

# School of Applied Science



More Knowledge  
More Discoveries  
**BE SO MUCH MORE**

#DiscoverRP

*DID YOU COME WITH HIGH EXPECTATIONS?*

# **WE'LL MEET THEM, AND MORE.**

## **DISCOVER**



### **WIDE RANGE OF PROGRAMMES**

Select from a variety of full-time diploma and lifelong learning courses from our 7 Schools



### **100% INTERNSHIP**

Gain real-world working experience with our established network of partners



### **STATE-OF-THE-ART FACILITIES**

Resources that add to the top-notch experience here

At RP, you'll find a nurturing, student-centric environment that helps you learn holistically. Beside each and every student is a mentor, there to guide you throughout your journey with us — and what a journey it promises to be!

With RP's Problem-based Learning approach, you'll soon realise you're more than able to solve whatever challenges get thrown your way. Transforming problems into possibilities? We'll open your eyes.

You'll embark on a comprehensive enhanced internship programme which will give you a head start in your career.

Look forward to achieving your dreams at RP, as lifelong learning is a journey and we are here to help you develop your potential. Our suite of lifelong learning courses will quench your thirst for learning, strengthen your skillsets and lead you to acquire new ones to stay relevant in this ever-evolving world.

Discover your potential, achieve your dreams and embrace a transformative experience at RP because we're so much more.

A distinctive and rigorous curriculum ensures that you are more than ready to shine in your chosen career. But we know you're looking beyond robust instruction, so you might be further enticed by our:



### **OVERSEAS STUDY TRIPS**

A whole world waiting to be explored and to learn from



### **>80 CO-CURRICULAR ACTIVITIES**

Indulge your interests or try something new



### **COMMUNITY-BASED PROJECTS**

Reach out and discover Singapore from a different perspective



### **3 ACCLAIMED ARTS & MUSIC FESTIVALS**

Held yearly to expand your cultural horizons

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ABOUT SCHOOL OF

# APPLIED SCIENCE

## SHAPING THE FUTURE THROUGH SCIENCE

Delve into the modern scientific world and explore realms from aquaculture to pharmaceuticals. SAS will unlock your curiosity and learning mindset and lead you to discover your passion amidst a diversity of scientific fields.

We'll nurture your talents and help you develop skills that will position you at the frontlines of biomedical and urban science. Challenge yourself at one of the largest science schools in Singapore, and be amazed at what you can achieve. Start off with the Common Science Programme or find exciting opportunities in our range of diploma courses in:

- Applied Chemistry
- Biomedical Science
- Biotechnology
- Environmental & Marine Science
- Pharmaceutical Science

Want to explore the unknown and find your 'Eureka!' moment? At **RP School of Applied Science (SAS)**, you'll learn to uncover new knowledge to pioneer new frontiers in science. Get ready to hone your research and technical skills to make life-changing discoveries.

With SAS, you can be confident in embarking on a rewarding career, equipped with the firm foundation. You will be equipped with practical skills for an industry with unbound potential. Our committed lecturers, with years of scientific experience and accumulated knowledge, will be your mentors on this stimulating journey.

Enjoy opportunities to go from classroom and laboratory into the real world with rigorous industrial attachments. You will interact and learn from experts in their fields, make valuable contacts for your network, and play a pivotal role in solving actual problems.

Make your mark as aquarists, pharmacy technicians, environmental officers, or chemists; or take your interests further with a degree in biotechnology, medicine or environmental science. Your SAS diploma prepares you as a contributing member of the scientific community, for a better tomorrow for all.

# HEAR FROM OUR GRADUATES



## **SEAN KEE YI HE**

**Diploma in Marine Science & Aquaculture  
(now known as Diploma in Environmental &  
Marine Science)**

**2020 Graduate**

Currently serving National Service



*In a world full of conventional wisdom, RP has given me the grounds to develop myself as an independent thinker and problem-solver. RP's unique PBL pedagogy has taken its students beyond plain knowledge acquisition. One's learning can only be complete after one applies it in a way that is helpful to self, and those around."*

Sean excelled in both his studies and student life activities. An exemplary student during his time in RP, Sean was inducted into the Director's Roll of Honour several times and was a recipient of the RP Higher Year Scholarship.

Beyond the classroom, Sean was actively involved in co-curricular activities as the President of the Marine Science Interest Group. Having exhibited the desired values of an RP student, Sean received the REPUBLIC Award in AY2018.

He was fortunate to be able to carry out his internship at Underwater World Pattaya and has gained valuable insights and experience from it. His outstanding performance has received positive feedback from his supervisors.

Despite his busy schedule, Sean set aside time to volunteer in activities organized by Resort World Sentosa South-East Asia Aquarium (RWS SEAA) and National Parks Board (NParks).



**FARHAN SUHADA BIN RASIP**  
**Diploma in Materials Science (now known as Diploma in Applied Chemistry)**  
**2021 Graduate**

Farhan is currently pursuing Bachelor of Engineering (Materials Engineering) at Nanyang Technological University



*RP has nurtured me to be more proactive in my learning. The daily grades for attendance, mini quizzes and reflections helped me to realise the importance of consistency to achieve my goals. The soft skills that I have developed through RP's Problem-based Learning pedagogy helped me to be a better communicator, negotiator, team player and leader. I was also blessed with supportive lecturers and mentor who continuously encouraged me to step out of my comfort zone and embrace new opportunities."*

Farhan graduated from RP with a Diploma in Materials Science with Merit and Diploma Plus in Business Innovation and Entrepreneurship. He was also a proud recipient of the Lee Kuan Yew Award for Mathematics and Science, and the Materials Research Society Singapore Gold Medal award. In his final year of study at RP, Farhan did his internship with an EduTech start-up company, Acktec Technologies Pte Ltd, where he honed his management and leadership skills. The entrepreneurship programme has allowed Farhan to apply the skills learnt with real-world experience.



**EMERALD CHANG**  
**Diploma in Biomedical Science**  
**2013 Graduate**

Currently working as a Research Assistant at the Department of Obstetrics & Gynaecology, National University Hospital



*I had a fulfilling and positive time at RP, where I was given a wide range of intriguing opportunities to learn about life sciences and to form lifelong friendships. The skillsets and knowledge acquired through the Diploma in Biomedical Science have provided me with an excellent foundation to pursue my interest in women's health research and contribute to better health outcomes for women and their children."*

Emerald Chang graduated from RP with Diploma in Biomedical Science in 2013. Upon graduation, she went to University of Melbourne, Australia to obtain her bachelor's degree in Science before pursuing a Master of Science in Epidemiology.





**MUHAMMAD HAZIM  
BIN MOHAMED**

**Diploma in Biomedical Science  
2020 Graduate**

Currently working as a Research Technologist at the Department of Pharmacy, Anti-microbial Resistance Research Laboratory, Singapore General Hospital



*RP has a team of passionate and caring lecturers leading the unique Problem-based Learning (PBL) pedagogy. Apart from the guidance given to me to achieve on the academic front, there were also plenty of opportunities for me to engage in interest groups as well as leadership and community services. RP had given me more than just a diploma, as the journey in RP allowed me to develop my character to bring out the best qualities in me."*

Hazim has always been a hardworking and inquisitive learner whose passion for Science started since he was very young. Being enrolled into the Diploma in Biomedical Science allowed him to further deepen his interest in medical research, as he was given the opportunity to undertake a research internship at A\*STAR where he was awarded the A\*STAR award during his second and third year of study in RP. He thrived in his studies at RP as PBL propelled his ability to combine self-directed learning, team collaboration, critical thinking, and problem-solving, which are highly sought-after skills in the working world.



**ANG SIU POH**

**Diploma in Biotechnology  
2021 Graduate**

Currently working as an Executive at Singapore Food Agency (SFA)



*RP has given me many opportunities to hone my presentation and people skills. I have also developed my interest to further pursue my studies in food science."*

As RP's first SFA Diploma Scholarship recipient, Siu Poh had to go through two rounds of interviews and six weeks of trial internship with SFA before being offered the scholarship. Her drive to excel was not limited to curricular activities as she went beyond the classroom to pursue the National Youth Achievement Award (NYAA). The NYAA interest group executive committee member went on to receive the NYAA Gold Award, SAS WINGS Gold Award and REPUBLIC Award during her time in RP.



### **ONG JIA QI**

**Diploma in Environmental Science  
(now known as Diploma in  
Environmental & Marine Science)  
2020 graduate**

Currently pursuing a Degree in Environmental Engineering at Nanyang Technological University



*Through RP's PBL, I managed to build up my confidence when presenting my solutions inside and outside the classroom. Together with internship opportunities, I understood and learnt about the pathway I need to take to be an environmental engineer. A big thank you to all RP lecturers and course mates for the beautiful memories that I will never forget."*

Diligent and always demonstrating a positive attitude in class, Jia Qi was one of the top students in the Diploma in Environmental Science. She never hesitated to share her knowledge and guide her peers. Jia Qi's final-year project was on waste management techniques using black soldier fly bioconversion to treat carnivore faecal waste produced in Singapore Zoo. The project was in collaboration with Mandai Wildlife Group and generated much publicity. Jia Qi did her internship at Sembcorp and also did well outside of the classroom, having participated in competitions and taking on the role of Publicity Manager in the Conservation Interest Group at RP.



### **CHONG KHE YING**

**Diploma in Biotechnology  
2016 Graduate**

Currently working as a Research Assistant at Chugai Pharmabody Research



*Problem-based Learning enhanced my critical thinking and troubleshooting skills, and instilled a strong fundamental knowledge in me at the same time. The guidance and care from experienced lecturers who are experts in their fields pointed me to the right directions when I hit road blocks. The opportunities provided by RP have broadened my horizons where I was eventually able to discover my passion in Life Sciences and work towards it. Today, I'm progressing steadily towards my dream and goals in Molecular Biology."*

An exemplary student, Khe Ying has achieved much during her time in RP where she was a recipient for Director's Roll of Honour as well as the REPUBLIC Award and Service-Learner Award. Beyond the classroom, Khe Ying participated actively in various course-based and inter-polytechnic events as well. Khe Ying also took up leadership roles in university and graduated with a Bachelor of Science (Honours) in Life Sciences from the National University of Singapore.





*I am thankful as RP has given me a myriad of opportunities to grow. RP lecturers are astute with sharing their knowledge and the unique collaborative learning has provided me the necessary skills to be independent, which is essential in the workforce. RP has also groomed me to be to be an independent and self-disciplined learner which is necessary as a researcher. The knowledge and skills gained in RP has prepared me to take on challenges in the workforce."*

**SITI AISHAH BINTE ABDUL GHANI**

**Diploma in Biomedical Science**

**2014 Graduate**

**Graduated with a Degree in Biomedical Science from University of Queensland, Australia**

Currently working as a Research Assistant at DUKE-NUS Medical School

Aishah's passion for Sciences was ignited during Biology lessons. The same interest and passion had led her to pursue the Diploma in Biomedical Science at RP. Through PBL conducted in class, Aishah had the opportunity to meet, collaborate and learn together with people from different walks of life. She credits RP's supportive environment as vital when creating a conducive learning environment.



*My education at RP has equipped me with skills to become a better problem solver and critical thinker — which are essential in my current role as a researcher. I am also very thankful to my lecturers who always passionately share their knowledge and challenge my understanding so that I can further improve myself."*

**MELVIN LEONARDI LIOE**

**Diploma in Pharmaceutical Sciences**

**2013 Graduate**

**Graduated with Bachelor of Science in Chemical Engineering from Technical University of Munich-Singapore Institute of Technology (TUM-SIT) in 2019**

Currently working as a Research and Development (R&D) Specialist at Bayer

After graduating from RP and working for 3 years, Melvin continued his further studies at TUM-SIT where he was awarded the German Academic Exchange Service (DAAD) Scholarship by the German government in 2018 during his overseas semester studies in Munich, Germany. Upon his return to Singapore after graduation, he worked in various roles related to R&D before his current position as R&D Specialist at Bayer. With his strong passion in chemistry and curiosity in science, Melvin's dream is to become a full-fledged scientist, focusing in medicinal chemistry and drug-discovery.



*DIPLOMA IN*

# ***APPLIED CHEMISTRY***

*R17*

- Acquire knowledge and skills in chemistry that can be applied widely, including in the cosmetic, flavours/fragrances, pharmaceutical, and petrochemical industries
- Learn to formulate, process and analyse chemicals and materials
- Undergo a 20-week Industry Immersion Programme with organisations such as 3M, A\*STAR Research Institutes, Clariant, Evonik, Osteopore, Procter & Gamble Company, and Solvay

# REVOLUTIONISE THE WAY WE LIVE WITH CHEMISTRY FOR A SUSTAINABLE FUTURE.



Scan to find out more about the diploma

## ABOUT THE DIPLOMA

From pharmaceutical drugs to skincare products, the practical use of chemistry is essential in our daily lives. Embark on a journey with us to discover how the atoms, the building blocks of all matter, interact to form products we use today.

Through the Diploma in Applied Chemistry, you will be equipped with a solid foundation in chemistry to tackle the challenges in various chemical-related industries. You will be trained to formulate, process and analyse chemicals and materials in the laboratory. Depending on your interest, you can choose to specialise in either Materials

Science or Industrial Chemistry in the later stages of the diploma.

With access to state-of-the-art learning facilities such as the RP-Shimadzu Sustainable Technology & Analytical Research Laboratory (S.T.A.R) Laboratory and Materials Innovation Hub (MI-Hub), you will gain practical training through the use of advanced analytical instruments and processing equipment pivotal to hone your skills. You can also look forward to participate in innovative research that are applicable in real-world through industry projects and internships with renowned companies such as 3M, Procter & Gamble Company, Evonik, and Solvay.

## CAREER OPPORTUNITIES

You can look forward to exciting careers in energy and chemicals, medical technology, pharmaceuticals, electronics, and aerospace sectors. Equip yourself to take on roles such as:

- Assistant Chemist
- Biomedical Product Specialist
- Laboratory Technologist
- Process Technician
- Research Associate
- Technical Sales Assistant
- Quality Assurance/Control Specialist



**Modules such as Formulation Science and Technology offer first-hand experience in creating skin and personal care products, allowing students to understand the look and feel of these products and, more importantly, delve into the science behind them. Other modules like Quality Assurance and Data Science also prepare students for the future of work as data science grows in importance."**

### MR CHAN KIN SHEN

Research Specialist and RP Alumni  
Procter & Gamble (Singapore) Pte Ltd

## COURSE STRUCTURE

The course structure consists of general, discipline, specialisation, elective, and freely chosen modules. There is also an industry orientation component.

### GENERAL MODULES

- Communication in the Global Workplace
- Critical Thinking and Problem Solving Skills
- ECG I: Exploring the Future of Work
- ECG II: Becoming Future-Ready
- Innovation and Practice
- Life Skills I
- Life Skills II
- Life Skills III
- Singapore, the World and I

### DISCIPLINE MODULES

- Analytical Instrumentation
- Biology
- Engineering Mathematics
- General and Physical Chemistry
- Laboratory Practices and Safety
- Materials Science
- Mathematics
- Organic and Inorganic Chemistry
- Physics
- Polymer Chemistry

### INDUSTRY ORIENTATION PROGRAMME

- Project

#### **Select one module from the list below:**

- Corporate Innovation Immersion Programme
- Entrepreneurial Immersion Programme
- Industry Immersion Programme

### FREELY CHOSEN MODULES

Students need to either select the Special Project module or select **two modules** from a list of Freely Chosen Modules

### SPECIALISATION MODULES

**Choose one out of two specialisation tracks listed below:**

#### **Option: Industrial Chemistry Track**

- Current Good Manufacturing Practice
- Formulation Science and Technology
- Laboratory Skills in Analytical Testing
- Materials Processing
- Medicinal Chemistry
- Nanotechnology
- Petrochemical Technology
- Quality Assurance and Data Science
- Specialty Chemicals

#### **Option: Materials Science Track**

- Additive Manufacturing for Applied Materials
- Biomaterials
- Composite Materials Design and Applications
- Laboratory Skills in Analytical Testing
- Material Analysis
- Materials Processing
- Nanotechnology
- Quality Assurance and Data Science
- Wafer Fabrication and Packaging

## MINIMUM ENTRY REQUIREMENTS

<b>MER for GCE O-Level Holders</b>	<b>GRADE</b>
<b>English Language</b>	<b>1 – 7</b>
<b>Mathematics (Elementary/ Additional)</b>	<b>1 – 6</b>
<b>ANY OF THE FOLLOWING SUBJECTS</b>	<b>1 – 6</b>

- Biology
- Biotechnology
- Chemistry
- Combined Science
- Design & Technology
- Engineering Science
- Food & Nutrition
- Fundamentals of Electronics
- Physical Science
- Physics
- Science (Biology, Chemistry)
- Science (Biology, Physics)
- Science (Chemistry, Physics)

## FURTHER STUDIES

**Discover exciting opportunities for further studies!**

Graduates can pursue a degree locally or in other prestigious overseas universities in a wide range of areas including chemistry, science, chemical engineering, and materials science.



*DIPLOMA IN*

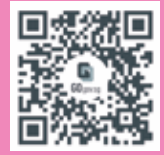
# ***BIOMEDICAL SCIENCE***

*R14*

- Acquire scientific knowledge and develop technical skills to work with genetic materials and cells, as well as handle analytical instruments
- Gain in-depth understanding of how to plan and design biomedical experiments
- Engage in a 20-week Industry Immersion Programme with organisations such as A\*STAR Institute of Molecular and Cell Biology, Genome Institute of Singapore, Ng Teng Fong General Hospital, Raffles Medical Group, and Singapore General Hospital



# TURN YOUR FASCINATION WITH THE HUMAN BODY'S RESPONSES TO ILLNESS INTO AN ANALYTICAL CAREER IN THE BIOMEDICAL SCIENCE AND HEALTHCARE PROFESSION.



Scan to find out more about the diploma

## ABOUT THE DIPLOMA

To understand the nature of diseases and how to combat them, you must first comprehend how diseases develop in the human body. The Diploma in Biomedical Science (DBMS) will equip you with the essentials of human anatomy, the molecular and physiological basis of different diseases, and their corresponding treatments. With access to state-of-the-art facilities and powerful diagnostic technology, your

investigative and technical skills will be honed for scientific research and laboratory diagnostics. You will also receive extensive hands-on training through the two specialisation tracks — Biomedical Research and Medical Laboratory Technology.

Through DBMS, you can look forward to a rewarding career in the biomedical science and healthcare industry.

## CAREER OPPORTUNITIES

You can pursue a fulfilling career in healthcare institutions, research laboratories and companies that develop and distribute biomedical products. Look forward to roles such as:

- Biomedical Research Assistant
- Laboratory Technologist
- Medical and Laboratory Product Specialist
- Medical Technologist
- Quality Control/Quality Assurance Officer



***RP students have been exceptional and helped the lab develop research in areas such as automated sequence analysis and AR protein visualisation. Some have been rewarded with first-author publications because of the research done in their respective assignments. That is evidence of the students' ability."***

### **DR SAMUEL GAN**

Senior Principal Investigator  
Experimental Drug Development Centre &  
Bioinformatics Institute  
A\*STAR

## COURSE STRUCTURE

The course structure consists of general, discipline, specialisation, elective, and freely chosen modules. There is also an industry orientation component.

### GENERAL MODULES

- Communication in the Global Workplace
- Critical Thinking and Problem Solving Skills
- ECG I: Exploring the Future of Work
- ECG II: Becoming Future-Ready
- Innovation and Practice
- Life Skills I
- Life Skills II
- Life Skills III
- Singapore, the World and I

### DISCIPLINE MODULES

- Anatomy and Physiology
- Biochemistry
- Biology
- Epidemiology and Biostatistics
- General and Physical Chemistry
- Genetics
- Immunology
- Laboratory Practices and Safety
- Mathematics
- Microbiology
- Molecular and Cell Biology
- Organic and Inorganic Chemistry

### INDUSTRY ORIENTATION PROGRAMME

- Project

**Select one module from the list below:**

- Corporate Innovation Immersion Programme
- Entrepreneurial Immersion Programme
- Industry Immersion Programme

### FREELY CHOSEN MODULES

Students need to either select the Special Project module or select **two modules** from a list of Freely Chosen Modules

### SPECIALISATION MODULES

**Choose one out of two specialisation tracks listed below:**

#### Option: Biomedical Research Track

- Advanced Cell Biology
- Cell Cycle and Oncology
- Developmental Anatomy and Neuroscience
- Genomics
- Medical Microbiology
- Techniques in Molecular Biology

#### Option: Medical Laboratory Technology Track

- Clinical Chemistry
- Developmental Anatomy and Neuroscience
- Diagnostic Pathology
- Haematology
- Medical Microbiology
- Medical Technology

### ELECTIVE MODULES

**Select one module from the list below:**

#### Option: Biomedical Research Track

- Current Good Manufacturing Practice
- Diagnostic Pathology
- Introduction to Programming
- Patient Care
- Pharmacology and Toxicology

#### Option: Medical Laboratory Technology Track

- Current Good Manufacturing Practice
- Introduction to Programming
- Patient Care
- Pharmacology and Toxicology
- Techniques in Molecular Biology

## MINIMUM ENTRY REQUIREMENTS

<b>MER for GCE O-Level Holders</b>	<b>GRADE</b>
<b>English Language</b>	<b>1 – 7</b>
<b>Mathematics (Elementary/ Additional)</b>	<b>1 – 6</b>
<b>ANY OF THE FOLLOWING SUBJECTS</b>	<b>1 – 6</b>
<ul style="list-style-type: none"><li>• Biology</li><li>• Biotechnology</li><li>• Chemistry</li><li>• Combined Science</li><li>• Design &amp; Technology</li><li>• Electronics</li><li>• Engineering Science</li><li>• Food &amp; Nutrition</li><li>• Fundamentals of Electronics</li><li>• Physical Science</li><li>• Physics</li><li>• Science (Biology, Chemistry)</li><li>• Science (Biology, Physics)</li><li>• Science (Chemistry, Physics)</li></ul>	

## FURTHER STUDIES

### **Discover exciting opportunities for further studies!**

DBMS graduates are ideally placed to pursue a degree in various biomedical and applied science fields including bioengineering, biological science, chemistry, dentistry, medicine, medical laboratory technology, medical science, and psychology. A large proportion of our graduates went on to undertake their degrees at the National University of Singapore, Nanyang Technological University, Singapore Management University, Singapore Institute of Technology, and Singapore University of Social Sciences.

Top overseas universities also welcome our graduates with advanced standing of up to two years. They include:

- Australian National University (Australia)
- Deakin University (Australia)
- Ferris State University (US)
- Murdoch University (Australia)
- Newcastle University (UK)
- The University of Adelaide (Australia)
- The University of Queensland (Australia)
- The University of Sheffield (UK)
- University of Dundee (UK)
- University of Liverpool (UK)
- University of Otago (NZ)
- University of Technology Sydney (Australia)
- University of Ulster (UK)



*DIPLOMA IN*

# ***BIOTECHNOLOGY***

*R16*

- Get creative and leverage technology to develop effective biological therapeutics to treat diseases
- Be equipped with skills to improve food quality and production, and develop new, nutritionally-enhanced foods
- Undergo a 20-week Industry Immersion Programme with organisations such as A\*STAR Research Institutes, Baxter Healthcare, Indoor Farm Factory Innovation, National Cancer Centre Singapore, Roche Singapore Technical Operations, Singapore Food Agency, Symrise Asia Pacific, ThermoFisher Scientific, and Wilmar International

# UNDERSTAND NEW BREAKTHROUGHS IN SCIENCE, AND TACKLE GLOBAL CHALLENGES IN FOOD, HEALTH AND GENETIC ENGINEERING.



Scan to  
find out more  
about the  
diploma

## ABOUT THE DIPLOMA

Gain knowledge across the broad spectrum that biotechnology encompasses. From vaccine design to agricultural sciences and food formulation, the Diploma in Biotechnology (DBIO) helps you develop solutions that benefit the world.

Get creative and leverage technology to develop effective biological therapeutics to treat diseases through the Biologics specialisation track. Alternatively, you may also acquire the skills to improve food quality and production, and develop new,

nutritionally-enhanced foods through the Food and Agrotech specialisation track.

DBIO will open doors for you in life science research, ranging from the biologics manufacturing, medical diagnostics, microbiological testing, agri-biotechnology research, food production, and innovation.

You will also experience the real-world impact of biotechnology as you embark on collaborative projects and internships with major companies in the industry. Be well on track for an exciting career through DBIO!

## CAREER OPPORTUNITIES

You can pursue a fulfilling career in healthcare institutions, research laboratories and companies that develop and distribute biomedical products. Look forward to roles such as:

- Assistant Agricultural Scientist
- Assistant Biotechnologist
- Assistant Food Technologist
- Biologics Production Technician
- Food and Microbiology Specialist
- Health Education Officer
- Laboratory Technologist
- Market Development Executive
- Plant Biotechnologist
- Quality Assurance Assistant
- Quality Control Analyst  
Research Assistant



***Justin, our intern from RP has adequate technical knowledge that enabled him to work independently and efficiently to complete his assigned tasks on time. He proved his willingness to learn by taking his own initiative to explore other areas and products beyond his job scope as our intern."***

### **MS GRACE H. LIZARDO**

Marketing Manager  
Roche Diagnostics Asia Pacific Pte Ltd  
on Intern, Ng Jun Wei Justin, 2019 Graduate  
from Diploma in Biotechnology

## COURSE STRUCTURE

The course structure consists of general, discipline, specialisation, elective, and freely chosen modules. There is also an industry orientation component.

### GENERAL MODULES

- Communication in the Global Workplace
- Critical Thinking and Problem Solving Skills
- ECG I: Exploring the Future of Work
- ECG II: Becoming Future-Ready
- Innovation and Practice
- Life Skills I
- Life Skills II
- Life Skills III
- Singapore, the World and I

### DISCIPLINE MODULES

- Analytical Instrumentation
- Biochemistry
- Biology
- General and Physical Chemistry
- Genetics
- Laboratory Practices and Safety
- Mathematics
- Microbiology
- Molecular and Cell Biology
- Organic and Inorganic Chemistry
- Quality Assurance and Data Science
- Recombinant DNA Technologies

### INDUSTRY ORIENTATION PROGRAMME

- Project

**Select one module from the list below:**

- Corporate Innovation Immersion Programme
- Entrepreneurial Immersion Programme
- Industry Immersion Programme

### FREELY CHOSEN MODULES

Students need to either select the Special Project module or select **two modules** from a list of Freely Chosen Modules

### SPECIALISATION MODULES

**Choose one out of two specialisation tracks listed below:**

#### **Option: Biologics Track**

- Anatomy and Physiology
- Biological Therapeutics
- Biologics Production
- Cell Culture
- Genomics
- Immunology
- Protein Technologies

#### **Option: Food and Agrotech Track**

- Food Innovation and Sustainability
- Food Processing and Packaging
- Food Science and Nutrition
- Fundamentals of Agro-systems
- Introduction to Agro-science
- Plant Genetics and Tissue Culture
- Quality Assurance in Agricultural and Food Products



## MINIMUM ENTRY REQUIREMENTS

<b>MER for GCE O-Level Holders</b>	<b>GRADE</b>
<b>English Language</b>	<b>1 – 7</b>
<b>Mathematics (Elementary/ Additional)</b>	<b>1 – 6</b>
<b>ANY OF THE FOLLOWING SUBJECTS</b>	<b>1 – 6</b>
<ul style="list-style-type: none"><li>• Biology</li><li>• Biotechnology</li><li>• Chemistry</li><li>• Combined Science</li><li>• Design &amp; Technology</li><li>• Electronics</li><li>• Engineering Science</li><li>• Food &amp; Nutrition</li><li>• Fundamentals of Electronics</li><li>• Physical Science</li><li>• Physics</li><li>• Science (Biology, Chemistry)</li><li>• Science (Biology, Physics)</li><li>• Science (Chemistry, Physics)</li></ul>	

## FURTHER STUDIES

### **Discover exciting opportunities for further studies!**

As a DBIO graduate, you can pursue degree programmes in a wide range of subjects such as biotechnology, biological sciences, food and nutrition, chemistry, medical sciences, and business. Every year, a significant percentage of our graduates have been accepted into the National University of Singapore, Nanyang Technological University, Singapore Management University, and Singapore Institute of Technology.

Top overseas universities also welcome our graduates with advanced standing of up to two years. They include:

- Australian National University (Australia)
- Monash University (Australia)
- Newcastle University (UK)
- Queensland University of Technology (Australia)
- RMIT University (Australia)
- The University of Melbourne (Australia)
- The University of Queensland (Australia)
- University of Dundee (UK)
- University of Western Australia (Australia)



*DIPLOMA IN*

# ***ENVIRONMENTAL & MARINE SCIENCE***

*R62*

- Attain knowledge and practical experience in the field of environmental and marine science, encompassing disciplines such as circular economy, climate science, ecology, and aquaculture
- Acquire skills in data analysis, resource management and field work/ studies/sampling to help you develop sustainable environmental and aquaculture solutions
- Intern with organisations such as National Environment Agency, National Parks Board, S.E.A. Aquarium, Tropical and Marine Science Institute, and Mandai Wildlife Group

# BE AT THE FOREFRONT IN PROTECTING THE ENVIRONMENT AND MARINE LIFE FOR THE FUTURE GENERATIONS!



Scan to find out more about the diploma

## ABOUT THE DIPLOMA

Climate change presents a host of challenges to humanity. These include increased wildfires, rising sea levels, declining clean water supplies, reduced agricultural and seafood yields, and disease outbreaks. Passionate in making a positive impact amidst these challenges? Join us to become the next generation of leaders in sustainability!

Through the Diploma in Environmental & Marine Science (DEMS), you will be equipped with knowledge in an extensive range of topics such as earth and climate science, terrestrial and marine ecology, environmental data analysis, environmental management, sustainability reporting, and circular economy. You will also gain essential knowledge and skills to help you

conserve and manage complex ecosystems through interactions with terrestrial and aquatic wildlife during external field trips and visits to RP's Rain Garden and aquaculture research facility, Aquaria.

Specialisation tracks in Environmental Management and Technology or Aquaculture Technology which you can choose in your second year will prepare you for fast-paced roles at the forefront of developing sustainable environmental and aquaculture solutions. Gain hands-on experiences through industry attachments in organisations such as Mandai Wildlife Group, S.E.A. Aquarium, Tropical and Marine Science Institute, National Environment Agency, and National Parks Board.

## CAREER OPPORTUNITIES

You can look forward to enriching careers in environmental, water services, petrochemical and semiconductor sectors, fisheries, oceanariums, wildlife and marine parks and reserves, research institutes as well as government agencies. Get ready to take on roles such as:

- Aquaculture Technologist
- Aquarist
- Aquatic Facility Manager
- Conservation and Outreach Executive
- Environmental Control and Environmental Service Officer
- Environmental Health and Safety Technician
- Laboratory Technologist
- Operations Technician/Executive
- Parks Officer



***RP students do well because they know what they want, they can work amidst ambiguity and have pleasant characters, and the courage to say 'yes' to new things. They succeed in their industry attachment because of their positive mindsets."***

### **DR. GENEVIEVE OW**

Deputy Director  
Sustainable Urban Greenery, Centre for Urban Greenery & Ecology, National Parks Board

## COURSE STRUCTURE

The course structure consists of general, discipline, specialisation, elective, and freely chosen modules. There is also an industry orientation component.

### GENERAL MODULES

- Communication in the Global Workplace
- Critical Thinking and Problem Solving Skills
- ECG I: Exploring the Future of Work
- ECG II: Becoming Future-Ready
- Innovation and Practice
- Life Skills I
- Life Skills II
- Life Skills III
- Singapore, the World and I

### DISCIPLINE MODULES

- Biology
- Earth and Climate Science
- Environmental Management and Assessment
- Environmental Data Analysis
- General and Physical Chemistry
- Laboratory Practices and Safety
- Marine Biology
- Marine Ecology and Conservation
- Mathematics
- Microbiology
- Sustainable Reporting and Communications
- Systematics and Biodiversity
- Terrestrial and Freshwater Ecology
- Wildlife Management and Conservation

### INDUSTRY ORIENTATION PROGRAMME

- Project

**Select one module from the list below:**

- Corporate Innovation Immersion Programme
- Entrepreneurial Immersion Programme
- Industry Immersion Programme

### FREELY CHOSEN MODULES

Students need to either select the Special Project module or select **two modules** from a list of Freely Chosen Modules

### SPECIALISATION MODULES

**Choose one out of two specialisation tracks listed below:**

#### **Option: Aquaculture Technology Track**

- Animal Health and Nutrition
- Comparative Aquatic Animal Physiology
- Genetics and Fish Breeding
- Seafood Handling
- Sustainable Aquaculture

#### **Option: Environmental Management and Technology Track**

- Environmental Public Health
- Pollution Control and Monitoring
- Resource Management and Circular Economy
- Water Resource Management
- Workplace Safety and Health

## MINIMUM ENTRY REQUIREMENTS

<b>MER for GCE O-Level Holders</b>	<b>GRADE</b>
<b>English Language</b>	<b>1 – 7</b>
<b>Mathematics (Elementary/ Additional)</b>	<b>1 – 6</b>
<b>ANY OF THE FOLLOWING SUBJECTS</b>	<b>1 – 6</b>

- Biology
- Biotechnology
- Chemistry
- Combined Science
- Design & Technology
- Engineering Science
- Food & Nutrition
- Fundamentals of Electronics
- Physical Science
- Physics
- Science (Biology, Chemistry)
- Science (Biology, Physics)
- Science (Chemistry, Physics)

## FURTHER STUDIES

**Discover exciting opportunities for further studies!**

Graduates can pursue a degree in prestigious local and overseas universities in numerous areas which include environmental and marine science, sustainable development, ecology, and aquaculture.



*DIPLOMA IN*

# ***PHARMACEUTICAL SCIENCE***

*R22*

- Gain a broad foundation of knowledge in pharmaceutical science, encompassing disciplines such as chemistry, pharmacology and pharmaceuticals
- Develop interdisciplinary skills in clinical pharmacy, laboratory research, medication review, patient counselling, pharmaceutical manufacturing processes, and supply and distribution of pharmaceuticals
- Experience a 20-week Industry Immersion Programme with organisations such as Beacons Pharmaceuticals, Khoo Teck Puat Hospital and Unity Pharmacy



# PLAY A PIVOTAL ROLE IN DRIVING DRAMATIC ADVANCES IN MODERN MEDICINE.



Scan to find out more about the diploma

## ABOUT THE DIPLOMA

The Diploma in Pharmaceutical Science (DPHM) offers you a detailed look at how new drugs and therapies significantly impact the way we treat illnesses and diseases today. Learn about drug discovery and development, clinical pharmacy, manufacturing, supply and distribution of pharmaceuticals, medication review, patient counselling, along with best practices and societal considerations of the pharmaceutical industry.

Acquire rigorous hands-on training in authentic clinical pharmacy and retail

operations at the cutting-edge RP Teaching Dispensary and the complementary RP-Unity Teaching Retail Pharmacy. The RP-BASF Pharmaceutical Technology Laboratory will further upskill you in formulation and compounding of medications. In DPHM, you can choose to specialise in either Industrial Pharmacy or Pharmacy Practice. With the valuable experience and contacts gained through your internships at hospitals, retail pharmacies, drug manufacturing plants, and other established pharmaceutical companies, your career is off to a good head start.

## CAREER OPPORTUNITIES

You can pursue a fulfilling career in healthcare institutions, research laboratories and companies that develop and distribute pharmaceuticals. Look forward to roles such as:

- Clinic Supervisor
- Clinical Research Coordinator
- Medical Representative
- Pharmacy Technician
- Quality Control Technologist
- Research Assistant
- Sales/Product Executive



***RP interns who are attached with us are eager to learn. They are also resilient in a demanding learning atmosphere which is necessary for their future career journey."***

### **MS SUPADHARA RAMAIYAH**

Senior Principal Clinical Pharmacist Head  
Department of Pharmacy  
Khoo Teck Puat Hospital

## COURSE STRUCTURE

The course structure consists of general, discipline, specialisation, elective, and freely chosen modules. There is also an industry orientation component.

### GENERAL MODULES

- Communication in the Global Workplace
- Critical Thinking and Problem Solving Skills
- ECG I: Exploring the Future of Work
- ECG II: Becoming Future-Ready
- Innovation and Practice
- Life Skills I
- Life Skills II
- Life Skills III
- Singapore, the World and I

### DISCIPLINE MODULES

- Anatomy and Physiology
- Biochemistry
- Biology
- General and Physical Chemistry
- Laboratory Practices and Safety
- Mathematics
- Microbiology
- Molecular and Cell Biology
- Organic and Inorganic Chemistry
- Pharmacology and Toxicology
- Quality Assurance and Data Science

### INDUSTRY ORIENTATION PROGRAMME

- Project

**Select one module from the list below:**

- Corporate Innovation Immersion Programme
- Entrepreneurial Immersion Programme
- Industry Immersion Programme

### FREELY CHOSEN MODULES

Students need to either select the Special Project module or select **two modules** from a list of Freely Chosen Modules

### SPECIALISATION MODULES

- Fundamentals of Pharmacy Practice
- Pharmaceutical Manufacturing Technology
- Pharmaceutics
- Pharmacotherapy and Pharmacy Practice

**Choose one out of two specialisation tracks listed below:**

#### **Option: Industrial Pharmacy Track**

- Analytical Instrumentation
- Current Good Manufacturing Practice
- Drug Development and Commercialisation
- Health Products Supply Chain

#### **Option: Pharmacy Practice Track**

- Clinical Skills in Pharmacy Practice
- Good Dispensing Practice
- Medicinal Chemistry
- Patient Care

## MINIMUM ENTRY REQUIREMENTS

<b>MER for GCE O-Level Holders</b>	<b>GRADE</b>
<b>English Language</b>	<b>1 – 7</b>
<b>Mathematics (Elementary/Additional)</b>	<b>1 – 6</b>
<b>ANY OF THE FOLLOWING SUBJECTS</b>	<b>1 – 6</b>
<ul style="list-style-type: none"><li>• Biology</li><li>• Biotechnology</li><li>• Chemistry</li><li>• Combined Science</li><li>• Design &amp; Technology</li><li>• Electronics</li><li>• Engineering Science</li><li>• Food &amp; Nutrition</li><li>• Fundamentals of Electronics</li><li>• Physical Science</li><li>• Physics</li><li>• Science (Biology, Chemistry)</li><li>• Science (Biology, Physics)</li><li>• Science (Chemistry, Physics)</li></ul>	

## FURTHER STUDIES

**Discover exciting opportunities for further studies!**

DPHM graduates can pursue degree programmes in a wide range of areas such as pharmacy, pharmaceutical sciences, medicine, dentistry, nursing, life sciences, biological sciences, and physiotherapy in local universities such as the National University of Singapore, Nanyang Technological University, and Singapore Institute of Technology.

Top overseas universities also welcome our graduates with advanced standing of up to 1.5 years. They include:

- Deakin University (Australia)
- Griffith University (Australia)
- Monash University (Australia)
- The University of Queensland (Australia)
- University of Otago (New Zealand)
- University of South Australia (Australia)



# ***COMMON SCIENCE PROGRAMME***

*R59*

***INTRIGUED BY THE SCIENCE BEHIND EVERYTHING?  
TAKE TIME TO INVESTIGATE.***

- Explore more, with more time to discover your interests
- Get to know different disciplines of science through common foundational modules
- Choose from five SAS diplomas

## ABOUT THE PROGRAMME

There is time to explore a little more before you settle on a specialisation from amongst SAS's various disciplines. Through the Common Science Programme (CSP), you will gain a broad understanding of science-related topics. You will be equipped with essential knowledge and skills to prepare you for a career in applied science. The CSP, offered in the first semester of the first year, introduces you to a wealth of opportunities in the industry, helping you to discover your interest amongst our diplomas:

- Applied Chemistry
- Biomedical Science
- Biotechnology
- Environmental & Marine Science
- Pharmaceutical Science



Scan to find out more about the programme

## COURSE STRUCTURE

### GENERAL MODULES

In the first semester, student will take the following modules:

- Biology
- Communication in the Global Workplace
- ECG I: Exploring the Future of Work
- General and Physical Chemistry
- Laboratory Practices and Safety
- Mathematics

## MINIMUM ENTRY REQUIREMENTS

<b>MER for GCE O-Level Holders</b>	<b>GRADE</b>
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<b>English Language</b>	<b>1 – 7</b>
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<b>Mathematics (Elementary/Additional)</b>	<b>1 – 6</b>
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<b>ANY OF THE FOLLOWING SUBJECTS</b>	<b>1 – 6</b>
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Biology, Biotechnology, Chemistry, Combined Science, Computing, Computer Studies, Design & Technology, Electronics, Engineering Science, Fundamentals of Electronics, Physics, Physical Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry)

For the full listing of entry requirements, visit [www.rp.edu.sg/full-time-courses/csp](http://www.rp.edu.sg/full-time-courses/csp)

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