Subject Description Form

Subject Code	EE6851 – EE6853
Subject Title	Special Topics in Smart Materials and Structures I/II/III
Credit Value	3
Level	6
Pre-requisite / Co-requisite/ Exclusion	Recommended background knowledge: Knowledge of Electrical Engineering equivalent to the final year of an Honours Degree in Electrical Engineering course. Preference will be given to those who have had research or working experience in the topic chosen.
Objectives	To provide practising engineers with an opportunity to study in depth a topic in smart materials and structures which are becoming increasingly important to engineers and researchers.
Intended Learning Outcomes	Upon completion of the subject students will be able: 4. To acquire an understanding of a selected topic in this area, up to the expertise knowledge level, through self study and guidance by the supervisor. 5. To possess the ability of developing latest innovations and cutting edge technologies, through literature studies, simulation studies, and/or experimental studies. 6. To be able to report and explain the above selected area of knowledge, through written and oral means.
Subject Synopsis/ Indicative Syllabus	To conduct an in-depth study in a particular topic in Smart Materials and Structures. The topic content will be fixed after mutual discussion with the prospective supervisor prior to the start of the module.
Teaching/Learning Methodology	The subject can be conducted via guided study in two modes for individual students. Mode I requires a student to take an MSc subject related to the topics of the guided study subject or a relevant short course as the basis of the guided study subject. The student will be required to participate fully in the MSc subject/relevant short course (i.e. attend all the lectures, complete both the coursework and examination requirements). To bring the subject up to the doctoral level, a student is required to submit further write-ups and presentations. An overall grade for the guided study subject is then derived from the result of the MSc subject as well as the extra writes-up and presentations. Mode II is operated for guided study subjects with no relevant MSc subject/short course available. A student is required, under the supervision of the subject supervisor, to read specified monographs, journal publications and/or a book. The student and the subject supervisor must meet once per week to discuss the progress made by the student in the subject. Courseworks in terms of literature survey reports and presentations should normally be included. At the end of the semester the student will be examined, normally both orally and in written form.

	<table><tr><td rowspan="2">Teaching/Learning Methodology</td><td colspan="3">Intended subject learning outcomes</td></tr><tr><td>1</td><td>2</td><td>3</td></tr><tr><td>Lecture & Tutorial (for mode I study only)</td><td>✓</td><td>✓</td><td>✓</td></tr><tr><td>One-to-one guided tutorial</td><td>✓</td><td></td><td>✓</td></tr><tr><td>Self study</td><td>✓</td><td>✓</td><td></td></tr><tr><td>Software/hardware experimentation</td><td></td><td>✓</td><td>✓</td></tr></table>
Assessment Methods in Alignment with Intended Learning Outcomes	<table><tr><td rowspan="2">Specific assessment methods</td><td rowspan="2">% weighting</td><td colspan="3">Intended subject learning outcomes to be assessed</td></tr><tr><td>1</td><td>2</td><td>3</td></tr><tr><td>Coursework</td><td>49</td><td>✓</td><td>✓</td><td>✓</td></tr><tr><td>Examination</td><td>51</td><td>✓</td><td>✓</td><td>✓</td></tr><tr><td>Total</td><td>100</td><td colspan="3"></td></tr></table> NB: Examination (normally both written and oral, conducted by the responsible staff and a staff member who is knowledgeable in the topic) Coursework (normally assignment and presentations)
Student Study Effort Expected **(Mode I)**	<table><tr><td>Class contact (time-tabled):</td><td></td></tr><tr><td>▪ Lecture</td><td>24 Hrs.</td></tr><tr><td>▪ Tutorial/Laboratory/Practical Classes</td><td>15 Hrs.</td></tr><tr><td>Guided activities:</td><td></td></tr><tr><td>▪ Meeting with the supervisor / Presentations/ Viva examination</td><td>10 Hrs.</td></tr><tr><td>▪ Self-study / Preparation of reports and presentation materials</td><td>56 Hrs.</td></tr><tr><td>Total student study effort</td><td>105 Hrs.</td></tr></table>
(Mode II)	<table><tr><td>Guided activities:</td><td></td></tr><tr><td>▪ Meeting with the supervisor / Presentations/ Viva examination</td><td>20 Hrs.</td></tr><tr><td>▪ Self-study / Preparation of reports and presentation materials</td><td>85 Hrs.</td></tr><tr><td>Total student study effort</td><td>105 Hrs.</td></tr></table>
Reading List and References	To be assigned by the subject lecturer.