

Course Application for E-Cube-I Scholarship 2021

Course name	Master of Science Program in Applied Chemistry												
Course Details	<p>The Master’s degree of Science in Applied Chemistry is a research-intensive graduate program focused on intellectual development and creation of novel technology or innovation for sustainable change in three fields of specialization:</p> <p>(1) Materials Chemistry and Nanotechnology:</p> <ul style="list-style-type: none">- Functional Polymers, Polymerization in aqueous dispersed systems- Polymer Microcapsules and Microspheres, Biopolymer- Photoelectrocatalysis, Thin-film fabrication, Energy and Environmental application- Photocatalytic nanomaterials- Theoretical and Computational Chemistry, Heterogeneous Catalysis <p>(2) Environmental and Analytical Chemistry:</p> <ul style="list-style-type: none">- Chemical sensor, Biosensor, Electrochemistry, Nanomaterials- Wastewater Treatment- Sample preparation, Environmental and Analytical Chemistry, Chromatography <p>(3) Biochemicals:</p> <ul style="list-style-type: none">- Plant biochemistry, Bio-active compounds, Protein structure , and functional- Biochemistry, Proteomics and Protein mechanism- Fluorescence sensors, Nanomaterials, and Natural product <p>Duration of Course: 2 years</p> <p>Language of Instruction: Thai/English</p> <p><u>Course Content</u></p> <p>Total of Credit: 36 Credit</p> <p>Program Structure</p> <p>1. Compulsory Course (9 credit)</p> <table><tr><td>09-211-601</td><td>Research Methodology in Applied Chemistry</td><td>3(3-0-6)</td></tr><tr><td>09-211-602</td><td>Advanced Instruments for Analysis</td><td>4(2-6-6)</td></tr><tr><td>09-211-603</td><td>Seminar 1</td><td>1(0-3-1)</td></tr><tr><td>09-211-701</td><td>Seminar 2</td><td>1(0-3-1)</td></tr></table>	09-211-601	Research Methodology in Applied Chemistry	3(3-0-6)	09-211-602	Advanced Instruments for Analysis	4(2-6-6)	09-211-603	Seminar 1	1(0-3-1)	09-211-701	Seminar 2	1(0-3-1)
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09-211-701	Seminar 2	1(0-3-1)											

	2. Elective Courses (15 credit) <i>Each field select at least one course of the other fields</i> 2.1 Materials Chemistry and Nanotechnology 09-212-601 Polymer Synthesis and Characterizations 3(3-0-6) 09-212-603 Semiconductor and Photocatalysis 3(3-0-6) 09-212-606 Polymerization in Dispersed Systems 3(3-0-6) 09-212-607 Nanoscience and Nanotechnology 3(3-0-6) 09-212-701 Advanced Organic Materials 3(3-0-6) 09-212-702 Thin Film Technology 3(3-0-6) 09-212-703 Biopolymer 3(3-0-6) 09-212-707 Computational Chemistry 3(2-3-5) 2.2 Environmental and Analytical Chemistry 09-213-601 Trace Analysis 3(3-0-6) 09-213-602 Analytical Method Validation 3(3-0-6) 09-213-603 Waste Reduction and Recycling Technology 3(3-0-6) 09-213-605 Applications of Separation Technique 3(3-0-6) 09-213-701 Green Chemistry 3(1-6-4) 09-213-702 Anaerobic Biotechnology for Bioenergy Production 3(3-0-6) 09-213-703 Biosensor and Applications 3(3-0-6) 09-213-704 Selected Topics in Environmental and Analytical Chemistry 3(3-0-6) 2.3 Biochemicals 09-214-601 Enzymology 3(3-0-6) 09-214-602 Bioorganic Chemistry 3(3-0-6) 09-214-603 Cosmetic Technology 3(3-0-6) 09-214-701 Frontiers in Medicinal Chemistry 3(3-0-6) 09-214-702 Nutraceutical 3(3-0-6) 09-214-703 Selected Topics in Biochemistry 3(3-0-6)		
	3. Master's Thesis (12 credit) 09-219-701 Thesis 12(0-0-36)		
Required-number of Undergraduate-Student	-		

Required- number of Graduate- Student	5
Course conditions	-
Applicant qualifications (Specific qualifications)	<ol style="list-style-type: none"> 1. To hold a Bachelor's degree in Chemistry or related from an accredited institution comparable to the degree offered at RMUTT, or expected to acquire such a degree before the RMUTT enrollment date. 2. To have an excellent academic record from reputable universities. 3. To have the aim, satisfactory knowledge, and research skill to work in the research field of this program 4. Application documents <ul style="list-style-type: none"> - Resume - Original bachelor's degree academic transcripts in English (Include date of issue) or their photocopies verified and bears FRESH school stamp by the graduated university or by a notary public. The transcript must contain all the courses studied each year, including the marks or grades for each course and GPA if the applicants are still studying for a bachelor's degree, providing a temporary academic transcript. - Briefly the research project in English and list of publications (if available). - Research proposal (1-2 pages in length): A detail of the research plan related to the program's interesting research fields and topics.
Contact person	Name: Assoc. Prof. Dr.Amorn Chaiyasat Phone/ Mobile Number:+66 98 826 3085 E-mail: a_chaiyasat@mail.rmutt.ac.th https://www.facebook.com/ApplChem