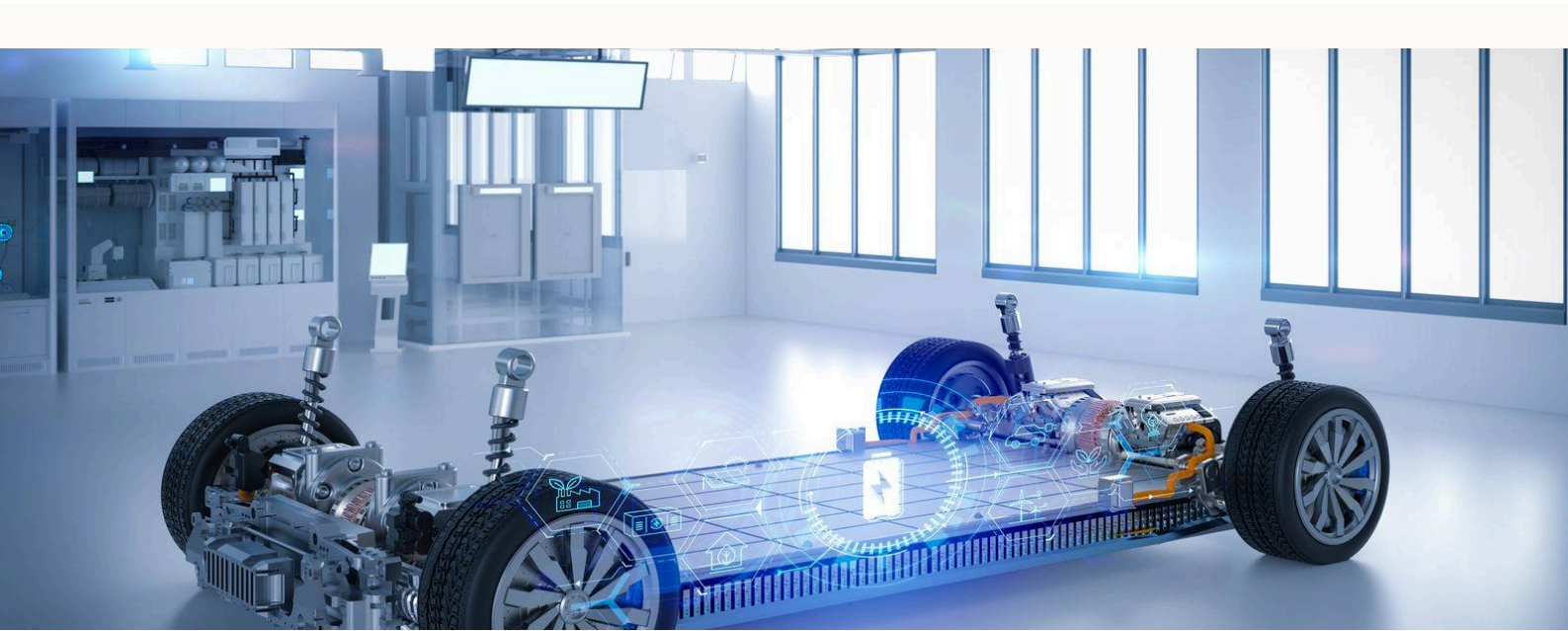




DOCTOR OF PHILOSOPHY

Innovation Engineering

VINCENT MARY SCHOOL OF
ENGINEERING, SCIENCE & TECHNOLOGY

A doctoral program that integrates mechanical, electrical, energy, computer, robotic, and systems engineering to design innovative products and manufacturing processes — and the research that challenges the boundaries between conventional engineering disciplines.

[APPLY NOW →](#)**DEGREE**
Ph.D.**DURATION***
3 Years**PATHWAYS**
Dissertation
Only ·
Coursework and
Dissertation**CREDITS**
48**INTAKES**
Jun · Nov

* The duration of a study program is the standard expected time frame for a student to complete all academic requirements, such as coursework, credits, or research, to earn a specific degree.

About the Program

The Doctoral Program in Innovation Engineering is a modern engineering discipline that integrates mechanical engineering, electrical engineering, energy engineering, computer systems, intelligent robotic systems, information and communication technologies, and systems engineering to design innovative products and manufacturing processes. The program emphasizes:

- The necessity of integrating and interacting among different branches of engineering.
- Innovative research, design, and development of products or systems to tackle real-world challenges.
- Challenging traditional engineering thinking and practices through team activities and crossing boundaries between conventional engineering disciplines.

Two pathways lead to the doctorate, each totaling 48 credits over three years: Type 1.1, a dissertation-only research track, and Type 2.1, which combines coursework with a dissertation. Both end in a dissertation defended before an academic committee.

The Doctoral Journey

Both pathways converge on the same research milestones across three years — from the qualifying examination to a public defense and peer-reviewed publication.



AFTER THE DOCTORATE.

Engineering researchers and innovators working across the boundaries of conventional disciplines.

■ University faculty in engineering or technology

■ Renewable-energy or smart-grid research engineer

■ Mechatronics and robotics research lead

■ Product-innovation engineer or technical founder

■ R&D engineer at an industrial or manufacturing lab

■ Energy-storage or electric-vehicle systems engineer

■ Embedded-systems or digital-control specialist

■ Postdoctoral researcher in innovation engineering

Study Plans

TYPE 1.1 · DISSERTATION TRACK

Dissertation Only

A research-only doctorate. The full program is conducted through supervised dissertation research across three years.

48 CREDITS · 3 YEARS

Dissertation	48
Total	48



Year 1 · Semester 1	INE 9218	Dissertation
Year 1 · Semester 2	INE 9218	Dissertation
Year 2 · Semester 1	INE 9218	Dissertation
Year 2 · Semester 2	INE 9218	Dissertation
Year 3 · Semester 1	INE 9218	Dissertation
Year 3 · Semester 2	INE 9218	Dissertation

Coursework and Dissertation

Combines required and elective coursework with a dissertation across three years.

48 CREDITS · 3 YEARS

Required courses	6
Elective courses	6
Dissertation	36
Total	48



Year 1 · Semester 1	INE 8211 Commercial Product Innovation, Engineering Management, and Entrepreneurships (3 Credits)
	INE 8212 Engineering Seminar and Research Method (3 Credits)
Year 1 · Semester 2	Elective Course 1 + Elective Course 2
Year 2 · Semester 1	INE 9219 Dissertation
Year 2 · Semester 2	INE 9219 Dissertation
Year 3 · Semester 1	INE 9219 Dissertation
Year 3 · Semester 2	INE 9219 Dissertation

Course Structure

1 · FOUNDATION COURSES

INE 5111 Fundamentals in Engineering

2 · REQUIRED COURSES

INE 8211 Commercial Product Innovation, Engineering Management, and Entrepreneurships

INE 8212 Engineering Seminar and Research Method

3 · ELECTIVE COURSES

INE 8311 Advanced Engineering Analysis

INE 8312 Advanced Numerical Simulation using Finite Element Method

INE 8314 Advanced Thermal System Design

INE 8315 Advanced Digital Control Systems

INE 8316 Advanced Mechatronics and Robotics

INE 8411 Advanced Renewable Energy Engineering and Innovation

INE 8412 Advanced Smart Grid Innovation for Smart Energy

INE 8413 Advanced Energy Storage Engineering

INE 8414 Advanced Energy Conservation in Industry and Building

INE 8415 Advanced Automotive Power Electronic and Control System

INE 8416 Advanced Automotive Electrical Machines and Drives

INE 8511 Advanced Design and Analysis of Computer Algorithms

INE 8512 Advanced Digital System Architecture

INE 8513 Advanced Artificial Neural Networks

INE 8514 Advanced Digital Image Processing

INE 8515 Advanced Data Engineering and Intelligent Systems

INE 8516 Advanced Wireless Sensor Networks and Internet of Things

INE 8611 Advanced System Modelling, Analysis and Design

INE 8612 Advanced Computational Method, Optimization and Artificial Intelligence

INE 8613 Advanced Topics in Innovation Engineering 1

INE 8614 Advanced Topics in Innovation Engineering 2

INE 8615 Advanced Topics in Innovation Engineering 3

INE 8616 Advanced Topics in Innovation Engineering 4

4 · DISSERTATION

INE 9218 Dissertation

INE 9219 Dissertation

Venue & Class Hours

CAMPUS Suvarnabhumi Campus	BUILDING VMS Building, Vincent Mary School of Engineering, Science and Technology
ACADEMIC CALENDAR Semester system · Semester 1 (Jun – Oct) · Semester 2 (Nov – Mar)	CLASS HOURS To be confirmed with the school

Estimated Tuition

Applies to Type 1.1 and Type 2.1 · Thai and Non-Thai students · 6 installments over 3 years

INSTALLMENT	THAI & NON-THAI (฿)	NON-THAI (US\$)*
1st installment	171,000	5,029
2nd installment	171,000	5,029
3rd installment	171,000	5,029
4th installment	171,000	5,029
5th installment	156,000	4,588
6th installment	140,000	4,118
Total	฿980,000	\$28,822

The total above does not cover the admission fee, textbooks, or the Qualifying Examination. Fees are subject to change at the University's discretion without prior notice. The exchange rate is contingent upon fluctuations in the foreign exchange market.

Admission Schedule

	Semester 1 · June – October	Semester 2 · November – March
Application deadline	Fri. 25 May	Wed. 25 October
AU EPS Test and interview	By appointment	By appointment
Registration period	2 – 9 June	27 Oct – 3 Nov.
Instruction begins	Mon. 9 June	Mon. 3 November

Graduation Requirements

Type 1.1 · Dissertation

- 01 Pass the qualifying examination.
- 02 Pass the dissertation proposal and final defense.
- 03 Publish the dissertation or part of it, or obtain acceptance of at least two publications in an international journal or academic publication with peer review, in accordance with OHEC's Regulations on Criteria for Selection of Academic Journals for Publication of Academic Works (B.E. 2565).
- 04 Obtain library and financial clearance from the University.
- 05 Demonstrate good behavior and discipline.

Type 2.1 · Coursework and Dissertation

- 01 Pass the qualifying examination.
- 02 Pass the dissertation proposal and final defense, evaluated by a committee appointed by the University. The final dissertation defense is open to the public.
- 03 Publish the dissertation or part of it, or obtain acceptance of one publication in an international journal or academic publication with peer review, in accordance with OHEC's Regulations on Criteria for Selection of Academic Journals for Publication of Academic Works (B.E. 2565).
- 04 Obtain library and financial clearance from the University.
- 05 Demonstrate good behavior and discipline.

HAVE A QUESTION?

Talk to the Office of Graduate Studies on LINE — we'll help you with anything you're wondering about.

Programs · admissions · scholarships · English requirements. Add [@abacgrad](https://www.abacgrad.com) or scan the code to start a chat.



Who Should Apply

- A master's degree in Engineering, Science, or a related field, from an institution accredited by the Ministry of Education, Thailand. Candidates without the specified degree may be required to enroll in foundation courses, as determined by the program director and approved by the dean.
- A cumulative GPA of 3.0 or higher (out of 4.0), or at least one year of work experience in engineering or a related field.
- Completion of the admission test and/or an interview specific to the program.

Application Documents

- 01 A completed application form
- 02 Official transcripts from the previous universities attended — bachelor's and master's (1 copy each)
- 03 A bachelor's degree certificate (1 copy)
- 04 A master's degree certificate (1 copy)
- 05 A citizen identification card and house registration — Thai applicants (1 copy)
- 06 A passport — Non-Thai applicants (1 copy)
- 07 One photograph, 1 × 1.5 inches, in formal attire (not in graduation gown)
- 08 Two letters of recommendation from former instructors or employers at the time of the application

Admission fee: ~~฿~~**1,000 (non-refundable)**

Note — all documents must be endorsed with a signature and submitted in person within the last day of the application period. Otherwise the application will not be considered and the applicant will not be allowed to sit the admission interview. Applicants who are graduates from overseas universities will be required to provide, at the time of applying and not later, all academic documents certified, attested, or notarized by competent notaries.

English Proficiency

Entrance Examination

- AU English Proficiency Test
- Interview entrance examination

Exemption

- TOEFL (iBT) score of 80, or IELTS (Academic) 6.0 — valid for two years
- A bachelor's degree from a native English-speaking country (the United States, Canada, the United Kingdom, New Zealand, or Australia)

School Contact



SUARNABHUMI CAMPUS

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Graduate Admissions Office

MON – FRI

08:30 – 17:00

SATURDAY

08:00 – 16:30

SUNDAY

08:00 – 14:00

IMPORTANT

The provisional information statements set forth in this catalog should not be construed as the basis of any contract between a student and this institution. As such Assumption University reserves the right to change any provision listed in this catalog, including, but not limited to academic requirements for graduation. Every effort, through the Office of Graduate Studies, will be made to keep students advised of any such changes.

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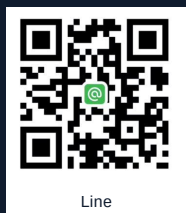
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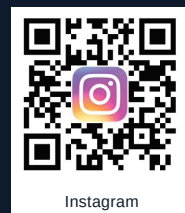
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