**Future Perspectives:**
Graduates from the IBDPE are able to develop further study or to start a career in areas of Renewable Energy, Energy Saving Technology, Environmental Technologies, Energy Utilization, Electricity Management, Energy Economy and Strategy, and Traditional Energy.
Education Objective of IBDPE:
The core of the curriculum aims at Energy Science and Technology, with a key aspect of Environmental Technologies. The curriculum of this Program is comprehensively co-organized by the Department of Aeronautics and Astronautics and other Departments of College of Engineering, NCKU. All courses of the IBDPE are taught in English.
Combustion, Heat Transfer and Energy

- Micro scale combustion and power generation
- Propulsions and Rockey
- Renewable Energy: wind, solar, fuel cells
- Solar thermal (power) system
- Ultra fine metal powder production
- Turbomachinery

Fluid Mechanics and Aerodynamics

- Flow measurement, analysis and flow visualization
- Characteristic fluid: magnetic fluid
- Computational fluid dynamics
- Hypersonic flows
- Wind energy
- Wind engineering
- Medical applications
Structures and Materials

- Fracture analysis of interface corners/cracks
- Computational structural mechanics
- Structure dynamics, coupled load analysis
- Rotor dynamics
- Optimization

Guidance and Control

- Navigation GPS/INS
- Unman Aerial Vehicle: (Air-ship, Tail sitter, Helicopter)
- Intelligent system
- Machine vision
- Robotics
Academic-Industry Partnerships Forum

(established since July 01, 2013)