Alignment of Programme Learning Outcomes

for Master of Science (MSc) in the field Space Science
(proposed implementation date for the new programme: September 1, 2019)

Statement of Programme Learning Outcomes (PLOs) aligned with or mapped against University Educational Aims (UEAs)

UEAs	PLOs	Centrality	
		Core	**Auxiliary**
Critical intellectual enquiry and acquiring up-to-date knowledge and research skills in a discipline/ profession	To apply a scientific approach to planning, designing, and/or executing a space mission, including the use of appropriate methods and modern computational tools applicable to space sciences and the analysis of space data.	X	
Application of knowledge and research skills to practice or theoretical exploration, demonstrating originality and creativity	To develop the necessary theoretical background and hands-on experience relevant to Space Science, including knowledge of astrophysics and planetary science, programming skills, and statistics	X	
Tackling novel situations and ill-defined problems	To synthesize knowledge from diverse disciplines (e.g. Detector Technology, Astrophysics) for the purposes of space mission design	X	
Collaboration and communication of disciplinary knowledge to specialists and the general public	To collaborate with and communicate results of space projects to a variety of audiences, including colleagues and a general audience	X	
Awareness of and adherence to personal and professional ethics	To maintain high ethical standards and comply with all legislation and regulations that are relevant to Space Science		X
Enhancement of leadership and advocacy skills in a profession	To become a confident space scientist, able to work with a diverse group of colleagues from countries all over the world, with backgrounds in many different areas of science and engineering	X	

Core: PLOs considered central to the discipline or profession, and assessed
Auxiliary: PLOs considered to be important but not assessed

Mapping of courses against the PLOs (in the form of a matrix). The mapping should include the disciplinary core and elective courses, but not the Common Core, language and other elective courses. The Core and Auxiliary classification should be included.

Course	Programme Learning Outcomes					
	PLO1	**PLO2**	**PLO3**	**PLO4**	**PLO5**	**PLO6**
Core courses						
SPSC7001 Space flight propulsion (6 credits)	C	C	C			
SPSC7002 Introduction to space weather (6 credits)	C	C	C			A
SPSC7003 Remote sensing (6 credits)	C	C	C	C		
SPSC7004 Radiation Detection and Measurement (6 credits)	C	C	C			
SPSC7005 Project Management for Space Science (6 credits)	C	C	C	C	A	C
SPSC7006 Small satellite design (6 credits)	C	C	C	C	A	C
Elective courses						
SPSC7011 Introduction to Space Plasma Physics (6 credits)	C	C	C			
SPSC7012 Climate Change (6 credits)	C	C	C	C	A	A
SPSC7013 Habitable planets and the origin of life (6 credits)	C	C	A	A	A	
SPSC7014 Machine Learning in Space Science (6 credits)	C	C	C	A	A	A
SPSC7015 Introduction to Planetary Science (6 credits)	C	C				C
SPSC7016 Overview of Space Astrophysics	C	C				C
SPSC7017 Introduction to astrochemistry and astrobiology	C	C	C			
SPSC7018 Space Science entrepreneurship	C	C	C	C	A	C
STAT6016 Spatial Data Analysis (6 credits)	C	C	A	C		C
DASC7014 Advanced Statistical Learning (6 credits)	C	C	C	C	A	A
ELEC6026 Digital Signal Processing (6 credits)	C	C	C			
ELEC6103 Satellite Communications (3 credits)	C	C	C		A	
Capstone requirement						
SPSC7021 Space Science Final Project (6 credits)	C	C	C	C	A	C