

# 應用化學系分子科學碩士班

111 學年度

最低修業年限	一年
應修學分數	24 學分
應修(應選)課程及符合畢業資格之修課相關規定	<p>1.必修書報討論 2 學分、專題演講 4 學分、論文研究 3 學分；超修上列課程不列入畢業學分。</p> <p>2.另須選修應用化學系碩士或博士班四門課，其中包含核心課程中至少兩種類型科目各一門。</p> <p>核心課程分五種類型：</p> <p>(1)量子化學/量子力學/計算化學</p> <p>(2)熱力學/統計熱力學</p> <p>(3)化學動力學/高等化學動力學/分子模擬動態學/物化特論－反應動態學。</p> <p>(4)物理化學研究技術/雷射化學/超快化學/分子光譜/光化學原理。</p> <p>(5)生物分析/生物物理/生物分子</p> <p>註：「量子力學」課程可至本校電子物理系或物理研究所碩士班選修，經修畢及格後，同意抵免本班核心課程。</p>
備註	<p>(1) 本所碩士班研究生入學後，申請獲准修教育學程者，修業期限最少為三年，如有特殊情況，由指導教授提課程委員會討論決定之。</p> <p>(2) 碩士生須於申請學位考試前完成線上「學術研究倫理教育」課程，課程總測驗成績達及格標準並提供證明文件，始得申請學位考試。</p>

## M.S., Graduate Program of Molecular Science, Department of Applied Chemistry

Academic Year 111

Minimum Term of Study	One Year
Minimum Credits	24 Credits
Curriculum and Regulations	<p>I. Mandatory: Seminar (2 credits), Colloquium (4 credits), Thesis Research (3 credits) ; if select those courses exceed the mandatory credits, will not include in the minimum credits.</p> <p>II. At least two courses from two of the five Core Fundamentals</p> <p>A. At least one course each from two of the five Core Fundamentals</p> <p>(1) Quantum Chemistry, Quantum Mechanics, Computational Quantum Chemistry</p> <p>(2) Chemical Thermodynamics, Statistical Thermodynamics</p> <p>(3) Chemical Kinetics and Dynamics, Advance Chemical Kinetics, Molecular Modeling Dynamics, Special Topics in Physical Chemistry- Reaction Dynamics</p> <p>(4) Research Techniques in Physical Chemistry, Laser Chemistry, Ultrafast Chemistry, Molecular Spectroscopy, Principle of Photochemistry</p> <p>(5) Bioanalytical, Biophysical, Biomolecules series</p> <p>B. Two additional graduate level courses from our Master program.</p> <p>Note: Credits of the graduate course “quantum mechanics” earned from the Department of Electrophysics or Institute of Physics can be counted as core courses of DAC.</p>
Notes	<p>I. Minimum term of study required is three years for master program students who join the teacher education program. Any special problems aroused should be submitted to the curriculum committee for discussion by the advisor.</p> <p>II. Students should pass the on-line course “Academic Research Ethics Education”. The passing certificate for this course should be submitted to the Department office before applying for the degree exam.</p>

# 應用化學系分子科學博士班

111 學年度

最低修業年限	三年
具碩士學位博士生 應修學分數	18 學分
直升博士生 應修學分數	32 學分
應修(應選)課程及符合畢業資格之修課相關規定	1. 必修書報討論 2 學分、專題演講 4 學分、論文研究 3 學分；超修上列課程不列入畢業學分。 2. 具碩士學位博士生另須選修本系碩士班或博士班課程至少 3 門共計 9 學分。 3. 直升博士生另須選修本系碩士班或博士班課程至少 6 門共計 18 學分。 4. 分析組：書報討論最多修 4 次；專題演講最多修 2 次，但上述課程均不列入必選修學分規定中的 3 門課程。
備註	博士生須於申請學位考試前完成線上「學術研究倫理教育」課程，課程總測驗成績達及格標準並提供證明文件，始得申請學位考試。

## Ph. D., Graduate Program of Molecular Science, Department of Applied Chemistry

Academic Year 111

Minimum Term of Study	Three Year
Minimum Credits for Ph.D. Students Who Have Master's Degrees.	18 Credits
Minimum Credits for Ph.D. Students Who Advanced from Master's or Bachelor's Programs	32 Credits
Curriculum and Regulations	I. Mandatory: Seminar (2 credits), Colloquium (4 credits), Thesis Research (3 credits) ; if select those courses exceed the mandatory credits, will not include in the minimum credits. II. Those with Master Degrees must take at least 3 additional graduate level classes from our program (9 credits). III. Those who switched over from our Master Program or Bachelor's must take at least 6 additional graduated level classes from our program (18 credits). IV. Analytic Chemistry Division: Seminar (up to 4 <b>times</b> ), Department Colloquium (up to 2 <b>times</b> ). These courses are not included in the required courses (the 3 or 6 courses) stated above.
Notes	Students should pass the on-line course "Academic Research Ethics Education". The passing certificate for this course should be submitted to the Department office before applying for the degree exam.