Thesis projects for final year undergraduate students – and Masters Projects for postgraduates in their final session – will be available in the areas indicated below in 2015. Students who will be undertaking their undergraduate Thesis or postgraduate Masters project in 2015 should indicate their preferences on the bottom section of this page. Preferences should be chosen from those listed below as appropriate for the degree enrolled and should be recorded by using the code, e.g., for Electrical Engineers – 1st Pref.: A.1; 2nd Pref.: C.1, etc. If desired, students may also write down specific areas, e.g., A.1 Power Quality – Monitoring. Before making selections, please read this form carefully:

**PROJECT AREAS AVAILABLE**

A.1 Power Quality and Reliability, e.g., equipment behaviour, modelling techniques, monitoring and data analysis, power conditioning, power system disturbances, standards and management.

A.2 Power Electronics, e.g., converters, renewable energy sources, simulation techniques, variable speed drives.

A.3 Renewable Energy and Distributed Generation, e.g. integration of wind and solar generation, energy storage.

B.1 Computer systems, e.g., micro-controllers, computer-assisted instructional systems, embedded systems, web-based systems, and computer architecture.

B.2 Mechatronics, e.g., control systems, vehicular systems, real-time control, robotics, and servo mechanisms.

B.3 Machine learning, e.g., probabilistic and multidimensional modelling, pattern recognition, biometrics and biomedical applications.

C.1 Digital Signal Processing, e.g., audio processing and segmentation, image processing, intelligent information processing, speech processing, speech and audio compression, video processing, and opto-electronics signal processing.

C.2 Computer networks, e.g., traffic engineering, network design and modelling, mobile computing, and wireless communications.

- Electrical Engineering students: can select preferences from any of the areas.
- Computer Engineering students: can select preferences from areas B and C only.
- Telecommunications Engineering students: can select preferences from C only.
- Mechatronics Engineering students: can select preferences from areas A, B and C.1 only

Students should select at least two preferences; the third is optional. It should be noted that whilst attempts are made to take preferences into account, these are only one of several factors affecting thesis topic allocation. Other factors include staff availability and workload, order of topic area form submission and student WAMs. The example topics given are only that – examples – and students are encouraged to explore possible projects with staff and even suggest their own topics. Students should submit a copy of this topic area form, signed or not, at EIS Central at least 3 to 5 weeks prior to start of the intended session.

**NAME: ................................................................. STUDENT NO: ................................. SUBJECT: ECTE451 / ECTE953**

**DATE: ................................................................. MAJOR: COMP / ELEC / TELE / TRON**

1st Preference............. 2nd Preference............. 3rd Preference.............

Would you prefer mainly: Hardware / Software / Both? <= (Circle the appropriate answer)

**Note:**

1. If your average is above 72.5% and you will be undertaking ECTE451+ECTE458 Thesis in 2015, you may wish to consider undertaking postgraduate studies (Masters or PhD) in 2016. You are encouraged to discuss the options available with staff.

2. If you have discussed a specific Thesis/Project topic with a staff member, and they wish to endorse your interest please complete the section below as well.

**Staff Member: .................................................................**

**Staff Signature: .................................................................**

**Project Title: ..............................................................................................................................................................................................**