

**EXPECTED LEARNING OUTCOMES (ELOs)
FOR Ph.D. in Polymer Science Program**

LOs of CU	ELOs of PO Ph.D. Program
1. Being knowledgeable	<ul style="list-style-type: none"> • having become familiar with complex scientific methods the production and analysis of polymer as well as for the development of processes for their use and are able to apply these methods • being able to interpret terminology and school of thought in an interdisciplinary specialist area of the use of polymeric materials • understanding the potential uses of research results and integrate results into own work or carry out further research work themselves • being able to understand the guidelines in the polymer industry and to contribute to work on guideline-oriented processes effectively • being able to combine current trend with technical topics related to polymer
2. Having morality and ethics	<ul style="list-style-type: none"> • taking the ecological, societal, social and ethical effects into account in their scientific activities • being able to quote correctly and appropriately
3. Having good judgement	<ul style="list-style-type: none"> • handling complex situations that require interdisciplinary cooperation • formulating scientifically founded assessment for the technical use of polymer, including assessments on the basic of incomplete or limited information

<p>4. Having essential skills</p>	<ul style="list-style-type: none"> • being able to apply their knowledge and their skill to solve technical problems along the entire process of polymer synthesis, production and characterization in new and unfamiliar situations as well as to adapt technical solutions to the relevant spatial context • being able to design and operate processes for the production of polymer • possessing a thorough scientific education, work independently, analyses critically and generate new idea • assessing technical challenges regarding the issues related to polymer under given conditions and express a sound technical opinion • reflecting on their own work and use relevant information in their own activities continuously <ul style="list-style-type: none"> • having master communication and presentation techniques • being able to write scientific texts • being flexible, able to adapt and to work in a term • being able to present complex scientific relationship and results in a comprehensible form, including for a non-scientific audience
<p>5. Having inquisitive mind and being aware of learning methods</p>	<ul style="list-style-type: none"> • exercise and inquisitive mind to conduct and learn from polymers-related researches with comprehensive viewpoints knowing for self-development and professional development

<p>6. Having leadership qualities</p>	<ul style="list-style-type: none"> • being able to understand, formulate and plan a task in an industrial and scientific environment and to present possible solutions • being able to take on leadership tasks • being able to put together and lead interdisciplinary projects teams to solve problems
<p>7. Maintaining wellness</p>	<ul style="list-style-type: none"> • maintain wellness by balancing professional works and habits for good health and mindfulness to possess strong physical, mental, emotional and social health
<p>8. Having voluntary-orientated mind and social awareness</p>	<ul style="list-style-type: none"> • being able to act as a link between various specialist disciplines in an interdisciplinary environment • being able to use learning strategies that enable them to further develop their knowledge independently • being able to take the initiative
<p>9. Maintaining Thai-ness in the world of globalization</p>	<ul style="list-style-type: none"> • Maintaining and revitalizing Thainess in globalization by realizing our own identity and values and driving efforts to develop and carry out various polymer research and projects, based on the content serving needs of polymers and related industries and Thai people