

INNOVATIVE & CREATIVE IDEAS 2019
“USTH-20” Program

No	Proposal title	Proposal code	Group leader	Supervisor	Objectives
1	USTH UAV quadcopter project	USTH20/SA.01/2019	Nguyen Ha Ninh (USTHBI7-118)	MSc. Nguyen Ngoc Van Thanh	The aim of the project is to design and manufacture a fully functional quadcopter which is able to be remote controlled by the operator as well as having an additional function such as high speed camera to create better flying experience.
2	Natural cosmetic mask in the form of gel beads with <i>Spirulina platensis</i> as the main	USTH20/PB.01/2019	Pham Hai Nam (USTHBI8-117)	Dr. Nguyen Thi Kieu Oanh	<ul style="list-style-type: none"> - Optimization of preparation method for crude <i>S.platensis</i> for nutritional preserving and Phycocyanin standardization in raw material. - Formulation of <i>Spirulina</i> Hydrogel mask. - Evaluation of permeability of Phycocyanin as well as other vitamins in hydrogel mask.
3	Development of a novel cassette for examining root system architecture in rice (<i>O.sativa</i>) in combination with a compatible high-throughput image analysing software for result evaluation	USTH20/PB.02/2019	Chu Thi Quynh Anh (USTH-BI7-005)	Dr. To Thi Mai Huong	Propose a potential solution for rice root phenotyping problem by optimizing different versions of a Simple-Yet-Effective Rhizotron cassette in combination with a compatible image analysing software.

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4	Home Waste2Compost	USTH20/WEO.01/2019	Pham Tuyet Ngoc Linh (USTHBI8-094)	Dr. Vu Cam Tu	Find out an efficient organic waste - to - compost design that is suitable for small households with limited space as in Hanoi city.
5	Development of a real-time Battery Monitoring System for Lithium-Ion battery packs based on Internet of Thing (IOT)	USTH20/EN.01/2019	Trinh Duc Tho (USTH.EN.M6.001)	Dr. Nguyen Xuan Truong	<p>The project will be focused on :</p> <ul style="list-style-type: none"> - Studying Battery Storage System in a micro-grid and Battery Management System. - Developing a Local Module to measure parameters in battery such as current, voltage, humidity and temperature in a real-time scenario. - Using tools and algorithms to estimate SOC of a battery system (in Central Module) and transfer the collected data to a CLOUD system via a router – through a wireless network system. - Data processing, then data management (data acquiring, validating, storing, protecting,...). - Building a prototype of BMoS based on IOT technology (Microcontroller; communication protocol, communication chanel; data acquisition algorithm; CLOUD system; Human Machine Interface - HMI). This prototype can be used to process and analysis real-time signals for optimal control and effective operation of Battery Storage Systems.

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