SBS5498 Final Year Project 2 (Applied Research Project)

http://ibse.hk/SBS5498/

Suggested Topics from Supervisors (2018-2019)

Name of Supervisor:	Dr. WANG Shifeng Stephen
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Title:	Conceptual construction and design of a small scale PV system on residential roof (e.g. 10 kW), stand-alone type
Description:	To build a conceptual model of a small PV system, including the components, installation methods, design of the panel array, selection of equipment, roof integration, cable sizing, and battery system design.

Title:	Conceptual construction and design of a small scale PV system on wasteland in Hong Kong (e.g. 10 kW), grid-tied system
Description:	To build a conceptual model of a small PV system, including the components, installation methods, design of the panel array, selection of equipment, tilting angle, cable sizing, and grid-connection.

Title:	Conceptual design and economic analysis of a mall wind power system (<10 kW) on the roof of THEi Building
Description:	To build a conceptual model of a small wind energy power system for THEi Building Tsing Yi, including the parameters of components, section of wind turbine, cable sizing and connection, mounting, and costs.

Title:	Investigation on the Feed-in Tariff (FiT) Scheme in Hong Kong and its promotion of renewable energy adoption
Description:	To study the details of FiT scheme for renewable energy use in Hong Kong, and analyze the payback time and economic promotion. Set up economic models for different scale of PV systems.

Title:	Conceptual design of solar energy powered road lamps in THEi Tsing Yi Campus

Description:	To set up conceptual model of solar energy powered road lamps for Tsing Yi Campus, including the components, design of the battery system, cable sizing, and selection of lamps.

Title:	Conceptual design of solar energy powered unmanned aerial vehicle (UVA)
Description:	To build conceptual model of solar energy powered UVA, including the integration of solar cell and surface of UVA, the battery system, power generation and consumption matching, and the circuit analysis.

Title:	Survey of the stone protection agent in Hong Kong market and their characteristics
Description:	To conduct a study on the products for construction stone protection, including the types of stone protection agents, their properties, their characteristics and comparison.

Title:	Study on graphene or graphene-analogous 2D materials quantum dots
Description:	Search relevant literatures of graphene or graphene-analogous 2D materials quantum dots synthesis, and propose the experiments to prepare quantum dots using hydrothermal approach.