UNDERGRADUATE RESEARCH OPPORTUNITY PROGRAM 2017/2018 ANNOUNCEMENT

**What is UROP?**

The Undergraduate Research Opportunities Program (UROP) is a scheme that creates a research mentorship platform between undergraduate students and research academic staff. UROP provides undergraduate students with an exciting opportunity to engage in academic research, hence nurturing them into becoming future HDR students.

**Duration of Program** : 1 year (August 2017 – July 2018)

**How to apply?**

1. Applicable to Year 2, Semester 2 and Year 3, Semester 1 students under Faculty of Engineering and Science (FOES) only
2. Application date starts on 8th June 2017. The application form is available on Moodle and can be obtained from Faculty Admin Office.
3. Please read the research topics carefully and select the research project of your interest.
4. Submit your application to Faculty Admin Office latest by 31st July 2017, before 5pm.

**Application Process**

Step 1: Application form submission will be reviewed by respective supervisors for selection process;

Step 2: Student selection is based on the number required for each research project, after the review and approval from the respective supervisors;

Step 3: Supervisors will contact the selected students directly to arrange for an initial meeting.

**Important Notes to Students**

* You are advised to consult the supervisors if there is any doubt regarding the research project before submitting your application.
* Each students is allowed to submit ONE application only.

Upon completion of the UROP program, a certificate of appreciation from the Faculty of Engineering and Science (FOES) will be awarded to the students.

Please find the details of the UROP Project listing below:

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| --- | --- | --- | --- | --- |
| **No.** | **Name of Supervisor(s)** | **Department**  | **Research Topics/Titles** | **Maximum No. of Students Required** |
| 1 | Mian Umer Shafiq | Petroleum Engineering | Experimental Investigation of Emulsified Acid Combination as Effective Stimulation Fluid for Sandstone Formation | 1 |
| Designing Effective Stimulation Fluid and Process for Sandstone Formation using Stimpro software  | 1 |
| 2 | Chew Ing Ming | Petroleum Engineering | Developing an Economical Fuzzy Logic Control System with Open Development Board | 1 |
| Simulation and Analytical Study of Boiler’s Heating Control with LabVIEW | 1 |
| 3 | Dr Jung Hyung-Chul | Mechanical Engineering  | Thermodynamic Modelling of a Combined Organic Rankine Cycle and Ejector Cooling System Powered by Biomass | 2 |
| 4 | Dr Sung Aun Naa | Mechanical Engineering  | Application of augmented reality in aviation engineering | 1 |
| 5 | Dr Lau Shiew Wei | Chemical Engineering | Sustainable cultivation of chlorella vulgaris for enhanced lipid production | 1 |
| 6 | Dr Perumal Kumar | Chemical Engineering | CFD studies of heat transfer in noncircular ducts | 4 |
| Vortex induced heat transfer enhancement in Heat exchangers |
| 7 | Dr Mubarak Mujawar | Chemical Engineering  | Synthesis of   magnetic nanomaterials using agricultural waste biomass for organic based phase change materials as fillers. | 2 |
| Synthesis of  graphene using   waste biomass for  energy storage  material | 2 |
| Synthesis of functionization of  hydronamaterials for  hydrogen energy  application | 2 |
| Synthesis of  magnetic based  carbon nanomaterials using agricultural waste  biomass for  waste water treatment  or  energy  storage or  phase chance materials    | 2 |
| 8 | Dr Hendra Gunawan Harno | Electrical and Computer Engineering  | Modeling and Control of Magnetic Levitation Systems. | 2 |
| 9 | Dr Yam Ke SanDr Vincent Lee | Mechanical Engineering | Designing Variable-Angle Water Rocket Launcher | 3 |
| 10 | Dr Stephanie Chan Yen San  | Chemical Engineering | Isolation of phosphate solubilisation bacteria for biofertilizer synthesis | 1 |
| Extraction of antioxidant enzymes from spirulina   | 1 |