Scope and Sequence
YEAR 8 INFORMATION TECHNOLOGY SELECTIVE

OBJECTIVE: Our Information Technology Selective program allows our students to have access to industry standard state of the art technology and specialist teachers who extend their learning. We aim to provide our students with the skills, knowledge and the ability to achieve success in their future learning pathways. Our future focused program endeavours to produce students who are equipped with 21st century learning skills such as collaboration, innovation, adaptability and leadership within the field of information technology.

Unit	Unit 1	Unit 2	Unit 3	Unit 4
Time/ Duration	Term 1	Term 2	Term 3	Term 4
Name of Unit	3D Design	Motion Graphics	Game Development	Robotics
Concepts	Develop knowledge, skills and understanding of Engineering and Industrial Design (STEM)	Develop knowledge and skills of industry standard animation through the production of motion graphics projects	Develop an understanding of computer programming through the process of game development using industry standard tools	Collaboratively develop skills and understanding of automation through the process of constructing and programming robots
Concepts for Extension	STEM and advanced design tools with the use of Autodesk 360 Fusion software	Advanced industry standard design techniques and tools with Adobe After Effects and Adobe Illustrator	Advanced software development methods and industry standard tools with Unity 3D Development Engine	STEM concepts with NXT Mindstorms and Sphero SPRK robotics kits
Content	• Knowledge of and skills in researching, experimenting, generating and communicating creative design ideas and solutions • Knowledge and understanding of and skills in the responsible selection and safe use of materials, tools and techniques	• Knowledge, understanding and appreciation of and skills in design processes, design theory and the work of designers • Knowledge of and skills in researching, experimenting, generating and communicating creative design ideas and solutions	• Knowledge and understanding about the features and characteristics of contemporary and advancing technologies • Develop and apply skills in the use of tools, materials and techniques through the application of contemporary, advancing and digital technologies	• Problem-solving and critical thinking skills in order to design and develop creative technology solutions for a variety of real-world problems • Effective communication skills and collaborative work practices leading to information and software technology solutions for specific problems
Links to Stage 5 courses	3D Technology & Game Design STEM	Information, Media & Digital Technology Film Making & Animation	Information Technology 3D Technology & Game Design	Information, Media and Digital Technology STEM
Assessments	Tutorial Completion (10%) 3D Project (15%)	Motion Graphics Project and Folio (20%) Reflection Task (5%)	Game Development Diary (10%) Game Project (15%)	Robotics Challenges (20%) Reflection Task (5%)