



## UWA Plus Micro-credentials

### *Critical Information Summary*

Title and brief description	PHYSM411 Einsteinian Science for School Teachers I: Atoms, Light, Space and Climate. This foundation unit will cover (a) modern understanding of atoms, heat, states of matter, and the forces that hold them together; (b) the fact that light is made up of photons and the nature of the electromagnetic spectrum; (c) an introduction to the quantum nature of light and matter; (d) an introduction to the concept of spacetime and that gravity is caused by warped spacetime; and (e) the basic science of our climate and the key drivers of climate change. In addition, mathematical concepts, which form the backbone of these scientific principles, will be introduced in an accessible manner. This unit will cover primarily Year 3 – 6 curriculum topics, paving the way to develop further into higher level concepts and curriculum.
Certified learning	(1) explain the physical concepts of atoms and molecules and force; (2) explain the quantum nature of matter and light (atoms, photons and phonons); (3) explain the basic concept of spacetime; and (4) teach the key topics in modern physics at the appropriate school level using simple models and analogies.
How learner participated	Online only
Effort required (indicative)	75 hrs with online lectures, self study, assessment preparations
Main assessment task	Portfolio and reflective evidence for validation of proficiency, Testing recall of facts
Indicative equivalent level	Undergraduate
Industry recognition	This micro-credential has been developed following discussions and collaborations through the Einstein-First Project, key stakeholders include: Curtin University; the Australian National University (ANU); the WA Department of Education; the Science Teachers' Association of WA (STAWA); the Association of Independent Schools of WA (AISWA); the Australian Research Council; and the Gravity Discovery Centre.
Quality assurance	The quality of UWA Plus micro-credentials is assured through The University of Western Australia's standards and academic integrity processes.
Successful learner earns PD Points for conversion to:	3
. Admission to an award course	No
. Credit towards an award course	Yes
. If yes, how much credit?	Credit is less than one unit