

Naresuan University

# FACULTY OF ENGINEERING



# 21987 SYLLINA UNIVERSITY

Naresuan University, a government university accredited by the Office of the Commission on Higher Education, Ministry of Education, is a comprehensive university which emphasizes the improvement of educational opportunity and equity for all as one of the top government university in Thailand. A strong focus is placed upon research, innovation, partnership, and internationalization. Naresuan University aspires to be the University of Innovation. It is strategically located at the heart of the Thai Kingdom, Phitsanulok province, the major city of the lower northern region and more importantly, the birthplace of King Naresuan the Great for whom our University is named. In line with the auspicious date of the 400th anniversary of King Naresuan the Great's accession to the throne, the University was officially founded on July 29, 1990. The institution's history can, however, be traced back to its inception as the College of Education in 1967.



Indo-China intersection

The comprehensive university lives up to the public expectations in providing diverse, cutting-edge programs through the faculties, colleges, and a demonstration school. Our vision statement affirms a commitment to continue proactive roles in promoting high standards in higher education both in the national and international arenas. Through ongoing review and the development of new paradigms of the best practice, the university continues to improve the quality of teaching and learning, especially highlighting the project-based, inquiry model throughout the university. All the programs are continuously enriched and informed by the rapid transfer of new knowledge used in ongoing curriculum improvements. To produce graduates of international standing, where expertise is in high demand and whose contributions and practice are of the highest caliber and integrity, the university instills in students at all levels the six "smarts":

- 1. Smart at work
- 2. Smart in people skills
- 3. Smart with ideas
- 4. Smart in life skills
- 5. Smart at problem solving
- 6. Smartly equipped with knowledge, skills, and attitudes as
- global citizens.

#### STUDENTS

In academic year 2013, students are from seventy-seven provinces and twenty-one countries.

	Number of Student		
Education Level	Thai	Foreign	Total
Undergraduate	16,263	79	16,342
Graduate & Professional	3,564	80	3,644
Total Students	19,827	159	19,986

(Source: Reported by the Division of Academic Affairs on March 4, 2014)

#### UNDERGRADUATE, GRADUATE, AND PROFESSIONAL FACULTIES/COLLEGES/SCHOOLS:

Sixteen professional faculties, two schools, two colleges and one institute are categorized into three clusters: the Social Sciences Cluster, the Science and Technology Cluster, and the Health Sciences Cluster.

## The Social Sciences Cluster is comprised of five faculties and two colleges:

- College of ASEAN Community Studies - Faculty of Business, Economics and
- Communications
- Faculty of Education
- Faculty of Humanities
- Faculty of Law
- Faculty of Social Sciences
- Naresuan University International College

## The Science and Technology Cluster is comprised of four faculties, two schools and one institute:

- Faculty of Agriculture, Natural Resources and Environment
- Faculty of Architecture
- Faculty of Engineering
- Faculty of Science
- School of Logistics and Supply Chain
- School of Renewable Technology
- The Institute for Fundamental Study



## The Health Sciences Cluster is comprised of seven faculties:

- Faculty of Allied Health Sciences
- Faculty of Dentistry
- Faculty of Medical Sciences
- Faculty of Medicine
- Faculty of Nursing
- Faculty of Pharmaceutical Sciences
- Faculty of Public Health

There is also the academic integration of the Graduate School, which is functionally equivalent to Faculty.



Naresuan University is aiming to become a "Research University" and to rank in the country's Top Ten universities. The university, with the approval of Naresuan University Council, has projected its research policy comprising 9 research strategies for a systematic and concrete operation at all levels for the faculties, the university, as well as all the related organizations. This strategic operation has encouraged a crucial development in research personnel, research projects, intellectual properties, national and international publications of research studies, and research collaborative networks.

#### **RESEARCH AT NARESUAN**

Naresuan University has established a Center of Academic Excellence to conduct research and produce graduate students done by Naresuan researchers/lecturers in all fields of twenty-one centers of excellence as follows:

- Center of Academic Excellent Research in Postharvest Technology
- Center of Agricultural Biotechnology
- Center of Excellence in Fats and Oils
- Center of Excellence in Mathematics
- Center of Excellence for Biodiversity
- Research Center for Academic Excellence in petroleum, petrochemical and advanced materials
- Center of Excellence in Biomaterial
- Research Center for Academic Excellence in Applied Physics
- Center of Excellence on Environmental Research and Innovation \*
- Center of Excellence for Energy Technology and Environment \*

- Excellence Center for Sustainability of Health, Environment and Industry \*

- Excellence Center for Road and Railway Innovation \*
- Water Resource Research Center \*
- Center of Excellence for Innovation and Technology for water Treatment \*
- Center of Excellence for Innovation in Chemistry NU
- Center of Excellence for Environment Health and Toxicology
- Center of Excellence in Medical Biotechnology
- Center of Excellence in Fungal Research
- Center of Excellence in Tourism Management
- Center of Excellence in Small and Medium Enterprises Management
- SET Investment Center

TOTAL SPONSORED AND PROJECT RESEARCH AWARDED TO NARESUAN IN FISCAL YEAR 2013 431 million (Bahts)

(Source: Reported by the Division of Research Administration on July 18, 2014)

\* Under Faculty of Engineering.

NU is located in Phitsanulok, a province in the Lower Northern Part of Thailand





Teaching quality and standards of a number of academic programs at Naresuan University are developed with valuable inputs from visiting professors and international researchers/ staff who spend sabbaticals/ work full-time at the university; this is made possible by extensive collaboration with overseas partners through a variety of activities to assure that students will not only be accommodated in a new learning environment but also in a remarkably research-oriented venue where quality has never been compromised.



#### Supporting your wellbeing at Naresuan University

The atmosphere on campus is an important part in helping students adjust to life and the pursuit of knowledge to their full potential. It also can support students in learning.

The university has 2 international dormitories with airconditioned rooms, internet access, and laundry services with a system for secure acceess to the dorm (keycard) system, CCTV and 24 hour security guards.

Naresuan University has a large state-of-the art medical center. In addition, there are facilities for swimming, tennis, basketball, and a fitness center.

Along with the excellent library services providing a vast on-line data base, Naresuan University is prepared to cater to student's intellectual and physical needs as they pursue their studies at NU.







#### **MESSAGE FROM THE DEAN**



Welcome to the Faculty of Engineering, Naresuan University. We are a public university responsible for providing academic services to Thai society in Lower Northern Thailand. Our duties include teaching and researching as well as the full variety of academic services. We realize the importance of technology and its practical application, particularly in terms of adding value to local products and the local people. We believe that the university is charged with the responsibility to support our people to improve their quality of life. One of our primary goals, therefore, is to be the Entrepreneurial Faculty for the regional economy. We are determined to produce qualified engineering graduates who have four major orientations; problem solving skills, excellent communication skills, leadership skills and an ethical mind and concern for the community. Through the variety of our research units, our students are able to engage

in various research projects, which are based on their interests. They also have more opportunities to participate in a number of Faculty projects in collaboration with and with the cooperation of industry, which provide analytical perspectives and skills throughout the learning process in realistic situations. Connections with, and funding from, outside organisations with similar research and development interests as our own, is an essential element of our programmes.

We invite you to become a part of our proud family, the Faculty of Engineering, Naresuan University. We look forward to seeing you here.

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Associate Professor Dr. Sarintip Tantanee Dean

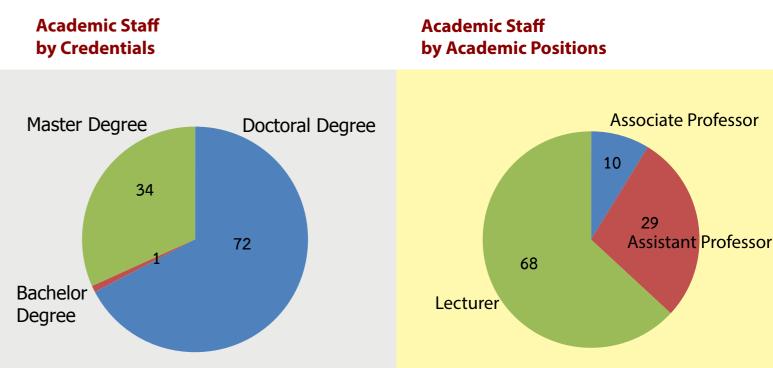
## **Faculty of Engineering, Naresuan University**

The Faculty of Engineering was founded in 1994 with the establishment of two departments: Civil Engineering and Industrial Engineering, followed by Department of Mechanical Engineering in the following year, and Department of Electrical and Computer Engineering in 1997. As of today, there are four full-capacity departments, which are strengthened with high-quality academic staffs and give precedence to ASEAN Economic Community in 2015. The faculty of Engineering nurtures and develops engineers for the economic growth and ASEAN markets. Therefore, all programs are of outstanding standard, and have been accredited by the Council of Engineers and Office of the Higher Education Commission of Thailand.

## **About People**

#### **Academic Staff Statistics**

#### **Academic Staff** by Credentials



#### **Student Statistics (Academic Year 2014)**





#### Department of Civil Engineering

The Department of Civil Engineering offers 9 academic programs:

2 undergraduate programs (B.Eng):

- Civil Engineering
- Environmental Engineering

4 master programs (M.Eng):

- Civil Engineering
- Environmental Engineering
- Construction Management
- Infrastructure Management

1 master program (M.Sc):

- Desaster Management
  (International Program)
- 2 doctoral programs (Ph.D.):
- Civil Engineering
- Environmental Engineering

#### Department of Industrial Engineering

The Department of Industrial Engineering offers 5 academic programs:

3 undergraduate programs (B.Eng):

- Industrial Engineering
- Material Engineering
- Chemical Engineering

1 master program (M.Eng):

- Engineering Management
- 1 doctoral program (Ph.D.):
- Management Engineering

#### Department of Mechanical Engineering

The Department of Mechanical Engineering offers 2 academic programs:

1 undergraduate program (B.Eng):

- Mechanical Engineering
- 1 master program (M.Eng):
- Mechanical Engineering



## Department of Electrical & Computer Engineering

The Department of Electrical & Computer Engineering offers 6 academic programs:

- 2 undergraduate programs (B.Eng):
- Electrical Engineering
- Computer Engineering
- 2 master programs (M.Eng):
- Electrical Engineering
- Computer Engineering
- 2 doctoral programs (Ph.D.):
- Electrical Engineering
- Computer Engineering



## **Center of Excellence**

	Centre of Excellence on Environmental Research and Innovation (CERI)		
<b>ERI</b>	Soil and Groundwater Remediation		
	Toxic Substance Removal		
	Nanoparticle: Environmental Chemistry		
	Nanosafety Research		
	Centre of Excellence on Energy Technology and Environment (CETE)		
CeTe	Energy technology, Energy device, Waste to Energy Energy Building, Technology , Climate change, Environmental impact from Energy		
	Utilization		
SH)	Excellence Center for Sustainability of Health, Environment and Industry (SHEI)		
	Health		
	Environment		
	Industry		
	Water Recourses Records Contex (WRRC)		
WRRC	Water Resources Research Center (WRRC) Water Resource		
0	Centre of Excellence for Innovation and Technology for Water Treatment (ITWT)		
8	Water - Water Purification, Wastewater Treatment		
	Air - Air Purification, Air Quality Assessment		
Centre of Excellent for Innovation and Technology for Water Treatment	Solar - Photocatalysis, Dye-Sensitized Solar Cell		
	Meterials - Catalyst, Self-Cleaning Materials		
	Excellent Center for Road and Railway Innovation (NU-RRI)		
NU-RRI	Structure/Infrastructure, Railway System		
	Highway System, Environmental System, Computational Mechanics		

#### **Research Units**

More Research Information : http://web.eng.nu.ac.th/eng2012/en/research.php

Department of Civil		
Research Unit for Integrated Natural Resources		
Integrated Facility Engineering and Manageme		
Air Pollution		
Energy for Environment		
nfrastructure and Transportation Center		
Climate Change, Natural Resources and Disaster		
Bridge and Railway Structural Systems Research		
Concrete Technology		
Advanced Materials for Energy and Environmen		
Research Unit for Innovative Construction Mate		
Research Unit for Road Safety		
Department of Industr		
Research Center for Industrial Design, Decision		
Research Unit on Functionalized Material for Ch Technology		
Centre for Operations Research and Industrial A		
Department of Mechan		
Development and Research of Innovative Vehic		
nnovative Mechanical Engineering Center		
Research Unit for Precision and Medical Engine		
Department of Electrical & C		

#### Department of Electrical & Computer Engineering

Analysis and Development of Electric Drives System

Advance Systems and Software Engineering Research Team

Embedded System and Smart Device Research Unit

Computer Vision and Human Interaction Technologies Laboratory

Mechatronics and Industry Laboratory

#### l Engineering

Remediation and Reclamation

ent Research Unit

er Research Unit

h Unit

ntal Applications

erials

#### rial Engineering

and Development

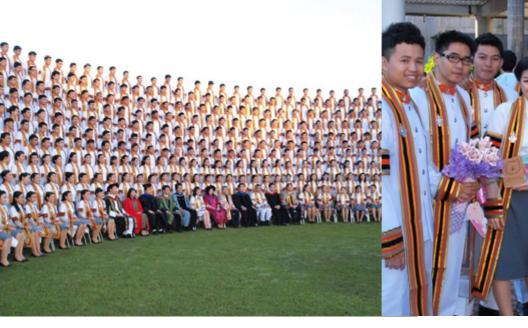
hemical, Biochemical and Biomedical

Application

#### nical Engineering

cle Engineering

ering Technology





## **Postgraduate Programs (M.Eng)** 2 years

Courses	Fee
Civil Engineering	Estimated total 100,000 Baht( 3,333 US\$) / Program
Electrical Engineering	Estimated total 100,000 Baht( 3,333 US\$) / Program
Mechanical Engineering	Estimated total 100,000 Baht( 3,333 US\$) / Program
Computer Engineering	Estimated total 100,000 Baht( 3,333 US\$) / Program
Engineering Management	Estimated total 100,000 Baht( 3,333 US\$) / Program
Environmental Engineering	Estimated total 100,000 Baht( 3,333 US\$) / Program
Construction Management	Estimated total 150,000 Baht( 5,000 US\$) / Program
Infrastructure Management	Estimated total 150,000 Baht( 5,000 US\$) / Program
Desaster Management (M.Sc)	Estimated total 150,000 Baht( 5,000 US\$) / Program

## **Postgraduate Programs (Ph.D.)** 3 years

Courses	
Management Engineering	
Civil Engineering	
Electrical Engineering	Estimated
Environmental Engineering	
Computer Engineering	



## **Undergraduate Programs (B.Eng)** 4 years

Courses	Fee
Civil Engineering	
Industrial Engineering	
Mechanical Engineering	
Electrical Engineering	Estimated total 32,200 Baht( 1,073 US\$) /
Computer Engineering	Academic Year, excluding summer session
Environmental Engineering	
Material Engineering	
Chemical Engineering	



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Fee

ed total 210,000 Baht( 7,000 US\$) / Program

#### **Research Support**



Short-term visiting program for foreign postgraduate students, researchers and professors, who can communicate in English The Faculty provides Living Costs, Accommodation and Health Insurance.

Visiting Program	Education Level	Faculty/ Professor	Researcher/ Ph.D. student	Master Students
	Living Costs	20,000 Baht/Month	15,000 Baht/Month	10,000 Baht/Month
	Accommodation Provided			
	Health Insurance		Provided	
Graduate Scholarships	Master's Level: 4 scholarships per annum - Tuition Fee Ph.D.: 15 scholarships in 3 years (2012 - 2014) - Tuition Fee - Living Cost			
Research Grants	Naresuan University Research Fund for Researchers in science and technology 180,000 Baht (US \$6,000) per research project			
Seed Money for Research Unit	The Faculty of Engineering: 1,000,000 baht (US \$33,000) Settlement of lab instrument and equipment			

#### **National Collaborations**



#### **International Collaborations**



#### Faculty of Engineering, Naresuan University



#### **Contact Us**

Email : engineering@nu.ac.th www.eng.nu.ac.th







#### **Contact Us**

Faculty of Engineering, Naresuan University, Phitsanulok 65000, Thailand Tel. +66 5596 4108 Fax : +66 5596 4000 Email : engineering@nu.ac.th www.eng.nu.ac.th





