School and Subject Group		School of Engineering and Applied Science, Electronic Engineering	
Module Code		EE7008	
Module Title		Structural Health Monitoring	
Module Type		Taught	
Date of introduction of new module		2010	
Level		7	Credit Value 10
Programme(s) in which module is available		MSc in Sensing	
Involvement of Other Schools		None	
Resource Split			
Name of Module Co-ordinator		Dr. Peter Foote	
Name of Module Advisor		Dr. John A.R. Williams	
Related Modules	Pre-requisites	None	
	Co-requisites	None	
	Prohibited Combinations	None	
Minimum and Maximum Intake Sizes		None – None	

Aims of the Module

1. Introduction: what is SHM why do we need it?
2. Underlying sensing technologies
   (a) Structural usage monitoring
   (b) Structural damage detection - towards automated inspection.
   (c) Approaches to diagnosis and prognosis
3. Integrated vehicle health management: putting it all together.
4. Applications
   (a) Aerospace and defence
   (b) Civil engineering and energy
   (c) SHM into design - changing the paradigms

Summary of Content

Summary of Methods and Frequency of Teaching	**Lectures** 18 hours. **Laboratory** 9 hours.

Summary of Methods of Assessment and Feedback including Formative Feedback

Assessment Type	*Status*	*%*	*Requirements*	*Due*
Laboratory	Compulsory	20.0		-
Formal Examination	Compulsory	80.0	Formal 1.5hr examination Marks released via local online grades page prior to examination board.	-

Module Outcomes - what the student should gain from successful completion of the module:	Learning and Teaching and Assessment Strategies to enable outcomes to be achieved and demonstrated	
	Learning and Teaching Methods	Assessment Methods
A. Knowledge and Understanding		
the principles and practice of sensing applied to structural health monitoring	Laboratory, Lectures	Formal Examination, Laboratory

B. Intellectual Skills		
convey complex ideas in a structured scholarly manner and to perform independent work in problem solving	Laboratory	Laboratory
C. Professional Skills		
apply their knowledge of the principles behind modern sensing systems	Laboratory	Laboratory
D. Transferable Skills		

Please provide either or both of:	
(i) Introductory Learning Resources	Blackboard
(ii) Core Texts	To be confirmed
Reading Lists	Attached
Specification completed by:	Dr. Peter Foote
Date	07-Nov-2009
Date module approved by Teaching Committee(s)	
Date module approved by School Board(s)	