw technique

C) Lecturer to review task

Pre-class Task =  
Evidence of their preparation  
+  
Indicator of level of understanding

*Task assessed. Issue identified.*

D) Lecturer to provide  
in-class activities.

Active Learning  
Experiential Learning  
• Discussion  
• Experiment/Projects  
Towards higher-level cognition

*Experiential Engagement*



In class

## COURSEVILLE – the social LMS

Register

Assignment: **Assignment 2: การสำรวจความก้าวหน้าระบบคอมพิวเตอร์ ที่ใช้ Speech Recognition ที่มีอยู่ในปัจจุบัน**

ID	Name	Grade	Assignment
3710000021	นาย ฤกษ์ 7	3	★ ★ ★ ★ ★ ☆
4738044869	น.ส. สุภัชชา เหมรัตน์	★ ★ ★ ★ ★ ☆	★ ★ ★ ★ ★ ☆
5230005721	นางสาว กมลลักษณ์ สุขเสน	★ ★ ★ ★ ★ ☆	★ ★ ★ ★ ★ ☆
5230007021	นาย กรกฎ ศิรินาม	★ ★ ★ ★ ★ ☆	★ ★ ★ ★ ★ ☆
5230008621	นางสาว กรกนก ชาวฮาไฟ	★ ★ ★ ★ ★ ☆	★ ★ ★ ★ ★ ☆
5230062421	นาย คุณุตม์ บุญกลิ่นขจร	★ ★ ★ ★ ★ ☆	★ ★ ★ ★ ★ ☆
5230123021	นาย ชวิน บุญนำสุขสกุล	★ ★ ★ ★ ★ ☆	★ ★ ★ ★ ★ ☆
5230124721	นาย ... ..	★ ★ ★ ★ ★ ☆	★ ★ ★ ★ ★ ☆

I AM DIGITAL NATIVE



- Around-the-clock access
- Instant feedback
- Social network

Courseville

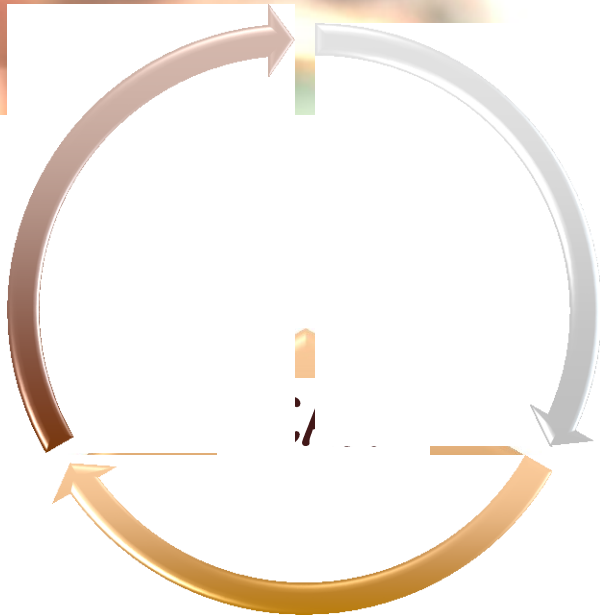
ดร. ต. อติวงศ์ สุชาโต  
Assoc. Prof. Dr. Atiwong Suchato

Your Courses Activity Feeds Register

Courses you teach

2110432 (2013/2)	2143499 (2013/2)	DISCRETE MATH 2110200 (2013/1)	FORMAL 2110221 (2013/1)	2110395 (2013/1)	2110593 (2013/1)	JAVA 2190101 (2013/1)
1&DC	3	123	Senior Project	APP PRO	GV	

[www.mycourseville.com](http://www.mycourseville.com)



## **CDIO framework**

Thinking behind innovation

## **Blended Learning**

Delivery of Knowledge, Skills  
& Attitude – Think like an engineer

## **iSCALE & iDesignWorkspace**

Maker's space – Failing with styles

# To adapt to the future of the learning

## Universities

Lay out strategic vision

Provide new platforms, programs, incentives

## Teachers

Mindset

Adapt teaching styles and acquire new skill sets

## Learners

Require to think flexibly and adapt to new ways of learning, communicating, and technology-enhanced environments