

Research-based University



### Great Indonesia

A National Instrument pursuing the latest Science & Technology Advancement

Future leaders of Indonesia

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A community of 30,000 scientists, in science, technology, (and social sciences)

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Communities of future scientists:
young scientists, constestants of Science &
Math research competitions / olympiads,
gifted and talented students / youth

C

Communities of children loving Math & Science, social communities loving and supporting the GASING Method for Math / Science, communities of teachers competent in the gasing method

The Vision of Surya University

Impeccable integrity, honest, tolerant; Cooperative and open-minded; Possess leadership qualities; Socio-and/or Techno-preneurial oriented Cutting-edge research & innovative products and services in education, science, and technology through over 70 world class research and education centers Undergraduate, graduate, and doctoral programs in science and technology through a 'research-based university' -- Surya University; Ph.D. Program under 20 years Facilitating potential students to study at world-class universities thru scholarship donors Educating gifted students; Selection of and training students to achieve awards in Math, Science, Techno-preneurship; Advocating 'research-based education' FOR CURRENT TEACHERS: GASING Math/Science; Teachers' Training/Research; Supervision Training/Early Childhood Teachers' Training; Math/Science Olympiad Teachers Training **FOR FUTURE TEACHERS:** Undergraduate, graduate, and doctoral programs for Math/Science/IT Teachers thru STKIP Surya

### **FOR THE PUBLIC:**

Teachers' training (CSR); GIPIKA / Math-Savvy Mom's Movement; GASING Math Training; The Armed Forces Educate thru GASING; GASING Expo; etc.

### **FOR CHILDREN:**

Fun with Science programs; GASING Camp; GASING House, Physics-Acoustics Workshop; Competitions at the Elementary School level; etc.



# Journey of SURYA University



1993

Prof. Yohanes Surya, Ph.D. pioneered the establishment of Indonesian Physics Olympiad Team known as TOFI (Tim Olimpiade Fisika Indonesia) to send brilliant Indonesian students to compete in International Physics Olympiads. Their victory elevated Indonesia onto the global map of prestigious science competitions.

1999

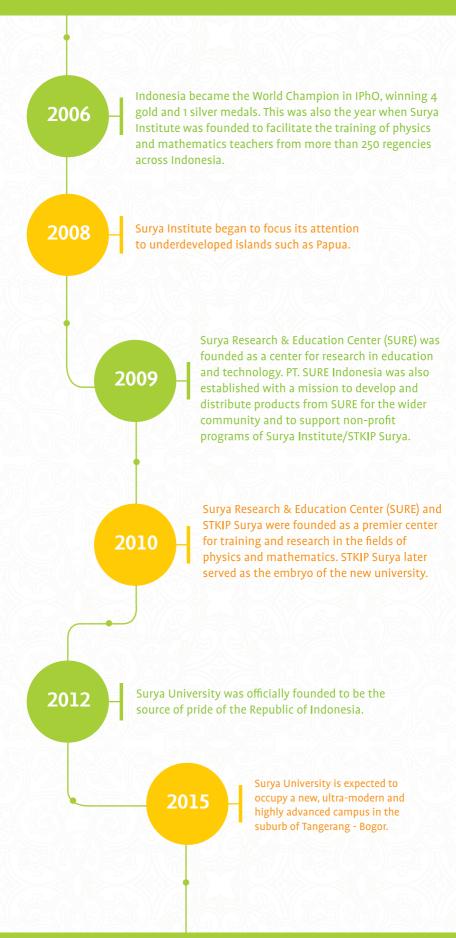
An Indonesian student for the first time ever won a gold medal in the 31st International Physics Olympiads in Italy.

2000

Prof. Yohanes Surya, Ph.D. founded the Asian Physics Olympiad (APhO) and began training physics and mathematics teachers in major cities, regencies, and remote villages across the archipelago from Sabang to Merauke.

2003

Indonesia became the Champion of Asia, winning six gold medals.





Visionary Founder

## Prof. Yohanes Surya, Ph.D.

Indonesia needs to have competitivel y superior human resources mastering science and technology, because only by then shall this nation become an innovation trendsetter and primar y actor that can survive the onslaught of global competition. Such superior human resources can only be nurtured by a research-based university.

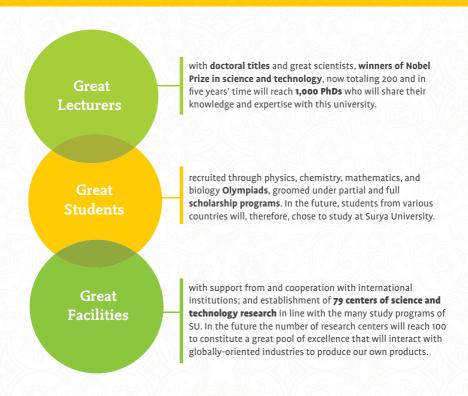
There are many research universities but almost none of them is actually a research-based university where all of its study programs are the results of research works that the lecturers take to the classrooms.

Had all universities in Indonesia become research-based universities, this country would have since long time ago become a technology innovation trendsetter to beat the tough global competition.

Such is the noble purpose underpinning my determination to establish Surya University (SU) which was inaugurated during a grand launching ceremony at Grand Hyatt Hotel in Central Jakarta on March 9, 2013.

Even since its inauguration, Surya University has had the resolve to become a source of pride for Indonesia and will therefore escalate it capacity to compete with other prestigious universities such as Harvard University and Massachusetts Institute of Technology (MIT).

### To become a world-class university, Surya University has made comprehensive preparations including the following:





## SURYA About University

This innovation is expected to usher in scientists and technopreneurs of the future who can excel in the era of increasingly tight science-based economic competition.

Established in 2012 by Prof. Yohanes Surya, Ph.D., the initiator of Indonesian Physics Olympiad team known as TOFI—that has elevated Indonesia to be the world champion in various prestigious science Olympiads— Surya University is determined to be the frontline center of excellence in advancing the latest frontiers of science and innovations.

The university is supported by more than 200 top lecturers who obtained their PhDs from various globally acknowledged universities, as well as by winners of international physics, chemistry, and biology Olympiads.

The team of lectures also includes well reputed and experienced practitioners in agribusiness, economy, renewable energy, biotechnology, neuroscience, and ICT. They are part of more than 1,000 PhDs who will join Surya University in the future.

With a vision to be a world-class university, Surya University has developed almost 80 frontline research centers that groom students to become great scientists and amplifies SU's reputation as a research-based university.



Surya University offers a variety of new and unique futuristic programs that are designed for the new century of competitive science-based economy.

Surya University also applies a modern learning system through the use of interactive tablet computers complete with multimedia devices that are needed for collaborative learning, note taking, and e-book browsing activities.

Each student is equipped with a tablet computer that has educative applications and multimedia contents such as video lectures accessible through the learning hub.

Surya University's campus at Summarecon Serpong, Tangerang, is surrounded by a green environment with a dynamic community conducive to learning and recreational activities. The university will in 2015 occupy its new futuristic campus complete with all the modern amenities in an area on the Tangerang-Bogor border.

Best-performing students are entitled to get Scholarships or Student Loans that will ease their tuition burden.

So, join us now and be a part of this superb, globally-oriented, research-based university!

# Why 200 Scientists with Ph.D. titles

Are Willing to Come Home

These great scientists with Ph.D. titles working abroad say they feel called to come home because the y wish to help realize the vision and mission of Prof. Yohanes Surya, Ph.D. in developing Surya University as a research-based university Indonesia will proud of.

Hendra Kwee Ph.D

Chairman of TOFI Secretary General of APhO (Asia Physics Olympiad)

Herry Kwee Ph.D

President of WoPho (World Physics Olympiad)

Sigit Santosa Ph.D

Obtained Ph.D degree from MIT Worked at General Motors

Dr. Sidrotun Naim

Postdoc at Harvard Medical School

Arief Suriadi Budiman Ph.D

Obtained Ph.D. degree from Stanford University

Nuki Agya Utama Ph.D

Postdoc at Kyoto University

Kholis Audah Ph.D

Postdoc at Yale University

Budi Chandra Ph.D

Obtained Ph.D degree from Purdue University Worked at Rolls Royce

Dr. Onno Purbo

Popularly known as Indonesia's Information Technology "god"

Dena Hendriana Ph.D

Obtained Ph.D degree from MIT Worked at Ford

Yalun Arifin Ph.D

Graduate of Australia National Universityn

Anton Wiranata Ph.D

Postdoc at Berkeley University

R. Dwi Susanto Ph.D

Graduate of Columbia University

Bidhari Pidhatika Ph.D

Graduate of ETH Zurich

Dr. David Mendel; Martin Tjahjono, Ph.D.; Dr. Riza Muhida; Dr. Gemala Hatta; dr. Taruna Ikrar, M.Pharm.,M.D.,Ph.D.; Rudi Irawan, Ph.D.; Lies Dwiarti, Ph.D.; Hendra Kwee, Ph.D. (Ketua TOFI); Herry Kwee, Ph.D. (President WoPhO); Dr-Ing. Arbi Dimyati; Albert Kuhon, Ph.D.; Yalun Arifin, Ph.D.; Assoc. Prof. Dr. Teddy Mantoro; Indranu Suhendro (expert in Consciousness); Hokky Situngkir (expert in Complexities); Jong Anly Tan,Ph.D.; Dr-Eng Niki Prastomo; Jutri Taruna, Ph.D.; Alexander Silalahi, Ph.D.; Jurianto Joe, Ph.D.;Dr. Agung Alfiansyah; Dr. Luluk Sumiarso; Lindawati, Ph.D.; Dr. Rifki Muhida; Dr. Wikky F Almaki; Dr. Jelita Asian; Dr. Handri Santoso; Dr. Caesar Harahap; Zainul Abidin, Ph.D.; Dr. Sri Lanawati, M.Psi.,S.Psi.; Dr. Agus Purwanto; Dr. Pudji Untoro; Dr. Doddy Kustaryono, D.E.A.; Tina Nurkhoeriyati, M.Sc.; Dr. Mauritsius Tuga; Dr. A Unggul Prianto; Dr. Endang Nina Sugiarti; Dr. Diah Intani; Dr. Dandy Soewandito; Dr. Henry Njoo Liang Tik; Ery Wijaya, Ph.D.; Eddy Yusuf, Ph.D.; Dwi Susanto, Ph.D.;dr. Elfi Wardaningsih, M.D.,Ph.D.; Leonard Rusli, Ph.D.; Dr. Anton Purnomo; Dr. Juita; Dr. Chris Salim; Dr. Rossi Setiadji; Ali Godjali, Ph.D.; Dr. Topik Hidayat; Dr. Nancy Susianna; Dr. Benyamin Lukas; Dr. Johanes Siregar; Sigit Santosa, Ph.D.; Dr. Ari Legowo; Dr. Isak Surya; Irawan Satriotomo, M.D.,Ph.D.; Alan Koropitan, Ph.D.; Ade Wijaya, Ph.D.; Dr-Eng. Bayu Indrawan; R. Dwi Susanto, Ph.D.; Yoga Divayana, Ph.D.; Munas Ramly, M.Sc.; Roy Adimulyo, M.Sc.; Surya Wijaya, M.Sc.; Suhandry Salim, M.Sc.; Dr. Michael Elias; Patmah Fatoni, M.Sc.; Djukarna, M.Sc.; Yunianto Purnomo, M.Kom.; Mariana Rajawane, M.Sc.; Budi Chang, S.Kom,M.M.; Ir. Srisetiowati Seiful, M.B.A.; Dr(cand). Karna Mustagim, S.Sn.,MA;

Dr(cand). Meilani Hartono, S.Si.,M.Pd.; Mariana Lie, M.Sc.; Szeifoul, B.Sc.,M.Sc.; Alfa Satya Putra, M.Sc.; Dr. Iman Hidayat; Dr. Teguh Triono; Asep Sugih Suntana, Ph.D.; Dr. Ir. Bambang Sayaka, M.Sc.; Niken Taufiqurahman, M.Sc.; Drs. Adik Bandoro, M.M.; Shirley Doornik, M.B.A.; Licesari, M.B.A.; Debby Sanjaya, M.Si.; Dr. Ida Sri Rejeki Siahaan; Sadikin Djumin, M.Sc.; Anne Sirait, M.Sc.; Franky Lumbantobing, M.Sc.; Dr(cand). Achmad Aditya; Fitrian Ardiansyah, Ph.D.(cand); Angela Pauline Pasaribu, M.Sc.; Chrismawaty, M.Sc.; Meisi Kacaribu, M.Sc.; Dr.(cand) Masni Dyta Anggriani; Enggo, M.Sc.; Dr. Jerald Leung; Fuad Nasution, M.Sc.; Dr. Ir. Sahat Pasaribu, M.Eng.Sc.; Dr. Ir. Saktyanu Kristantyoadi, MS.; Dr. Maydison Ginting; Adityo Pratomo, M.IDEA.; Jeffrey Tanudji, M.Sc.; Dr. Maxi Parengkuan, Agus Putu Abiyasa, Ph.D.; Richard Irawan, SE.,M.M.; Dr. Josephine Kusuma; Hendry Elim, Ph.D..; Mandau Kristianto, ST.,M.Sc.; Andhy Fathony,ST.,M.Phil; Yulius Hermanto, M.D.; Surendra Prabhawa, M.D.; Diana, M.Psi.; Dias Rima Sutiono, M.Si.; Aulia Parluhutan Aruan, Ph.D.; Dr. Rukmantara; Dr.-Ing Azhar Zam, S.Si.,M.Sc., ; Martha Maulidia, M.Sc.; Teddy Trilaksono, M.A.; Jeffrey Rufinus, Ph.D. Anggi Muzaki, SP,MS; Alexander Batara Marpaung, SE.,M.BA., Novistiar Rustandi, SE.,M.BA.; Arya Antaputra, ST.,MT.; Adityo Pratomo, ST.,M.Eng.; Fuadi Nasution M.Sc., Dr. Tijpta Purwita; Dr. Khie Kiong; Dr. Syam Surya Syamsi; Marsekal Madya Rodi Prasodjo M.Sc; Dr. Aditya Putranto; Dr. Purba Purnama; Dr. Sri Hastuty; Dr. Hanny J. Berchmans; Dr. Lucia Kusumawati; Dr. Stefanie Daryanto; Dr. Religiana Hendarti; Dr. Martinus Tukiran; Tjipto Juwono Ph.D; Dr. Pauline Henriette Pattyranie Tan; Dr. Bimo A. Tejo; Dr. Siti Rahma Utami; Dr. Nyoman Artha; Dr. Agustinus Yohanes Silalahi; Prof. Irwandi Jaswir; Dr. Sholeh Mamun; David Setiabudi M.Sc; Dr. Erwin Anggadjaya; Dr. Yunan Prawoto; Prof. Roy Sembel, Ph.D; Prof. Sunartoto Gunadi, M.Eng.; Drs. R.M. Jon Respati.

### **CUTTING EDGE**

## Research Centers

To make Surya University a research-based university, we have established many research centers led by highly capable scientists. These scientists will take the results of their research projects into the classrooms so that students will learn directly from the experts' findings. At present we have 79 research centers covering various scientific disciplines.

They are managed by great scientists who graduated from world-class universities abroad and these experts are determined to make Surya University a source of pride for Indonesia.

http://www.surya.ac.id/research/index.php

### **CLUSTER HUMAN COMPUTER INTERACTION (ICT)**

Academic Resource Planning Institute (ARPI)	FX Nursalim Hadi, Ph.D.
Center for Robotic and Intelligent Machines (CRIM)	Dr. Riza Muhida
Center for Ubiquitous Technology (UBITECH)	Assoc. Prof. Dr. Teddy Mantoro
Center for Creative Technology (CCT):	Arya Antaputra, M.T
Supercomputing Center for Education & Research (SCER)	Rufinus, Ph.D. / Agung Alfiansyah, Ph.D.
Center for Augmented/Virtual Reality	Dr. Markus Santoso
Multimedia and Animation Studio (SMAST):	Ardiyan Sah
Entertainment Essence Center Studio	Michael Gumelar
Interactive Culture Center	Santo Tjhin
2D Games Research Center	David Setiabudi
Center of IT interactive	Beny Saputro
Networked Computing Center	Dr. Rahmat Budiarto
	Center for Robotic and Intelligent Machines (CRIM) Center for Ubiquitous Technology (UBITECH) Center for Creative Technology (CCT): Supercomputing Center for Education & Research (SCER) Center for Augmented/Virtual Reality Multimedia and Animation Studio (SMAST): Entertainment Essence Center Studio Interactive Culture Center 2D Games Research Center Center of IT interactive

### **CLUSTER OF ECONOMY, BUSINESS & ENTERPRENEURSHIP**

13	Indonesia Center for Green Economy (ICGE)	Dwi Susanto Ph.D
14	Center for Agribusiness (CAG)	Dr. Bambang Sayaka, M.Sc.
15	Center for Technopreneurship & Innovation (CTI)	Martin Tjahjono, Ph.D
16	Institute for Applied Business Research (IABR)	
17	Center for Asset Management	Dr. Agustinus Yohanes Silalahi
18	Center for Community Development	Dr. Syam Surya
19	Center for Econophysics	Dr. Tjipto Juwono
20	Center for Financial Engineering	Maydison Ginting Ph.D
21	Center for Financial Literacy	Lingga Madu Darutama
22	Global Business Strategy Center (GBSC)	Dr. Victoria Sabon
23	Research Center on International Cultures and Communications	Dr. MAS Hikam

### **CLUSTER OF LIFE SCIENCES**

24	Brain & Circulation Institute of Indonesia (BCII)	Taruna Ikrar. M.D., Ph.D.
25	Indonesia Brain Research Center (IBRC)	Irawan Satriotomo, M.D., Ph.D
26	Center for Molecular Biodiversity Research (CMBR)	Dr. Teguh Triono
27	Comprehensive Herbal Medicine Institute (CHMI)	Dr. Tutun Nugraha
28	Center for Consciousness (CC)	Indranu Suhendro
29	Center for Sustainable Aquaculture and Pathology Studies (Aqua Path)	Dr. Sidrotun Naim
30	Center for Drug Research in Infectious Diseases	Dr. Kholis Abdurachim Audah
31	Center for Beverages	Dr. I Nyoman Artha
32	Center for Bioinspired Advanced Materials	Dr. Yudi Rahmawan
33	Center for Functional Food	Dr. Ihsan Iswaldi
34	Center for Food Technology	Dr. Agung Waluyo

### **CLUSTER OF ENVIRONMENTAL, SUSTAINABILITY & RENEWABLE ENERGY**

35	Academy for Clean Energy and Sustainibility (ACES)	R.M. Soedjono Respati
36	Indonesia Center for waste Management (ICWM)	Dr- Eng. Bayu Indrawan, M.T.
37	Sustainable Terrestrial Management & Integrated Renewable Energy Center (STIREC)	Asep Sugih Suntana, Ph.D.
38	Center for Climate Finance (CCF)	E.G. Togu Manurung, Ph.D.
39	Center for Clean Water Technology (CCWT)	Dr. Chris Salim
40	Center for Bioenergy and Bioproducts (CBB)	Yalun Arifin, Ph.D.
41	Center Sustainable Smart City (S-Smart)	Nuki Agya Utama, Ph.D.
42	Research Center for Catastrophe and Disaster Mitigation (CCDM-SU)	Dr. Abdul Muhari
43	Center for Carbon Capture Storage	Dr. Sholeh Ma'mun
44	Center for Renewable Energy	Rudi Irawan Ph.D
45	Center Consumption and Production (IC-SCP)	Dr. Aretha Aprilia

### **CLUSTER OF MARITIME SCIENCE**

4	46	Center for Oceanography & Marine Technology (COMT)	Alan F. Koropitan, Ph.D.
-	47	Center for Marine Product	Prof. Irwandi Jaswir

### **CLUSTER OF SUPPORTING TECHNOLOGY**

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48	Center of Mobile, Micro, and Nanotechnology (CMMN	David-A. Mendels, Ph.D.
49	Center of Glass and Optics Devices (CGOD)	Prof. Sunartoto
50	Center for Semiconductor Lighting and Display Technologies (SLIDES)	Yoga Divayana, Ph.D.
51	Center for Optical and Biomedical Engineering (COBE)	Dr. –Ing Azhar Zam
52	Center for Computational Fluid Dynamics (CCFD)	Dena Hendriana, Sc. D.
53	Center for Future Transportation (CFT)	Sigit Santoso, Ph.D
54	Center for Complexities (CC)	Hokky Situngkir
55	Center for Solar Photovoltaic (CSP)	Arief Budiman, Ph.D.
56	Center for Metrology and Microanalysis	Agus Purwanto Ph.D/Dr. Arbi Dimyat
57	Center for Geoinformatics Engineering	Dr. Parluhutan Manurung
58	Center for Digital Broadcasting	Dr. Albert Kuhon
59	Center for Biomaterial and Supercritical Fluid	Dr. Purba Purnama
60	Center for Flight Dynamics Research	Dr. Budi Chandra
61	Center for Advanced Marine Vehicle Research	Dr. Thombi layukallo
62	Advanced Robotic Lab	Dr. Dandy Barata Soewandito
63	Electric Propulsion Center	Dodi Garinto

### **CLUSTER OF EDUCATION**

Center for Innovative Learning (CIL)	Syailendra Harahap
Center for Educational Technology (CET)	Budi Chang, M.Sc.
Center of Math GASING (CMG)	Ali Godjali, Ph.D.
Science and Math Olympiad Center (SMOC)	Hendra Kwee, Ph.D
National Centre for Gifted and Talented (NCGT)	Dr. Srilanawati, M.Si.
Surya Institute for the Promotion of Science (SIPS)	Ir. Srisetiowati, M.B.A.
Center for Young Scientist (CYS)	Monika Raharti M.Sc.
Center for Curriculum Development (CCD)	Dr. Nancy Susianna
Center for Physics GASING	Dr. Hani Santosa
Surya Voyager Young Writers Center	Sylvia Lim, Ellen Cory
Center for Music Development	Dr. Rita Hutagalung
	Center for Educational Technology (CET)  Center of Math GASING (CMG)  Science and Math Olympiad Center (SMOC)  National Centre for Gifted and Talented (NCGT)  Surya Institute for the Promotion of Science (SIPS)  Center for Young Scientist (CYS)  Center for Curriculum Development (CCD)  Center for Physics GASING  Surya Voyager Young Writers Center

### **CLUSTER OF SCIENCES**

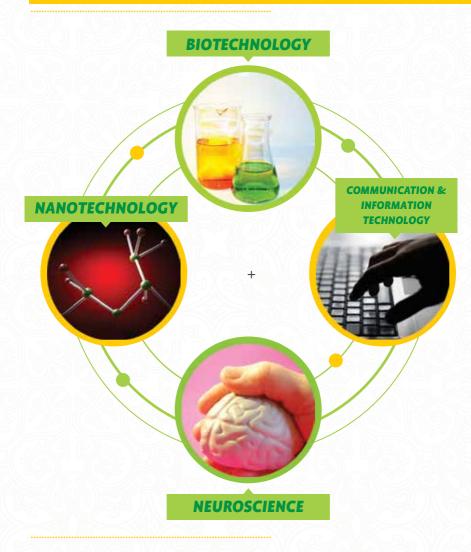
75	Center for Theoretical Particle Physics (CTPP)	Jong Anly Ph.D
76	Center of Nuclear Physics (CNP)	Anton Wiranata Ph.D

### **CLUSTER OF ART, DESIGN, AND INNOVATION**

77	Center of Art/design for Creative Research Practices (C4ADRP)	Karna Mustaqim, M.A. ,Ph.D.(car)d
78	Center for Innovation and Certification (CIC)	Dr-Ing. Pudji Untoro
79	Center For Film-making	Kar-Kwee

# 1 OStudy Programs

Study programs at Surya University are so designed that they shall fit the change of time and are oriented toward four future technologies that will dominate the world, namely:



### Faculty Of Green Economy & Digital Communication

### 01. Agribusiness

**Concentration** Livestocks & Fishery Agribusiness, Plantation & Agro Forestry, Horticulture & Crops Agribusiness

### o2. Green Economy

Concentration Accounting, Finance & Banking, Management, Global Trading

### 03. Technopreneurship

### a. Technopreneurship

**Concentration** Computer & Information Technology Technopreneurship, Smart Franchise Technopreneurship, Smart Real Estate Technopreneurship, Life Science Technopreneurship, Energy Technopreneurship

### b. Financial Analysis

Concentration Risk Management, Financial Market (Forex, Stock, Bond, Derivatives)

### 04. Digital Communication

Concentration 3D Movie & Beyond, Digital TV & Radio, Video Games, Digital Media

### Faculty of Clean Energy & Climate Change

### 05. Physics - Energy Engineering

**Concentration** Solar Energy, Wind Energy, Geothermal Energy, Hydro and Ocean Energy

### o6. Chemical & Green Process Engineering

**Concentration** Industrial Chemical Technology, Energy Biofuel, Herbal & Pharmaceutical Technology, Bioprocess Technology

### 07. Environmental Engineerin g

**Concentration** Renewable Energy Management, Water / Wastewater Management, Sustainable Smart-city / Green Building, Forest Conservation & Climate Change

### Faculty of Life Science

### 08. Biotechnology & Neuroscience

### A. Biotechnology

Concentration Bioprocess & Industrial Fermentation, Genetic Engineering, Cell Science Technology

### h Neuroscience

Concentration Community Neuroscience, General Neuroscience, Clinical Neuroscience

### og. Human Computer Interaction

**Concentration** Human Centered Design, Artificial Intelligence, Game Programming, Distributed System and Networking, Embedded System

### 10. Nutrition & Food Technology

**Concentration** Food Chemistry & Analysis, Food Safety & Microbiology, Food Processing & Engineering, Food Industry Management & Entrepreneurship, Food Chemistry & Biotechnology

. . .



was located in the landmark Summarecon, Tangerang. The surrounding green environment and vibrant community provide a perfect backdrop to academic life and intellectual stimulation.

The township offers unrivaled modern facilities and convenience for students to excel in their study and enjoy life at the same time.





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