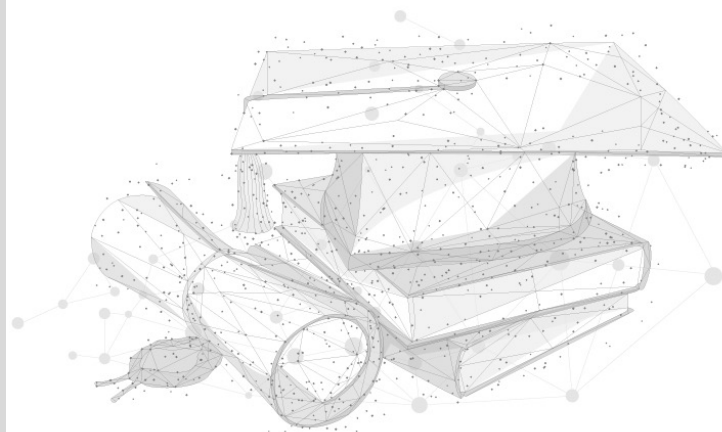











Area of Research


# Natural Sciences and Science Education



 Research Domains	 Scope of Research	 Faculty Members (Potential Supervisors)
<b>Pharmaceutical Chemistry</b>	Marine natural products chemistry Drug discovery Marine cyanobacteria Marine invertebrate-associated microbes	<a href="#">Dr Tan Lik Tong</a>
<b>Science Learning and Teaching</b>	Chemistry education Diagnostic instruments Alternative conceptions Conceptual change Variation theory Practical work	<a href="#">Assoc Prof Daniel Tan</a>
<b>Science Learning and Teaching</b>	Biology education Learning in primary science STEM curriculum planning Science teacher learning Science classroom interactions Inquiry-based learning	<a href="#">Assoc Prof Tan Aik Ling</a>
<b>Science Learning and Teaching</b>	Sociocultural learning theory Curriculum research Epistemic knowing Classroom assessment Qualitative methods Science education for development	<a href="#">Assoc Prof Lee Yew Jin</a>
<b>Science Learning and Teaching</b>	Physics education STEM education Scientific and epistemic practices (e.g., reasoning, modelling, and argumentation) Collaborative learning	<a href="#">Asst Prof Ong Yann Shiou</a>

 Research Domains	 Scope of Research	 Faculty Members (Potential Supervisors)
Science Learning and Teaching	Chemistry education	<a href="#">Assoc Prof Teo Tang Wee</a>
Science Learning and Teaching	Physics education Primary science education Student-generated representation Intuition in science education	<a href="#">Asst Prof Joonhyeong Park</a>
Science Learning and Teaching	Primary Science Education Science inquiry Technology-based learning Sociocultural learning Representation	<a href="#">Asst Prof Jina Chang</a>
Science Learning and Teaching	Whole person education Chemistry education AI in education (i) automatic assessment (ii) multimodal learning (iii) human-AI collaboration Lab-based learning Curriculum Studies	<a href="#">Asst Prof Gyeonggeon Lee</a>
STEM Education	Equity issues in STEM education	<a href="#">Assoc Prof Teo Tang Wee</a>
STEM Education	Design-based inquiry Integrative STEM education Immersive learning technologies	<a href="#">Dr Tan Ter Ming Timothy</a>
STEM+C & AL/ML Education	Computational Thinking/Pedagogy Engineering Education/Psychology Artificial intelligence & machine learning education	<a href="#">Asst Prof Ibrahim H. Yeter</a>
Molecular Physiology	Ammonia toxicity in fish Molecular mechanisms in giant clam-dinoflagellate associations Salinity adaptations in fish	<a href="#">Assoc Prof Chew Shit Fun</a>
Artificial Intelligence in Education	AI in Science Education AI in Special Needs Education AI in STEM Education Impact of AI on Teaching and Learning Transformational Properties of AI for Education AI Instructional Support AI-Enabled Professional Development AI-Facilitated Learning	<a href="#">Asst Prof Edwin Chng</a>

 <b>Research Domains</b>	 <b>Scope of Research</b>	 <b>Faculty Members (Potential Supervisors)</b>
<b>Plasma Physics and Nuclear Fusion</b>	High energy density plasma (HEDP) - pinch plasma in Plasma Focus (PF) HEDP Plasmas for: (i) Fusion relevant research (ii) Multiple radiation source of x-rays, ions, electrons and neutrons (iii) Materials synthesis and processing under fusion relevant conditions Low temperature plasmas for energy storage and conversion material synthesis and processing	<a href="#">Prof Rajdeep Singh Rawat</a>
<b>Nuclear Radiation Measurement and Imaging</b>	Neutron and charged particle diagnostics for nuclear fusion Radiation imaging Coded aperture imaging Applications of pixelated silicon and CdTe radiation detectors	<a href="#">Assoc Prof Stuart Victor Springham</a>
<b>Spintronics and Nano-magnetism</b>	High spin orbit coupling materials with high spin Hall angle Spin Hall nano oscillators Voltage controlled magnetization High Ku magnetic materials	<a href="#">Prof Rajdeep Singh Rawat</a>
<b>Inorganic and Bio-inorganic Chemistry</b>	Inorganic and organometallic synthesis Biological activity of coordination complexes	<a href="#">Assoc Prof Yan Yaw Kai</a>
<b>Plant Physiology</b>	Photosynthesis (chlorophyll fluorescence, Rubisco protein ) LED quality and quantity on photosynthesis and vegetable production Halophyte vegetables grown under saline condition with LED lighting Microclimate control to increase yield and nutrients of leafy vegetable at lower energy requirements Impact of abiotic stresses on tropical orchids	<a href="#">Assoc Prof He Jie</a>

 Research Domains	 Scope of Research	 Faculty Members (Potential Supervisors)
<b>Space Electric Propulsion</b>	Low power electric propulsion for small satellites Hall thrusters (5-200 W) Hollow cathodes (< 1 A) Fundamental studies on the Rotamak nuclear fusion device Rotamak-like plasma thrusters Plasma diagnostics for electric propulsion (electrostatic probes, OES) Low and ultra-low thrust measurements	<a href="#">Prof Xu Shuyan</a>
<b>Consumer Food Science</b>	Consumers' perceptions and practices towards sustainable food consumption and food-related issues	<a href="#">Dr Johannah Soo</a>
<b>Ecology</b>	Vertebrate ecology Terrestrial ecology Conservation biology	<a href="#">Dr Norman Lim T-Lon</a>
<b>Organic Synthesis</b>	Metal mediated C-heteroatom cross-coupling reactions Metal mediated C-H functionalization reactions	<a href="#">Dr Teo Yong Chua</a>
<b>Nanotechnology and Materials Chemistry</b>	2D nanomaterials Energy storage Membrane technology Electrocatalysis Bio-sensor	<a href="#">Asst Prof Edison Ang Huixiang</a>
<b>Medicinal Inorganic Chemistry</b>	Investigation of metal complexes as potential therapeutics for cancer Pathogen-Host cell interaction studies Apoptosis	<a href="#">Dr Peter Lee</a>
<b>Marine Environmental Biology</b>	Marine ecotoxicology Coral reef ecology Intertidal ecology	<a href="#">Dr Beverly Goh</a>