



## STEM TRACK ROBOTICS STRAND

This strand gives students a hands-on, multidisciplinary approach in designing, building, and programming robots. It aims to build a strong foundation on the principles of physics, electronics, engineering, mechanics and computer programming. Students will start by building robots to demonstrate these principles. By the time they graduate, they will be able to apply their skills to design and prototype practical robots to solve real-world problems. This strand serves as a stepping stone in pursuing careers in the fields of mechanical, electrical and/or software engineering, or a combination of these (mechatronics).

### Grade 11 - 1<sup>st</sup> Semester

CORE SUBJECTS	HOURS
Oral Communication	80
Komunikasyon at Pananaliksik sa Wikang Filipino at Kulturang Pilipino	80
General Math	80
Earth and Life Science	80
Introduction to Information Technology	80
Physical Education and Health	20
SPECIALIZED SUBJECTS	
Pre-Calculus	80
Computer Programming	80
General Chemistry 1 and 2	80
TOTAL HOURS	660

### Grade 11 - 2<sup>nd</sup> Semester

CORE SUBJECTS	HOURS
Reading and Writing	80
Understanding Culture, Society and Politics	80
Pagbasa at Pagsusuri ng Ibat-Ibang Teksto Tungo sa Pananaliksik	80
Personal Development	80
Physical Education and Health	20
CONTEXTUALIZED SUBJECTS	
Research in Daily Life 1	80
SPECIALIZED SUBJECTS	
Basic Calculus	80
General Physics 1	80
Introduction to Mobile Robotics	80
TOTAL HOURS	660



## Grade 12 - 1<sup>st</sup> Semester

<b>CORE SUBJECTS</b>	<b>HOURS</b>
Introduction to Philosophy of the Human Person	80
Physical Education and Health	20
Statistics and Probability	80
<b>CONTEXTUALIZED SUBJECTS</b>	
English for Academic and Professional Purposes	80
Research in Daily Life 2	80
Pagsulat sa Filipino sa Piling Larangan	80
<b>SPECIALIZED SUBJECTS</b>	
General Physics 2	80
Basic Electronics	80
RobotC Programming	80
<b>TOTAL HOURS</b>	<b>660</b>

## Grade 12 - 2<sup>nd</sup> Semester

<b>CORE SUBJECTS</b>	<b>HOURS</b>
Disaster Readiness and Risk Reduction	80
Contemporary Philippine Arts from the Regions	80
21 <sup>st</sup> Century Literature from the Philippines and the World	80
Physical Education and Health	20
<b>CONTEXTUALIZED SUBJECTS</b>	
Entrepreneurship	80
Empowerment Technologies (E-tech): ICT for Professional Tracks	80
Research/Capstone Project	80
<b>SPECIALIZED SUBJECTS</b>	
Python Programming	80
Arduino-Based Design	80
<b>TOTAL HOURS</b>	<b>660</b>