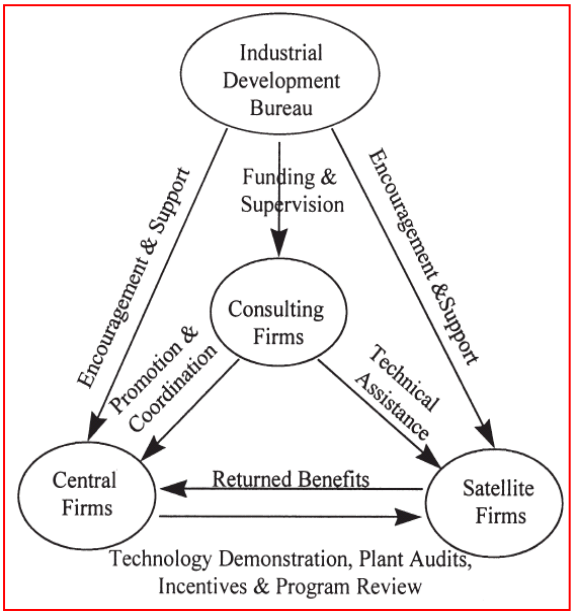
國立臺北大學自然資源與環境管理研究所

104 學年度第二學期『清潔生產與工業生態』

課程進度(06、08)：生產環節之工業生態學－為環境與永續性而設計

Industrial Ecology through Production Processes: Design for Environmental and Sustainability

- INTRODUCTION: SUSTAINABLE ENGINEERING
  - □ Corporate Synergy and Center-Satellite System
  - □ Green Procurement (Purchasing)
  - □ Green Chemistry (p.125)
  - □ Green Engineering (p.128)
  - □ Product Life Cycle (p.132)
  - □ Green Technology and Sustainability



- TECHNOLOGICAL PRODUCT DEVELOPMENT
  - □ Product Development Challenge
  - □ Conceptual Tools for Product Designer
    - ⇨ The Pugh Selection Matrix
    - ⇨ The House of Quality
  - □ Design for X
  - □ Product Realization Process

- DESIGN FOR ENVIRONMENT & SUSTAINABILITY: CUSTOMER PRODUCTS (Chp.10)
  - □ Choosing Materials => Combining Materials
  - □ Product Delivery
    - ⇨ General Packaging Considerations
      -- "Paper or Plastic" => the Packaging Materials
      -- On-Site Recycling and "Take-Back" of Packaging Materials
  - □ Product Use Phase => Dissipative Products
  - □ Design for Reuse and Recycling => Reverse Logistics and Remanufacturing
  - □ Guideline for DfES => DfE; Joseph Fiksel; bombardier.com; HP; DfE Mind Map

- DFES: BUILDINGS AND INFRASTRUCTURE (Chp.11)
  - □ The (Infra)structures of Society
    - ⇨ Electric Power Infrastructure
    - ⇨ Water Infrastructure
    - ⇨ Transportation Infrastructure
    - ⇨ Telecommunication Infrastructure
  - □ Green Buildings
    - ⇨ The LEED System: U.S. Leadership in Energy and Environmental Design
    - ⇨ BREEAM: U.K. Building Research Establishment Environmental Assessment Method
    - ⇨ Taiwan's EEWH System: Ecology-Energy Saving-Waste Reduction-Health
  - □ Infrastructure and Building Material Recycling