

Republic Polytechnic opens new Aquaculture Centre

The Aquaculture Centre, the first of its kind at a local Polytechnic, will lead research and learning for the growing aquaculture industry

Singapore, 9 January 2014 – Republic Polytechnic (RP) today announced the official opening of its new Aquaculture Centre on the first day of its Open House, with Guest-of-Honour Dr Mohamad Maliki Bin Osman, Minister of State, Ministry of National Development and Ministry of Defence in attendance. The new Aquaculture Centre, named *The Aquaria*, is the first of its kind at a local polytechnic.

As Singaporeans consume seafood in growing quantities each year, and with approximately half the fish and shellfish consumed around the world now being produced through aquaculture, there is an increased focus on developing sustainable aquaculture techniques and practices. RP's new Aquaculture Centre will conduct research in areas such as fish feed formulation using soy waste like okara to make supplies of food-fish more sustainable and identify how various combinations of water conditions and parameters can be used for cost-effective health management of fish being bred in aquaculture facilities.

The Aquaria is a state-of-the-art 180-square-metre indoor and outdoor laboratory which will serve an important role in teaching, learning and research. Students from the new **Diploma in Marine Science** and **Aquaculture (DMAC)**, administered by RP's **School of Applied Science** will benefit from it as a technologically-advanced teaching and learning facility. In addition, the centre will also support research in marine science and aquaculture technologies, thereby supporting Singapore's goal to boost local food fish production in a sustainable manner.

Set on RP's campus, *The Aquaria* features five outdoor circular fiberglass tanks and a sophisticated indoor facility. The outdoor tanks are fully integrated with two life support systems with a total of more than 20,000 litres of fresh or saltwater to support a wide array of fish. The indoor facility contains a total of 48 experimental tanks for both fresh and sea water with UV light and temperature control capabilities for sea and freshwater teleost and crustaceans. The teleost, a large and extremely diverse group of ray-finned fishes, comprise some 30,000 species, with new species being discovered each year. The indoor facility also features two-metre long coral tanks to help boost coral conservation



studies and research in a controlled environment. A food preparation laboratory has also been incorporated to support research on feed formulation, which includes preparation of wet and dried feed and culturing of algae and phytoplankton.

"Singapore's aquaculture industry is growing fast, in line with the government's target to increase local production of food fish from about 7 per cent to 15 per cent of local consumption. It is important to ensure that our students are kept abreast of modern aquaculture technologies, so that they can act as conduits, translating advanced techniques and technologies into the industry, thus accelerating the growth of our local aquaculture industry," said Mr Yeo Li Pheow, Principal/CEO, Republic Polytechnic.

Three Memorandums of Understanding (MOU) were signed with various leading organisations in the aquaculture and marine conservation sector, including the Tropical Marine Science Institute (TMSI) of the National University of Singapore (NUS), the Temasek Life Sciences Laboratory (TLL) and Resorts World Sentosa (Marine Life Park). A joint-laboratory agreement was also signed with James Cook University, which will see part of the aquaculture facility retrofitted with equipment for marine conservation and exploration cum surveillance work.

Under the MOUs signed, RP and TLL will embark on areas such as feed formulation and microalgae cultivation which is required for cultivating of fish fries, and the MOU with RWS' Marine Life Park will see both organisations exploring volunteer programmes, scholarships for DMAC students as well as collaborative projects on marine conservation. RP will also collaborate with TMSI in areas such as anti-fouling, bioprospecting, aquaculture techniques, and co-application of competitive grants for aquaculture research. The MOUs, all for the duration of three years, will provide opportunities for further collaboration on research projects, student internships as well as staff exchanges.

"These Memorandums of Understanding with our partners will open new doors for further collaboration in the area of marine conservation and feed development. Our students will benefit from new opportunities to engage in industry-relevant projects and internships," Mr Yeo added.

The new centre is set to start undertaking projects which include fish feed formulation, horseshoe crab and coral conservation, water quality management, anti-fouling and mathematical modelling approaches to optimise aquaculture.



About Republic Polytechnic

The first educational institution in Singapore to leverage the Problem-based Learning approach for all its diploma programmes, Republic Polytechnic (RP) has six schools and two academic centres offering thirty-nine diplomas in Applied Science, Engineering, Enterprise and Communication, Events and Hospitality, Infocomm, Sports, Health & Leisure, and Technology for the Arts.

Republic Polytechnic is committed to nurturing innovation and entrepreneurial learning in an environment that develops problem-solving skills and lifelong learning opportunities. Its holistic and broad-based curriculum prepares students for an active and meaningful role in society as problem solvers, respected professionals and passionate citizens.

Republic Polytechnic strives for excellence by achieving various international and national accreditations, including ISO 9001, ISO 14001, OHSAS 18001, ISO 22301, Singapore Quality Class, People Developer, Innovation Class, and Service Class.

For more information, visit http://www.rp.edu.sg

关于共和理工学院

共和理工学院 (Republic Polytechnic) 是新加坡首所利用解题式学习法于文凭课程的教育机构。共和理工学院拥有六所分院和两所学习中心,提供三十九项文凭。其中包括应用科学、工程学、资讯通信、企业与通讯、酒店服务、体育、保健与休闲教育学,以及艺术科技。

共和理工学院致力于培育创新和创业精神的学习环境,以创造解题过程的技能和终身学习的机会。其全面而广泛的课程,栽培学生在投入社会时能够积极有效地解决问题,成为专业人才,并对社会做出有意义的贡献。

共和理工学院坚持追求卓越表现,以获得国际和国家认证机构的认证标志,其中包括ISO 9001, ISO 14001, OHSAS 18001, ISO 22301, 新加坡素质级、新加坡人力资源发展标准、新加坡创新级和新加坡服务级。

欲了解更多信息, 请浏览 http://www.rp.edu.sg



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Appendix – Quotes from Industry Partners

Temasek Life Sciences Laboratory

"I would like to congratulate Republic Polytechnic on the official opening of The Aquaria. The launch of its new aquaculture centre is strategic as it supports the teaching and development of innovative research and aquaculture technologies which plays an important role in contributing to future food security for Singapore and the region," said Peter Chia, Chief Operating Officer of Temasek Life Sciences Laboratory.

"The sustainability of any aquaculture business is enhanced by the right feed formulation which not only brings profitability and competitiveness to farms, but delivers higher quality and more nutritional fish products for consumers. We are excited to collaborate with Republic Polytechnic's new aquaculture centre to develop new feed formulation and microalgae cultivation, and I look forward to address new challenges faced by the industry with Republic Polytechnic."

Marine Life Park

Mr. Biswajit Guha, Director of Education at Resorts World Sentosa, said "This collaboration affirms Marine Life Park's commitment in marine conservation, research and outreach. Our partnership with RP will provide an excellent platform to groom local talents for this budding industry. Students will not only benefit from the knowledge and skills transfer, MLP will also provide excellent internship and employment opportunities for them. We will keep this momentum going, and continuously explore opportunities to inspire the next generation of marine stewards."

Resorts World Sentosa will be awarding the Marine Life Park Scholarship to two top students from RP's DMAC. The \$7,500 scholarship will be disbursed over the course of the student's second and third year.