徳島県立徳島科学技術高等学校 Tokushima Prefectural Senior High School of Science and Technology

### **Creating Global Engineers**

Nurturing talent to respond to the progress and complexity of technology

Education that supports not only those who will seek employment, but those interested in further education

- ◆School Principles [Courtesy] [Responsibility] [Service] [Technology]
- ◆ Features \*A curriculum aiming to advance students to university, which doesn't rely solely on classroom study
  - \*A wide variety of fascinating subjects
  - \*Education built around hands-on experience using advanced facilities

#### ♦ Branches of learning (Division/Course system)

Full-time system	1 <sup>st</sup> year	2 <sup>nd</sup> , 3 <sup>rd</sup> year
General Science Branch	General Science Division	Information Science Course
		Environmental Science Course
	Marine Science Division	Marine Science Course
General Technology Branch	Machine Technology Division	Mechanical Engineering
		Course
		Production and Systems
		Engineering Course
	Electrical Engineering Division	Electrical Engineering Course
		Information and
		Communications Engineering
		Course
	Construction Engineering Division	Environmental Construction
		Engineering Course
		Architecture Course
		General Industrial Design
		Course
	Marine Technology Division	General Marine Technology
		Course

#### ◆Curriculum aims

General Science Branch

We aim to produce high-level technology specialists by sending students on to university. General Technology Branch

We aim to create technicians who can play an active part in the industrial world.

#### ♦Course guide

General Science Branch – General Science Division **OInformation Science Course** 



Basic Electrical Engineering Training

College Preparation Supplementary Class Mechanical Class

Programming Class

#### Aims and Features

In addition to complementing regular science and mathematics classes, this course gives students a foundation of knowledge and skills in I.T. and areas of physics, such as electricity, necessary to progress to a related course at university. These students will aim to enter a four-year course at a national or private university.

#### Attainable Qualifications

Basic I.T. Technician I.T. Passport English Proficiency Test I.T. Proficiency Test Etc.

#### Principal Areas of Specialization

Basic Technical Science and Mathematics English for Industrial Technology (English Expression I) Basic Electrical Engineering Etc.

#### General Science Branch – General Science Division **Environmental Science Course**



Environmental Analysis Practical Class

Atomic Absorption Spectronomy Apparatus

Gas Chromatograph

Fuel Cell Experiment

#### Aims and Features

In addition to complementing regular science and mathematics classes, this course gives students a foundation of knowledge and skills necessary to progress to a related course at university in the field of chemistry, including study of the environment and energy. These students will aim to enter a four-year course at a national or private university.

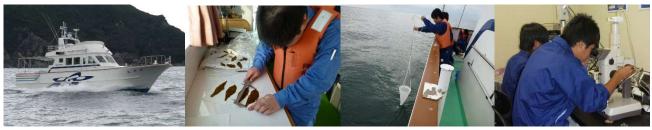
#### Attainable Qualifications

Pollution Prevention Administrator (water quality) Grade II Boiler Engineer Handling of Hazardous Materials English Proficiency Test Etc.

Principal Areas of Specialization

Basic Technical Science and Mathematics English for Industrial Technology (English Expression I) Geo-environmental Chemistry Etc.

## General Science Branch- Marine Science Division



Ashumaru (school motorboat )

Seaweed Measuring

Marine Analysis

Observation with Microscopes

#### Aims and Features

In addition to acquiring specialized knowledge and skills related to marine studies, students study the various environmental problems associated with the ocean. These students will aim to enter a four-year course at a fishery or marine university.

#### Attainable Qualifications

Diving Maritime II-category Special Radio Operator Class 3 Refrigeration Safety Manager English Proficiency Test Etc.

Principal Areas of Specialization

Fisheries and Ocean Science Ocean Environment Ocean Life Basis of Fisheries and Oceans Ocean Information Technology Comprehensive Practice Etc.

#### General Technology Branch-Machine Technology Division **Mechanical Engineering Course**



Lathe Operation

Gear Hobbing Machine Operation Manufacturing Competition
(Technical Division)

Welding Room

#### Aims and Features

Centering on the basics of industrial manufacturing, from the study of industrial materials to the drafting of plans, students acquire knowledge and skills related to every sphere of the machinery industry.

#### Attainable Qualifications

Technician (lathe) Grade II Boiler Engineer Handling of Hazardous Materials Machine Drafting Proficiency Test Etc.

# <u>Principal Areas of Specialization</u> Basic Technical Science and Mathematics Machine Design Machine Engineering and Construction Prime Movers Drawing Practical Machine Operation Basic I.T. Etc.

#### General Technology Branch-Machine Technology Division Orduction and Systems Engineering Course



Sequencer Practical

CAD/CAM Practical Training Robotics Practical Training Microcomputer Practical Training

#### Aims and Features

Focusing on the fundamentals of machine technology, students acquire knowledge of automated production systems, such as NC machine tools and industrial robots, and the role of electricity in the operation of machines.

#### Attainable Qualifications

Second Class Electric Work Specialist Approval test of basic CAD Installation Technician (DD3 type) Etc.

<u>Principal Areas of Specialization</u>
Basic Technical Science and Mathematics Machine Design
Machine Engineering Construction
Technology of Production and Systems
Basic Mechatronics
Electronic Information Technology
Applications of Electronics
Etc.

#### General Technology Branch- Electrical Engineering Division **Electrical Engineering Course**



Electric Motor Practical

Electronic Circuit Practical Training High Tension Current Transformer Training

Manufacturing Competition, Electrical Division

#### Aims and Features

While learning the basics of electricity, from power generation to application, students acquire practical knowledge and skills related to electrical work. This course creates technicians who will thrive in fields such as the manufacture and administration of electrical equipment, and general electrical work.

#### Attainable Qualifications

Third Class Electric Chief Engineer First Class Electric Work Specialist Second Class Electric Work Specialist Etc.

<u>Principal Areas of Specialization</u> Basic Electricity Electrical Appliances Electric Energy Technology Electronic Measurement and Control Electronic Circuits Etc.

#### General Technology Branch- Electrical Engineering Division <a>Information and Communications Engineering Course</a>



Programming Practical Training

Sequential Control Practical Training Manufacturing Competition, (Electronic Circuits Construction Division) Computer Construction Exercise

#### Aims and Features

From the basics of computing to such aspects of communication technology as networking and multimedia use, students study to become technicians who can respond to the needs of companies in the communications industry.

#### Attainable Qualifications

Basic Information Technician I.T. Passport Installation Technician (General Division, DD1 Type) Second Class Electric Work Specialist Etc.

Principal Areas of SpecializationBasic ElectricityElectronic CircuitsHardware TechnologyProgramming TechnologyNetwork SystemCommunication TechnologySoftware TechnologyEtc.

## General Technology Branch- Construction Engineering Division $\bigcirc$ Environmental Construction Engineering Course



Surveying Practical Training

Geographical Information Systems Training Material Experiments (Testing Compressive Strength of Concrete) Use of Small Construction Vehicles

#### Aims and Features

In this course, students acquire practical knowledge related to surveying, design and construction while gaining computer literacy, in order to become safe, successful civil engineers.

#### Attainable Qualifications

Grade II Construction Supervisor Assistant Surveyor Surveyor Explosives Control Supervisor Use of Small Construction Vehicles Etc.

<u>Principal Areas of Specialization</u> Drawing Surveying Civil Engineering Work Civil Foundation Mechanics Civil Engineering Construction Design Environmental Engineering Construction Mathematics Etc. General Technology Branch<sup>-</sup> Construction Engineering Division 



CAD Architecture Practical Training

Woodworking Practical Training

Surveying Practical Training Model-building Practical Training

#### Aims and Features

In this course, students learn about wooden, steel and reinforced concrete building structures. Additionally, with a focus on designing and drafting, students acquire a practical knowledge of the principles of architecture, including such planning-stage considerations as building safety.

#### Attainable Qualifications

Grade II Architectural Supervising Technician Grade I Architectural Supervising Technician Second Class Architect First Class Architect Etc.

<u>Principal Areas of Specialization</u> Architectural Drafting Architectural Structure Architectural Structure Design Execution of Architectural Works Architectural Laws and Regulations Architectural Planning Etc.

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Wood Processing Practical Training Composition

Lettering Practical Training

CG Practical Training

#### Aims and Features

Students acquire creative and practical skills related to every field of design focusing on Interior Design. Aiming to realize each individual student's goals for the future we foster in them an ability to respond independently to the changing face of modern technology.

#### Attainable Qualifications

Lettering Proficiency Test Tracing Proficiency Test Color Application Proficiency Test Graphic Design Proficiency Test Interior Coordinator Etc.

<u>Principal Areas of Specialization</u> Drawing Interior Processing Interior Planning Color Planning Design Technology Information Design History of Design Etc.

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Swimming

Seaweed Harvesting

Cutter Practice

Snorkeling

#### Aims and Features

Students acquire knowledge and skills related to marine industries and to navigation and control of motorboats, and, with the help of the school's own motorboat, learn about marine environmental surveys.

#### Attainable Qualifications

Diving Small Vessel Piloting Maritime II-category Special Radio Operator Class 3 Refrigeration Safety Manager Etc.

Principal Areas of Specialization

Ocean Life Fishery Stock Enhancement Small Boats Fishing Industry activity Comprehensive Practice Etc.

#### ♦School Life



Students Prepare for Job Interviews

Studying in the Classroom

Students Gather for a General Assembly



Competing in the Sports Festival

School Culture Festival

School Trip in Hokkaido

#### ♦Access

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