Educational Institutes and Software Industry
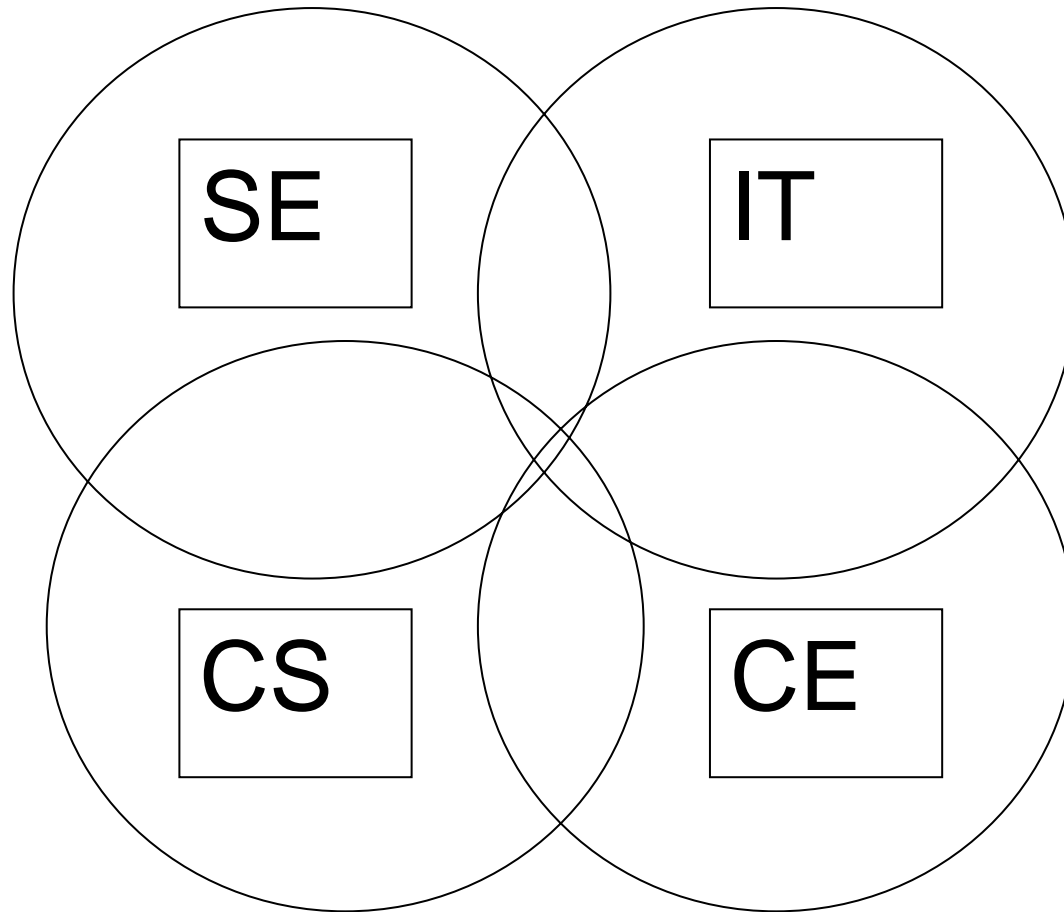
Prabhas Chongstitvatana
Department of Computer Engineering
Chulalongkorn University
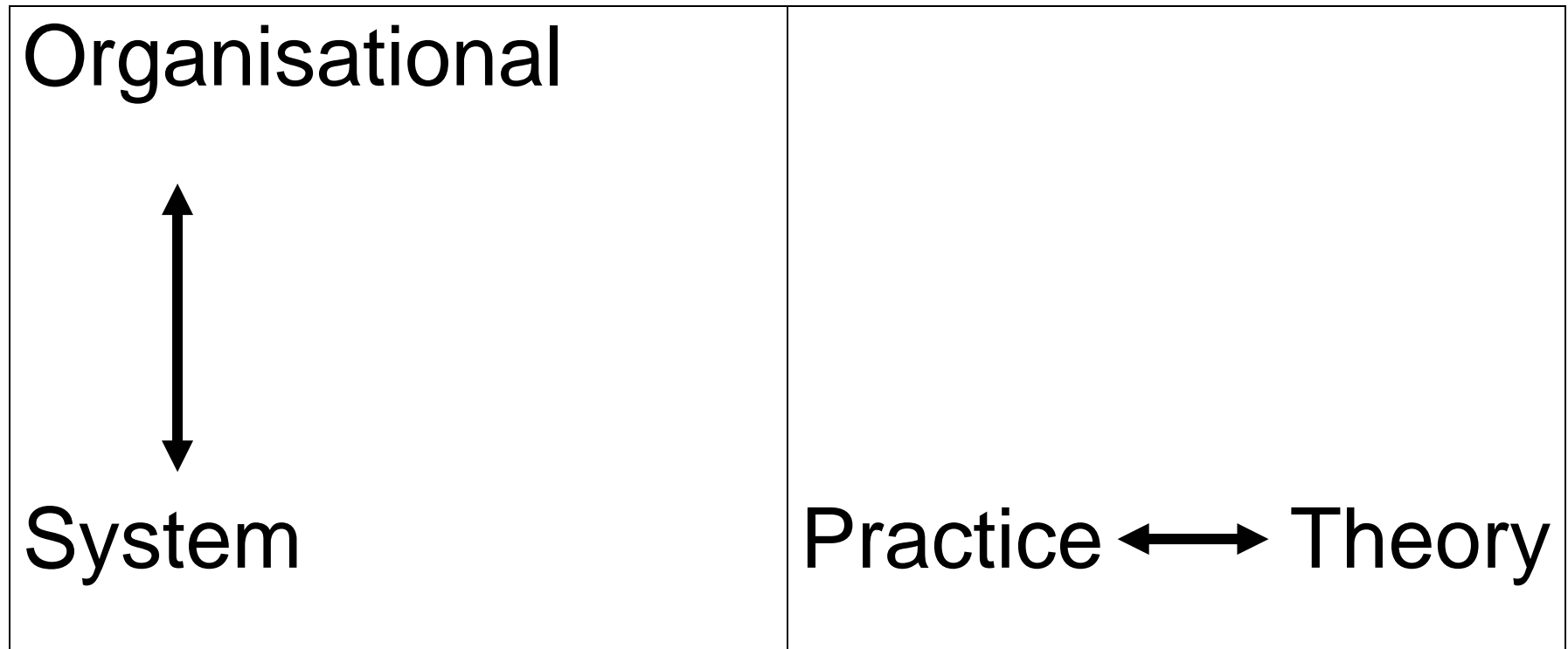
University Curriculum

Bachelor CS CE SE IT
Master   CS CE SE IT
Doctor   CS CE

CS computer science, CE computer engineering
SE software engineering, IT information technology

SE   IT

CS   CE

Knowledge Space

Organisational ↕ System	Practice ⟷ Theory
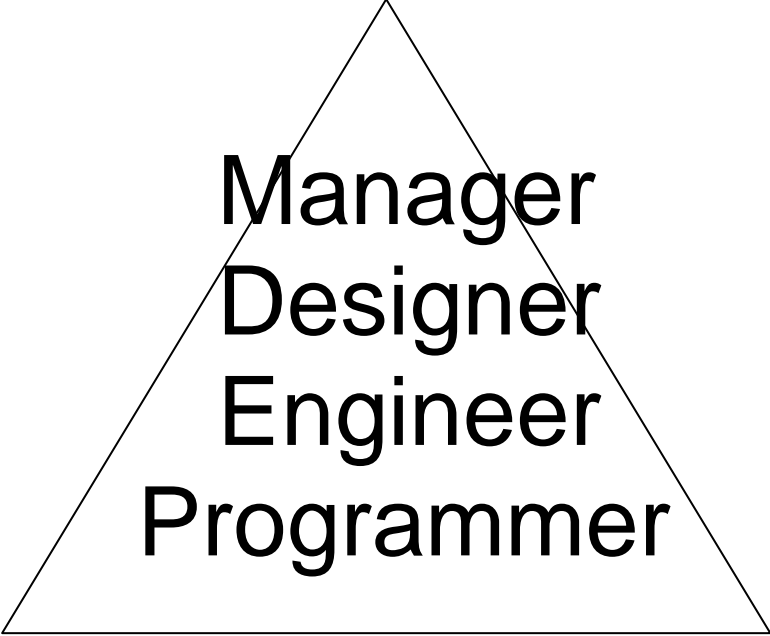
Task Space	Required Volume
Manager Designer Engineer Programmer	Manager Designer Engineer Programmer

Knowledge acquisition

Organisational	System
Domain Knowledge Training Experience	Continuing education Training Standard Skill

Knowledge body for programmer

- System thinking
    - Mathematics
    - Architecture
- Programming skill and practice
- Specialised domain
- Certificate

Knowledge body for engineer

- Engineering education
- Standard
- Training
- Engineering design

Knowledge body for designer

- Architecture
- Design practice and skill
- Analysis
    Mathematics
- Domain knowledge
- Culture

Knowledge body for manager

- Organisational
- Breath of knowledge
- Management science and skill
- Finance
- Society

Example of Volume of work force produced by Chulalongkorn University

Computer Engineering: CS CE SE

Bachelor   100
Master
   CS   30
   CE   30
   SE   30
Doctor   5

Computer Science, Department of Mathematics CS

Bachelor   50
Doctor   3

Faculty of commerce and accounting

IT + SE

Bachelor 60

Business software development
Master   60

End