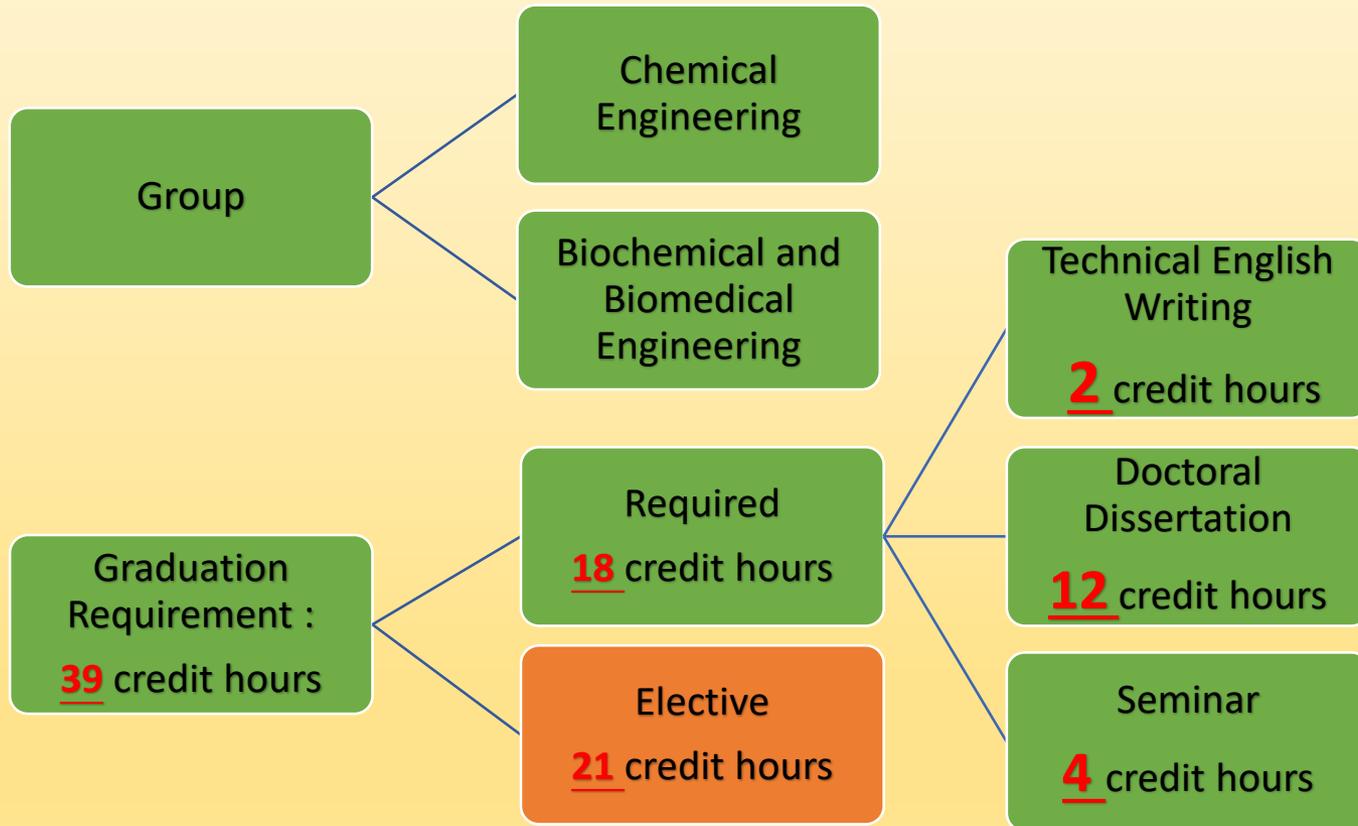


# Ph.D. Requirements in Chemical Engineering & Biotechnology Department



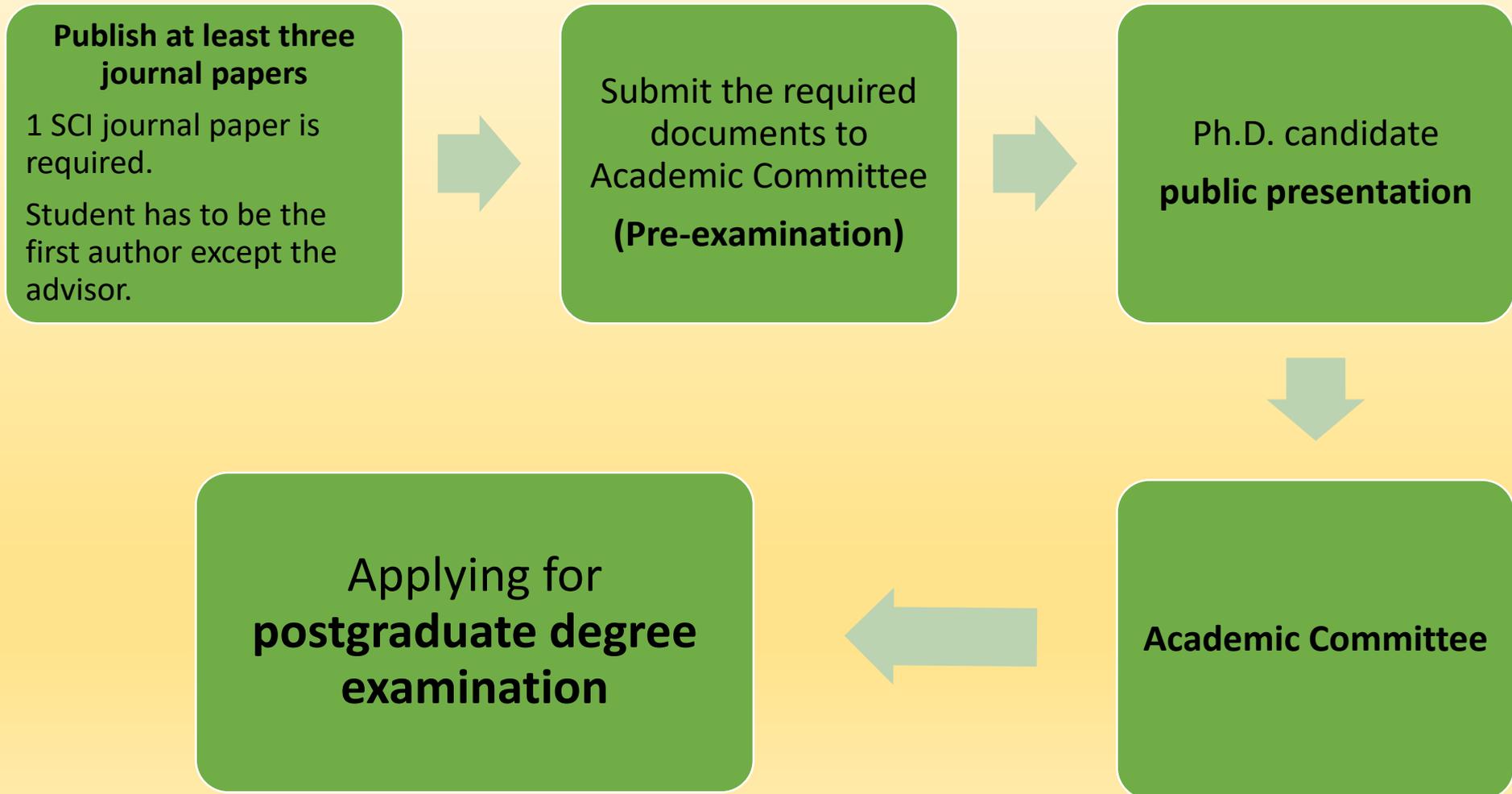
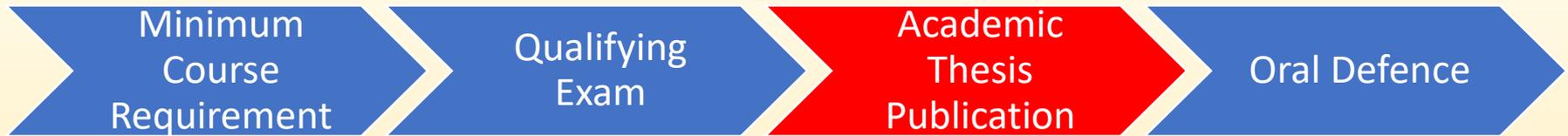
※Ph.D. students may complete their Ph.D. degree in 3 to 7 years.

# Ph.D. Requirements in Chemical Engineering & Biotechnology Department



<b>Subject</b>	<b>Category I</b>	Advanced Fluid Mechanics, Advanced Heat transfer, Advanced Mass Transfer, Advanced Chemical Engineering Thermodynamics, Advanced Chemical Reaction Engineering, Advanced Organic Chemistry, Advance Physical Chemistry, Advanced Molecular Biochemistry, Biomedical Engineering, Biotechnology and Biochemical Engineering
	<b>Category II</b>	Process Simulation, Electrochemistry and Electrochemical Engineering, Semiconductor Manufacturing Technology, Semiconductor Process Integration, Colloid and Interface Science, Manufacture Process of Specialty Chemicals, Adsorption and Ion Exchange, Special Topics on Characteristics of Polymers, Polymer Materials and Composites, Polymer Synthesis, Industrial Catalyst and Application, Special Topics on Transport, Phenomena of Membrane, Drugs Release and Control, Optoelectronic Devices Manufacturing Technology, Biomolecular simulations, Genetic Engineering, Biomaterials, Tissues Engineering, Advances In Microbiology, Human molecular, genetics
<b>Policies for Ph.D. qualifying examination</b>	<p>The following options are available:</p> <ol style="list-style-type: none"> <li>1) Pass two written subject exams: (1)one subject from category I and the other from category II, or (2)both of two subjects from category I.</li> <li>2) Pass one written subject exam and pass one subject course in the Category I with grade higher than 50 percentile.</li> <li>3) Pass one written subject exam from category I and publish one SCI journal paper as the substitution for Category II subject. Student has to be the first author except the advisor. This SCI journal paper must not be included in the required SCI journal papers for graduation.</li> </ol>	
<b>Remarks</b>	Doctoral students must pass the exam within three enrollment years.	

# Ph.D. Requirements in Chemical Engineering & Biotechnology Department



# Ph.D. Requirements in Chemical Engineering & Biotechnology Department



## Degree Examination Process

Application Opening	First Semester: From the completion of the registration to <b>November 30</b> . Second Semester: From the completion of the registration to <b>May 31</b> .
Processing Time	First Semester: From the completion of the registration to <b>January 31</b> . Second Semester: From the completion of the registration to <b>July 31</b> .
Withdrawal Deadlines	First Semester: Before <b>January 31</b> . Second Semester: Before <b>July 31</b> .

## Minimum English Proficiency Requirement for Graduation

Each Master's and Doctoral student admitted to NTUT in and after the Academic Year 2019 **must meet the minimum English proficiency requirements** prescribed by the Master's/Doctoral program before graduation.

## Academic Research Ethics Education of Graduate Students

As of Academic Year 2019, each freshman of the master's/doctoral programs shall complete **academic research ethics education**.