

2022

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AFRICAN PARTNERS

Kenya

Moi University

University Overview

Moi University was established in 1984 to be the university of choice in nurturing innovation and talent in science, technology, and development in Kenya. Moi University's mission is to preserve, create, and disseminate knowledge; conserve and develop scientific, technological, and cultural heritage through quality teaching and research; create a conducive working and learning environment; and work with stakeholders for the betterment of society.

Leadership

Name: Prof. Isaac Sanga Kosgey Title: Vice-Chancellor of Moi University Contact: *Email:* <u>vc@mu.ac.ke</u>

IUPUI Partnership Contact

Name: Charles Lagat, PhD Title: Director International Programmes, Linkages & Alumni at Moi University, AGBA Vice President Kenya, and UNESCO Chair in Business and Sustainability Contact:

E-mail: lagatck@mu.ac.ke, lagatck@yahoo.com

Basic Details

Website

https://www.mu.ac.ke/index

Campuses

- Alupe University College
- Annex Campus
- Bomet University College
- Coast Campus
- College of Health Sciences
- Eldoret West Campus
- Kitale Campus
- Nairobi Campus
- Odera Akang'o Campus College

- URAP World Rankings: #2441 in World University Rankings (2021-2022)
- URAP Kenya Rankings: #3 in Kenya University Rankings (2021)

Uniqueness of Moi University

Moi University has distinguished itself for its commitment to holistic training combined with theoretical and practical experience. One way in which the university exposes students to practical and theoretical studies is through the ownership of Rivatex East Africa Limited (REAL), an ultra-modern textile facility which is used as an industrial training asset for students.

The university is also the first in East and Central Africa to establish a School of Aerospace Sciences, and is registered as an Aviation Training Organization by the Kenya Civil Aviation Authority. Moi University's School of Medicine ranks top among the eight public medical schools for research expenditures in Kenya, with work performed in HIV/AIDS (through AMPATH), cancer (through the Chandaria Center), cardiovascular diseases, and many others.

Moi University's unique research commitment in Phytochemicals, Textiles, Renewable Energy, Education, and Peace and Reconciliation studies is also well recognized. Moi University offers degrees in a wide range of fields, including agriculture, education, music, environmental studies, hotel and hospitality management, tourism, sports management, and entrepreneurship.

ACEII-PTRE - Center of Excellence in Phytochemicals, Textiles & Renewable Energy

Moi University's ACEII-PTRE is one of 24 African Higher Education Centers of Excellence that is funded by the World Bank. ACEII-PTRE offers short courses, master's degrees, doctoral programs, and research opportunities for students and faculty. Two key funded projects at ACEII-PTRE include Mobility for Innovative Renewable Energy Technologies (MIRET) and Energy Transforming Access Learning Partnership (TEA-LP), which specializes in hydro energy, wind and solar energy, bio energy, and energy entrepreneurship. The center has garnered a reputation for excellence and partnered with organizations and universities globally, including the World Bank and the University of Zambia.

Moi-ACC – Moi University African Cluster Center

Moi University's African Cluster Center (ACC) is a hub for all African studies. The ACC conducts multi- and trans-disciplinary research and organizes seminars and workshops in fields such as Arts and Aesthetics, Learning, Moralities, and Gender and Diversity. Partners of the ACC include Rhodes University at Makhanda, South Africa and the University Joseph Ki-Zerbo at Ouagadougou, Burkina Faso. Current research includes the Indian Ocean Cultures Workshop, which explores the relationship of the Indian Ocean to Africa with an emphasis on migration and culture.

CERM-ESA – Center of Excellence for Educational Research Methodologies and Management (CERM-ESA)

CERM-ESA nurtures innovative practices in education, research, and administration of educational institutions, and has partners in Germany, South Africa, Tanzania, and Uganda. The center focuses on African education methods, didactics, and management strategies, and trains future educational leaders at the masters and PhD levels.

IUPUI Engagement with Moi University

- 1. AMPATH: https://www.ampathkenya.org/
- 2. IU School of Nursing
- 3. IU Lilly Family School of Philanthropy
- 4. IUPUI School of Liberal Arts
- 5. Kelly School of Business
- 6. School of Education

- 7. IU School of Dentistry
- 8. School of Social Work
- 9. Purdue School of Engineering & Technology

ASIAN PARTNERS

China India Japan Thailand Vietnam

Beijing University of Technology

University Overview

Beijing University of Technology (BJUT) is a public research university established in 1960 with the mission of creating skilled engineers for the industrial systems of Beijing. BJUT is home to programs in science, engineering, economics, management, literature, law, art and education.

IUPUI Partnership Contact

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Basic Details

Campus(es)

One campus in Beijing

- Times Higher Education World University Rankings: #1001-1200 in World University Rankings (2022), #301-350 in Asia University Rankings (2021)
- **QS Top Universities Rankings:** #701-750 in QS World University Rankings, #201-250 in QS WUR Rankings in Materials Sciences, #202 in Asian University Rankings
- US News & World Report: #701 in Best Global Universities, #160 in Best Global Universities in Asia, #66 in Best Global Universities in China

Urban Development

BJUT's focus is urban construction, pollution management, environmental improvement, and traffic congestion alleviation.

Engineering

BJUT's Civil Engineering program has entered the list of "Double First-Class" disciplines and its environmental science and engineering was rated as grade A- by China's Ministry of Education.

IUPUI Engagement with BJUT

- 1. Purdue School of Engineering and Technology: 4+1 BSMS exchange program
- 2. Department of Computer and Information Science: MS admissions collaboration

Sun Yat-sen University

University Overview

Sun Yat-sen University (SYSU) is a public research university based in Guangzhou, China. Founded in 1924 by Dr. Sun Yat-sen, the institution prides itself on the distinguished research that it facilitates. The university is regarded as the best talent development center in South China. With five campuses and 10 affiliated hospitals, the university offers undergraduate, master's, PhD, and post-doctoral degrees to Chinese and international students in the fields of humanities, social sciences, natural sciences, medical sciences, and engineering.

Leadership

Name: Dr. Gao Song Title: President Contact: *E-mail:* <u>president@mail.sysu.edu.cn</u>

IUPUI Partnership Contact

Name: Ms. Huang Menglin Title: Deputy Chief, Section for Global Partnership, Regional Manager (America & Oceania), Office of International Cooperation & Exchange, Sun Yat-sen University Contact: Email: huangml25@mail.sysu.edu.cn Phone: (8620) 84115613; 84111897

Fax: (8620) 84036860

Basic Details

Website

https://www.sysu.edu.cn/en/index.htm

Campus(es)

- Guangzhou South
- Guangzhou North
- Guangzhou East
- Zhuhai
- Shenzhen

- Times Higher Education World University Rankings: #251-300 in World University Rankings (2022), #176-200 in World Reputation Rankings (2020), #39 in Asia University Rankings (2021)
- **QS Top Universities:** #260 in World University Rankings, #248 in WUR Rankings in Arts and Humanities, #201-250 in Graduate Employability Rankings, #44 in Asian University Rankings
- **US News and World Report:** #159 in Best Global Universities, #21 in Best Global Universities in Asia, #8 in Best Global Universities in China

Public Health

One of SYSU's core areas of strength is public health. Established in 1976, the School of Public Health focuses on preventative medicine, nutrition, maternal and child health, medical statistics and epidemiology, and health service management. The school also consists of the Health Inspection and Quarantine Center and the Teaching Laboratory Center. Public Health and Preventative Medicine at SYSU placed fifth in the 2012 China Discipline Rankings.

Cancer Studies

Cancer treatment and prevention studies are another area of priority for SYSU. The Sun Yatsen University Cancer Center (SYSUCC) was established in 1964 as one of the first four tumor hospitals in China. Today, SYSUCC is the largest cancer care, education, research, and prevention center in southern China. The center addresses an array of cancer-related topics such as Blood Transfusion, Breast Oncology, Medical Imaging, Minimally Invasive Therapy, Pediatric Oncology, and many more. SYSUCC is also involved in research of novel drugs. The SYSUCC has collaborations with the University of Texas MD Anderson Cancer Center (MDACC). the Netherlands Cancer Institute (NKI), and the Karolinska Institute in Sweden.

Ophthalmology

One key area of research at SYSU is ophthalmology, which is carried out by the Zhongshan Ophthalmic Center (ZOC). The roots of the ZOC date back to 1835. The ZOC specializes in cataracts, glaucoma, corneal and oculus fundus diseases, oculoplasty, LASIK, and a plethora of other topics. The high-profile research and quality of work at ZOC has been recognized through the many renowned rankings and ratings, including the center's ranking of first for seven consecutive years in the ophthalmology category of the Specialized Department List for Chinese Hospitals and the first 3-A-Class ranking for an ophthalmic hospital in China. The ZOC has partnered with School of Informatics and Computing (SoIC) and international organizations such as Orbis International, the Asia-Pacific Academy of Ophthalmology, and the Asia-Pacific Glaucoma Society, among others.

Economics and Management

SYSU is also renowned for its prowess in economics and management. Operated by the Lingnan College, SYSU offers programs in three Economics, disciplines: Finance, and Management. Programs range from undergraduate to PhD levels, with the inclusion of professional degrees like the MBA and Executive MBA. The faculty of the school carry out rigorous research in the area of China's ongoing economic and managerial development. The Lingnan College has also partnered with globally recognized institutions such as MIT's Sloan School of Management, University of Minnesota's Carlson School of Management, and the University of Virginia's McIntire School of Commerce.

IUPUI engagement with SYSU

- **1. IU School of Nursing (IUSN):** Student exchange program and virtual learning
- **2. IU School of Medicine (IUSM):** Student and faculty exchange programs

- **3. IU Fairbanks School of Public Health:** Research collaborations and faculty visits
- 4. Purdue School of Engineering and Technology: 2+2 BSME program
- 5. Confucius Institute in Indianapolis: 2008 2019

Chongqing University of Technology

University Overview

Chongqing University of Technology public research (COUT) is a based university in Chongging, Founded China. in 1940. the institution is renowned for building morality while serving economic and social development. The university offers undergraduate, master's, PhD, and post-doctoral degrees to Chinese and international students in the fields engineering. of science. literature, management, economics, law, medicine and art.

Leadership

Name: Dr. Du Huiping Title: Principal

IUPUI Partnership Contact

Name: Dr. Liu Chenglong Title: Director, International Office, Chongqing University of Technology Contact: Email: <u>liuchenglong@cqut.edu.cn</u> Phone: +86-23-62563117

Basic Details

Website

https://www.cqut.edu.cn/

Campus(es)

- Huaxi (Main)
- Liangjiang
- Yangjiaping

Rankings

• US News and World Report: #1761 in Best Global Universities, #666 in Best Global Universities in Asia, #251 in Best Global Universities in China

Automotive Technologies

CQUT has vast experience with the research and development of automotive technologies. With numerous research labs and groups, the University is involved in the development of auto parts manufacturing, automotive control, power systems, and vehicle simulation.

Sensor and Detection Technologies

Another key area of research at CQUT focuses on sensors and detection apparatus. This involves notable technology like time grid sensing, advanced detection, optical fiber sensing, photoelectric detection, and intelligent vision systems.

Advanced Materials and Manufacturing

CQUT is renowned for its research into novel materials and manufacturing methods. There are several laboratories and engineering centers dedicated to this work at CQUT. Examples of research topics include green energy materials, mold technology, special welding materials, and materials chemical engineering.

IUPUI engagement with CQUT

1. Purdue School of Engineering and Technology: Accelerated BSMS programs and research collaborations

Amity University

University Overview

Amity University is a private research university located in Noida, India. It was established in 2005 by an Act of the State Legislature of Uttar Pradesh and is recognized by University Grants Commission and accredited by the National and Accreditation Assessment Council (NAAC) of India with grade A+.Amity University offers programs on campus and online, in a number of fields of study at undergraduate, postgraduate, and doctoral levels.

Leadership

Name: Dr. Ashok K. Chauhan, **Title:** Founder President, Ritnand Balved Education Foundation

IUPUI Partnership Contact

Name: Prof. Bhawna Kumar Title: VP & Mr. Gaurav Bhatnagar, Asst. Director, International Affairs Division, Amity University Uttar Pradesh, Sector-125, Noida, 201313 Uttar Pradesh, India Contact: Email: bkumar@amity.edu, gbhatnagar@amity.edu Phone: +91 120 4392044

Basic Details

Website

https://www.amity.edu/

Campus(es)

Thirteen Indian Campuses, thirteen Global Campuses (Dubai, London, Singapore, New York, San Francisco, Seattle, Tashkent, Mauritius, South Africa, Romania, Abu Dhabi, China, Amsterdam), 10 Global Business Schools, 3 Online Universities (Amity University Online, Amity Distance Learning, Amity Future Academy)

- **QS University Rankings:** Ranked in top universities in Asia (2014, 2015 & 2016) and in top 120 universities in 'BRICS' Nations (2016), #1001-1200 in QS World Rankings (2022), and #218 in QS Asian University Rankings (2022)
- Times Higher Education World University Rankings: Ranked among top universities globally (2016), #1201 in World University Rankings (2022)
- India Today University Rankings: India's #1 Not-For-Profit Private University (2019)

Amitv's research and innovation program is directed by the Amity Science, Technology & Innovation Foundation (ASTIF), Amity Institute of Click Chemistry Research and Studies (AICCRS), and the Amity Case Research Center. ASTIF specializes in projects such as Cancer Biology, Genome Engineering, and Renewable Energy. AICCRS explores innovations in the fields of Nanomaterials, Chemical Biology & Synthetic Drug Discovery, Chemical Methodologies, and Energy Storage & Catalysis. Finally, the Amity Case Research Center delves extensively into management research involving the fields of Strategy, Marketing, Finance, and Economics, amongst others. Overall, Amity has completed 400+ research projects, 25,000+ publications and received 1,540+ patents.

Amity Science, Technology & Innovation Foundation (ASTIF)

ASTIF was founded in 2008 by the Founder President of Amity University, Dr. Ashok K. Chauhan. The foundation's key operations are split into 15 research clusters, with each cluster involving a dedicated group of faculty, staff, and students. A few key clusters are:

- 1. Cancer Biology
- 2. Genome Engineering
- 3. Alternate and Renewable Energy
- 4. Agriculture Biotechnology

Amity Institute of Click Chemistry Research and Studies (AICCRS)

AICCRS was established in 2016 also by Dr. Ashok K. Chauhan to innovate and design technologies at a molecular scale to enhance efficiency and societal impact in the fields of energy, healthcare, and the environment. Areas such as bioinspired smart biomimetics and nanobiomaterials, 2D nanomaterials, medicinal chemistry, drug discovery, chemical biology and immuno-intelligent materials for biomedical applications remain a strategic thrust at AICCRS.

Amity Case Research Center

Carrying forward Amity's 18 years of excellence in management education are Amity School of Business' faculty who are involved in all aspects of management research, consulting, and a Management Development Program (MDP). Such a strong focus on research has allowed the faculty to develop management case studies covering domains like strategy, marketing, economics, finance, and others. The Amity Case Research Center has developed numerous case studies that have been purchased by global leaders in education, such as the University of Oxford, McGraw-Hill Education, Massachusetts Institute of Technology, Stanford University, Harvard University, and many more. The case studies have also won various awards for their stellar quality and relevance in today's business environment.

IUPUI Engagement with Amity University

- 1. Purdue School of Engineering and Technology: Accelerated MS program
- 2. Department of Computer and Information Science: 2+2 BS program
- **3. School of Informatics and Computing:** 2+2 BS program

Amrita University

University Overview

Amrita Vishwa Vidyapeetham is a multi- campus, multi-disciplinary research academia that is accredited 'A++' by NAAC and ranked one of the best research institutions in India. Founded by the world-renowned

humanitarian, Sri Mata Amritanandamayi (aka Devi the *multi-campus* 'Amma'). University was established to provide rigorous academic instruction in an ambience rooted from Indian cultural heritage. Amrita has established international collaborative initiatives with over 75 world-leading institutions in the U.S., Europe, Australia and Japan, with extensive faculty and student exchanges and cross- continental research projects.

Leadership

Name: Sri Mata Amritanandamayi Devi

Endearingly referred to as Amma, is the Founder and Chancellor of Amrita Vishwa Vidyapeetham. Amma is a renowned humanitarian and spiritual teacher who believes that scientific knowledge and spiritual wisdom are intertwined, and recognizing this is essential for the growth of humanity. Her values and vision have been instilled into every aspect of Amrita Vishwa Vidyapeetham, and under her leadership, Amrita has risen to the forefront of education and research. **Name:** Swami Amritaswarupananda Puri **Title:** President, Amrita Vishwa Vidhyapeetham & Vice President, Mata Amritanadamayi Math

IUPUI Partnership Contact Details

Name: Radha Murali Contact:

Email: international@amrita.edu *Phone:* +91-476-280-4152 *Address:* Amrita Center for International Programs (ACIP) Amrita Vishwa Vidyapeetham Amritapuri Campus, Kollam, 690525, Kerala, India

Basic Details

Website https://amrita.edu/

Campuses

Six campuses in South India, two upcoming campuses in Andhra Pradesh and Haryana

- Times Higher Education World University Rankings: #181 out of 200 Universities in the 'BRICS' association and Emerging Nations (2016); #801-#1000 in World University Rankings (2022); #170 Asia university Ranking (2021), #201-#250 Young University Rankings (2021)
- Stanford University Study Five Amrita Professors Among World's Top 2% of Scientists: In a study conducted by Stanford University, USA, five Amrita professors were among the top 2% from a database of 100,000 top global scientists:

- Prof. Maneesha Vinodini Ramesh, Director of Amrita Center for Wireless Networks and Applications
- Prof. Shantikumar Nair, Director of Amrita Center for Nanosciences and Molecular Medicine
- Prof. R. Jayakumar, Amrita Center for Nanosciences
- Prof. Madhav Sutta, Amrita School of Engineering
- Dr. N. Radhika, Department of Mechanical Engineering

Amrita Vishwa Vidyapeetham University places paramount importance on research and development. The University has established six dedicated research centers and undertakes studies in 13 key research areas, including Artificial Intelligence, Biotechnology and Spiritual Studies.

Amrita is also a partner in multiple international bilateral governmental research programs and initiatives, such as Indo-US Initiative (Cyber Security, Cyber Crimes, & Cyber Forensics), Indo-European Union (Erasmus Mundus, India4EU programs), and the Indo-Japan Initiative in Wireless Networks & Applications.

Amrita Research Centers

Amrita Center for Nanoscience and Molecular Medicine – ACNSMM

Amrita Center for Nanoscience and Molecular Medicine (ACNSMM) was established in early 2006 and specializes in nanotechnology and molecular medicine. This research center has grown to become well-recognized nationally and internationally for contributions to nanotechnology, molecular medicine and energy science. Some key facilities of ACNSSM include nano characterization facility, cell culture & stem cell facility, and high-resolution imaging facility. The center is also India's first Nanobio center.

Centre for Internet Studies and Artificial Intelligence – CISAI

The Center for Internet Studies and Artificial Intelligence (CISAI) focuses on research and studies on Artificial Intelligence, Internet and related technologies, and their impact on society. Some key areas of research include Internet measurement, modeling and topology studies, Internet Standards and Security, and Internet governance.

Amrita Institute of Medical Sciences – AIMS

The Amrita Institute of Medical Sciences (AIMS) is dedicated to the progress of medical techniques and technology, and is one of the most advanced medical studies centers in India. AIMS is also home to high-tech infrastructure and machinery such as sequencers, and thermal cyclers. Some key areas of research at AIMS include molecular biology, biodegradable stents and tumor immunology.

Amrita Center for Environmental Studies

The Center for Environmental Studies was established in 1999 at Amrita's Main Campus at The center aims Ettimadai. to develop which eco-friendly, technologies are economically sustainable, with a focus on the needs of the community. Some key areas of research at the Center for Environmental Studies include ex-situ conservation, cultivation and propagation of medicinal and avurvedic plants as well as other endangered species of plants, and sustainable agriculture.

Amrita Center for Wireless Networks and Applications – AWNA

The Amrita Center for Wireless Networks and Applications (AWNA) was launched in 2006 and is based in Amrita's Kollam campus. Starting as a R&D center for the promotion, development and application of wireless technologies in a plethora of fields, AWNA has grown to become an internationally recognized research center. One of AWNA's biggest achievements was the successful development of world's first Wireless Sensor Network (WSN) System for the Detection and Early Warning of Landslides in the Munnar region of Kerala. Other key research areas include wearable medical systems, intelligent infrastructure and 6G technology.

Amrita Center for Humanitarian Operations and Management – ACHOM

The Amrita Center for Humanitarian Operations and Management (ACHOM) was established to study the organizational, managerial and behavioral issues pertaining to preparedness, response, relief, recovery, rehabilitation and reconstruction in humanitarian crises. Based in the Amrita School of Business, some of ACHOM's key research areas include disaster management and humanitarian operations/interventions.

IUPUI Engagement with Amrita University

- **1. Purdue School of Science:** Research and development partnership, PhD Supervision
- **2. Kelley School of Business:** PhD Supervision

Vellore Institute of Technology

University Overview

Vellore Institute of Technology (VIT) is a private research university originally established in Vellore, India in 1956, and founded in 1984 as the Vellore Engineering College. The college received University status in 2001 and is accredited by NAAC with A++. VIT offers numerous programs on campus and through distance mode, in various fields of study at undergraduate, postgraduate, and doctoral levels.

Leadership

Name: Dr. G. Viswanathan, Title: Founder Chancellor, Vellore Institute of Technology Contact: <u>chancellor@vit.ac.in</u>

IUPUI Partnership Contact

Name: Dr. R. Seenivasan Title: Professor and Deputy Director (USA and Canada Cooperation) International Relations Office Contact: *Email:* ir1@vit.ac.in *Phone:* +91-416-2243118 *Address:* VIT -Vellore Institute of Technology, Vellore-632 014, Tamil Nadu, India

Basic Details

Campus(es)

4 Indian Campuses: Vellore, Tamil Nadu; Chennai, Tamil Nadu; Vijayawada, Andhra Pradesh; Bhopal, Madhya Pradesh

1 Online University: VIT Online Learning (VITOL) Institute

- NIRF: #21 for Indian Universities (2021)
- US News & World Report: #902 in Best Global Universities
- **QS Top Universities:** #1001 #1200 in World University Rankings (2022), #198 in Asian University Rankings (2022)

VIT's reputation for unparalleled research and development is founded in the University's philosophy to drive higher education through a commitment to excellence in fundamental research. The research undertaken at VIT has had significant impacts on India's defense and research organizations such as the Indian Space Research Organization (ISRO), the Indian Atomic Research Centers, India's Defense Organization Research and Development (DRDO), among others. Through such critical work, VIT has secured funding for 50 research projects, amounting to Rs. 100 million (approximately \$1.3 million).

VIT Research Centers

Automotive Research Center – ARC

VIT's Automotive Research Center (ARC) was established in 2005 and was funded by India's Department of Science and Technology (DST). Key research areas include Electric and Autonomous Vehicles, alternative fuels, engine management systems, engine emission control, and Homogeneous Charge Compression Ignition (HCCI) engines. The ARC has also partnered with large automotive manufacturers such as Tata Motors and Renault-Nissan Technologies.

Center for Innovative Manufacturing Research – CIMR

The Center for Innovation Manufacturing Research (CIMR) at VIT was founded in 2016 with the vision of helping develop global manufacturing methods to be more sustainable and efficient. Key research areas include advanced material processing, additive manufacturing, machining, surface engineering and material characterization, and testing. partnerships with national CIMR's and international organizations include India's Defense Research and Development Laboratory, and the Texas A&M University.

Center for Nanotechnology Research – CNR

VIT's Center for Nanotechnology Research (CNR) focuses on "Printed and Flexible Electronic devices for Energy, Sensors and Health care". Key partnerships include the Korea Institute of Energy Research (South Korea), Plymouth University (UK), SPEL Supercapacitors (India) and Alkosens (Sweden).

Center for Bio Separation Technology – CBST

The Center for Bio Separation Technology (CBST) at VIT was created under the "High priority Research Area" category and is funded by India's Department of Science and Technology (DST). This center is classified as a "National Facility" by the DST, due to the significance of its research. The focus of the center is to develop technologies which allow for the efficient separation of biomolecules in the field of pharmaceuticals. Research also focuses on immunotechnology and metabolic disorders.

VIT's other centers of research include Center for Disaster Mitigation and Management – CDMM, Center for Function Materials – CFM; Center for NanoBiotechnology – CNBT; CO2 and Green Technologies Center; Center for Biomaterials, Cellular and Molecular Theranostics – CBCMT; and Technology Information Forecasting and Assessment Council – TIFAC.

IUPUI Engagement with VIT

- **1. Purdue School of Science:** 2+2 BS program
- 2. Purdue School of Engineering and Technology: 2+2 BS programs
- **3. School of Informatics and Computing:** 2+2 BS program
- 4. Indiana Summit 2019 "Advances in Science Engineering and Technology"

Dr. MGR Educational and Research Institute (MGR-ERI)

University Overview

Dr. MGR Educational and Research Institute (MGR-ERI) is a "deemed university" ranked in the 151-200 tier by the Ministry of Education, India. The University is accredited by NAAC with 'A' grade and currently consists of 13,000 students from India and abroad. Five departments of MGR-ERI have also received accreditation from the National Board of Accreditation. The institute's leadership consists of high-profile scholars. scientists. and educationalists. The university has received funding from the Indian government and private sector organizations such as Microsoft and IBM.

Leadership

Name: Prof. Dr. S. Geethalakshmi, Title: Vice-Chancellor Contact: <u>vc@drmgrdu.ac.in</u>

IUPUI Partnership Contact

Name: Dr. Mehata Contact: <u>advisor.cs@drmgrdu.ac.in</u>

IUPUI Engagement with MGR-ERI

1. Purdue School of Science: Joint academic program exploration

Maharashtra Institute of Technology World Peace University (MIT-WPU)

University Overview

Maharashtra The Institute of Technology World Peace University (MIT-WPU) is a private research university, based in Pune, India. It was established in 1983 with the opening of the first engineering college in Maharashtra. Over the years, the university has grown to multiple schools covering fields including medicine, management, sustainability, law and many more. The university is accredited with grade 'A' by NAAC, and also carries accreditation by NBA (National Board of Accreditation). MIT-WPU has earned itself a Silver rating in the **OS-** IGAUGE ranking scale, and its schools of business and engineering have consistently ranked among the top programs in India, according to the Times Indian Universities survey. MIT-WPU provides a valuable educational experience, while also promoting the value of world peace.

Leadership

Name: Rahul Vishwanath Karad Title: Executive President, MIT-WPU

IUPUI Partnership Contact

Name: Prof. Shubhalaxmi Joshi Title: Dean, Faculty of Science, MIT-WPU, Contact: <u>shubhalaxmi.joshi@mitwpu.edu.in</u>

IUPUI Engagement with MIT-WPU:

1. Purdue School of Science: Joint academic program exploration

Indian Institute of Technology (IIT) Ropar

University Overview

The Indian institute of Technology (IIT) Ropar is a state university based in Punjab, India. Established in 2008, IIT Ropar is ranked 31st in the NIRF Overall Indian University rankings (2021), and 19th in the NIRF Engineering Indian Universities rankings (2021). The university is also ranked in the 351 - 400th band in the Times Higher Education World University Rankings (2022), 63rd in the Times Young University Rankings 2021, and 55th in the Times Asian University Rankings 2021. Led by Prof. Dr. Rajeev Ahuja, the university is among the most soughtout in India, receiving the first rank in Research Ouality by OS India Rankings 2020.

Leadership

Name: Prof. Rajeev Ahuja Title: Director Contact: Email: <u>director@iitrpr.ac.in</u> Phone: +91-1881-231006

IUPUI Partnership Contact

Name: Dr. CC Reddy Title Dean International Relations and Alumni Affairs Contact: deanir@iitrpr.ac.in

IUPUI Engagement with IIT Ropar

1. Purdue School of Science: Joint academic program and research collaboration exploration

Manipal Academy of Higher Education (MAHE)

University Overview

The Manipal Academy of higher Education (MAHE) is multidisciplinary, private deemed university based in Karnataka, India. Founded in 1953 as part of the Manipal Group of Institutions. The university also has two additional campuses in Karnataka and two campuses in Dubai and Malausia respectively. MAHE is certified under ISO 9001:2008 and ISO 14001:2004. The university has also won prestigious IMC Ramakrishna Bajaj National Quality Award and the Asia Pacific Quality Award in 2007-2008. As for rankings, NIRF has placed MAHE #15 in the 2021 Overall Indian Universities ranking. The university has placed in 1001-1200th band of the Times Higher Education World University Rankings (2022) and in the 351-400th bad of the Times Higher Education Asian University Rankings (2021). In the QS World University Rankings, MAHE falls in the #751-800 category and is ranked #194 in the Asian Universities category.

Leadership

Name: Dr. Ramdas M. Pai Title: President and Chancellor

IUPUI Partnership Contact

Name: Dr. B. Reshmi Title: Associate Professor-Senior Scale and Head: Health Information Management, Contact: <u>reshmi.b@manipal.edu</u>

IUPUI Engagement with MAHE

1. School of Informatics and Computing: Joint academic program exploration and research collaborations

Nalla Malla Reddy Engineering College (NMREC)

University Overview

Nalla Malla Reddy Engineering College (NMREC) is a private engineering university situated in Hyderabad, Telangana, India. The university is affiliated with the Jawaharlal Nehru **Technical** University (JNTU), Hyderabad, and is accredited by the National Board of Accreditation (NBA), the National Accreditation Assessment and Council (NAAC) by whom the university has been granted 'A' grade, and by the All India Council for Technical Education (AICTE). The university's BE/BTech course is ranked #161 in National Rankings set out by The Times. NMREC offers BTech. MTech and MBA courses, and has six distinct academic departments.

NMREC prides itself with the quality of its education and research. NMREC pioneers research in areas such as AI and Machine Learning, Minina. Geotechnical Data Engineering, Embedded Systems and Internet of Things (IOT) to name a few. With excellent infrastructure, qualified faculty, advanced research and a commitment to quality, *NMREC* is a unique institution in the Indian engineering college landscape.

Leadership

Name: Prof. Talla Venkat Reddy Title: Chairman

IUPUI Engagement with NMREC

- **1. School of Informatics and Computing:** 3.5+1.5 Accelerated MS program
- 2. Purdue School of Engineering and Technology: Joint academic program exploration

Hakuoh University

University Overview

Hakuoh University is a private university based in Tochigi, Japan. Founded in 1986 by renowned educationalist Dr. Kazuyoshi Kamioka, the university offers Bachelors and Masters level degrees in Business Administration and Law. and Bachelors level degrees in Education. The uniqueness of the university is divulged through the vast international network that has been cultivated. Hakuoh University has partnerships with 19 universities, and has welcomed over countless fulltime international students and exchange students over its history.

Leadership

Name: Takayasu Okushima Title: President

IUPUI Partnership Contact

Name: Osamu Kitiyama Title: Vice-President c/- Office of International Affairs Contact: Email: global@ad.hakuoh.ac.jp Phone: 0285-20-8162 (直通) Fax: 0285-20-8163 Phone: +81-285-20-8162(direct call) *Address:* 2-2-2 Ekihigashidori, Oyama City, Tochigi, 323-8586 JAPAN Fax:+81-285-20-8163

Basic Details

Website

https://hakuoh.jp/english

Campus(es)

Hakuoh University is home to two campuses – the Main Campus in Oyama, and the Daiyoji Campus

Rankings

Ranked in the 201+ subset in the Japan University Rankings of **Times Higher** Education World University Rankings

Business Administration

Hakuoh University's business administration faculty focuses on business administration and business communication. Students are trained in fields such as accounting, distribution, financing, information management, and marketing.

Law

Hakuoh's law faculty offers courses in international law, practice law, localgovernment law, corporate law, and policymaking.

Education

The faculty of education at Hakuoh University focusses on learning of the "heart" and "body to build versatile educationalists for the future. The unique approach utilizes the belief that education is human development, and this is applied through the various course offerings. Students can opt to specialize in early childhood education, health and sports science education, English education, or psychology education.

IUPUI Engagement with Hakuoh University

1. School of Liberal Arts: Student exchange program

Tsuda University, Japan

University Overview

Tsuda University is a private university for women in Tokyo, Japan. The university was founded in by Umeko Tsuda. 1900 a revolutionary female educator who contributed significantly to the battle against gender prejudice in Japan. Tsuda University now provides Bachelors, Masters, and Doctoral level programs for women in multiple fields and disciplines. The institution's efforts have been paramount in the achievement of some significant milestones: the first female lawyers, first female Chief Secretary, first female Cabinet Diplomat, and first female Head of the Women and Minors Bureau, were all alumni of Tsuda University. Tsuda University offers world class education to create global leaders who effect change at both in the local and international realms.

Leadership

Name: Dr. Yuko Takahashi Title: President

IUPUI Partnership Contact

Name: Suga Yasuko Title: Center for International Exchange Contact:

Email: cie@tsuda.ac.jp

Phone: +81-42-342-5164 *Address:* 2-1-1 Tsuda-machi, Kodaira-shi Tokyo, 187-8577, Japan]

Basic Details

Website

https://www.tsuda.ac.jp/en/index.htm

Campus(es)

The institution has two campuses: the Kodaira Campus and the Sendagaya Campus, both based in Tokyo.

Rankings

By the **Times Higher Education World University Rankings**, Tsuda University was ranked #1 among Japanese Women's private Universities in 2021, and #58 in the Overall Japanese University rankings in 2021.

Language and Culture

Tsuda University's research into Language and Culture is impressive, including projects in British and American Literature, Linguistics, Language Education, Communication Studies, among others.

International and Cultural Studies

The focus of Tsuda University's International and Cultural Studies research is to develop novel methodologies for exploring contemporary international relations and area studies. Examples of work undertaken here include studies of political systems, labor practices among blue-collar women workers, relations between Japan in Philippines in the age of globalization, and studies of humanitarian work.

Mathematics and Computer Science

Research in Mathematics and Computer Science is a high priority at Tsuda. Researchers from within and outside the bounds of Tsuda participate in such research and are invited to share findings and exchange results. Recent work has included research in mass data analysis algorithms, discrete dynamical systems and combinatories, optical illusion solids, and probability.

Policy Studies

Tsuda University promotes research in policy studies in conjunction with international socioindustrial partners, aiming to significantly impact research in higher education and academics. SDGs and investment, as well as tourism policy making, are examples of focus areas.

IUPUI Engagement with Tsuda University

1. School of Liberal Arts: Student exchange program

Chulalongkorn University

University Overview

Chulalongkorn University is a public, autonomous research university, situated in the heart of Bangkok, Thailand. The universitu was founded in March 1917 by King Vajiravudh, naming the university predecessor, after his Kina Chulalongkorn. Chulalongkorn University is Thailand's premier higher learning institution and is the largest in Thailand.

Chulalongkorn University is globally for renowned research and excellence. and has forged partnerships with noted international organizations in an array of fields. With its rich and diverse history, this university has produced numerous noteworthy alumni who have assumed positions of leadership in the public and private sectors.

Leadership

Name: Prof. Bundhit Eua-arporn Title: President, Ph.D. Contact: <u>bundhit.e.@chula.ac.th</u>

IUPUI Partnership Contact

Name: Ratsiri Thato Title: RN, PhD Dean and Professor Contact: *Email:* ratsiri99@gmail.com *Address:* Faculty of Nursing, Chulalongkorn University Borommaratchachonnani Srisataphat Building Rama1 Road, Pathumwan, Bangkok 10330, THAILAND

Name: Penpaktr Uthis **Title:** RN, PhD Associate Dean for Research and International Affairs

Contact:

Email: penpaktr uthis@yahoo.com

Address: Faculty of Nursing, Chulalongkorn University Borommaratchachonnani Srisataphat Building Rama1 Road, Pathumwan, Bangkok 10330, THAILAND

Basic Details

Website

https://www.chula.ac.th/en/

Campus(es)

Main Campus in the heart of Bangkok, Thailand

- Times Higher Education World University Rankings: 801-1000th in World University Rankings 2022; 23rd in Impact Rankings 2021; 194th in Asia University Rankings 2021
- **QS Top Universities**: #215 in QS World University Rankings, #51-100 in QS WUR in Petroleum Engineering, #141-150 in Graduate Employability Rankings, #36 in Asian University Rankings
- US News & World Report: #541 in Best Global Universities, #111 in Best Global Universities in Asia, #2 in Best Global Universities in Thailand

Advanced Materials

Advanced Materials Cluster is a research group focusing on natural and synthetic materials. Its mission is to promote responsible research & development in the functionality of modern materials including nanomaterials, bioplastics and biopolymers, porous-structured materials, thin film for agricultural application, and advanced application in energy and sensing application.

Aging

Chulalongkorn University is involved in crossdisciplinary research into social, economic and technological innovations that promote the health and capacity of the elderly. The findings of the research group shed light on and help mitigate the impacts of various challenges on the lives and wellbeing of Thailand's senior citizens. One focus is on the development of prototypes to facilitate mobility for senior citizens, and research into the development of hybrid sensors for home health surveillance.

Energy Storage

An energy storage system (ESS) is a crucial element in energy-efficient systems. Despite the great success of lithium-ion batteries, limited resources and their high cost restrict their implementation large-scale practical or application. Therefore, alternative batterv technologies using cheap and abundant materials such as sodium (Na), aluminum (Al), magnesium (Mg), and zinc (Zn) for electrodes are in the spotlight. Areas of focus include Zincion batteries (ZIBs), Zinc-air batteries (ZABs), and spent battery reusage. The energy storage research at Chulalongkorn University has also garnered international attention and mutually beneficial partnerships with organizations such as Mitsubishi Heavy Industries, University of Duisburg-Essen and University of Johannesburg.

Food & Water

CU's Food Research Cluster aims to foster and enable comprehensive high- end research throughout the entire food value chain including food production, processing, packaging, logistics and management, marketing and consumer research, food waste, and food quality and safety. The vision of food cluster is to establish research excellence especially in the areas of food safety and quality, innovative food products and smart packaging. The ultimate goal is the push the innovations to industry according to Thailand 4.0 "value-based economy" model in order to develop the global competitiveness of Thailand food industries.

IUPUI Engagement with Chulalongkorn University

- **1. IU School of Nursing (IUSN):** Research mentoring
- **2. IU School of Dentistry (IUSD):** Student and faculty exchanges

EUROPEAN PARTNERS

France Germany United Kingdom

Aix-Marseille University

University Overview

Aix-Marseille University (AMU) is a multidisciplinary research institute spread across nine cities in France. The university is the largest Frenchspeaking multidisciplinary research university in France. Established formally in 2012, the university offers Bachelors, Masters and Doctorallevel degrees to candidates, as well as providing opportunities for students and faculty to engage in international research through its 15 research institutions and numerous international research partnerships. AMU is committed to creating a future of unity and sustainable development on all fronts.

Leadership

Name: Eric Berton Title: President Contact: <u>eric.berton@univ-amu.fr</u>

IUPUI Partnership Contact

Name: Maria Lefevre Title: Responsable RI Polytech Marseille- Head of International Relations Polytech Marseille Aix-Marseille Université Contact: *Email:* maria-jose.lefevre@univ-amu.fr *Address:* POLYTECH LUMINY - 163 av. de Luminy - case 901 - 13009 Marseille, France

Basic Details

Website https://www.univ-amu.fr/en

Campus(es)

Five campuses: Aix-en-Provence, Marseille Center, Marseille Etoile, Marseille-Luminy, Marseille-Timone

- Times Higher Education World University Rankings: 301-350th in World University Rankings 2022, 201-300th in Impact Rankings 2021, 62nd in Young University Rankings 2022
- **QS Top Universities Rankings:** #501-510 QS World University Rankings, #156 in QS World University Rankings in the field of Life Sciences and Medicine, #501+ in Graduate Employability Ranking
- **US News and World Report:** #180 in Best Global Universities, #69 in Best Global Universities in Europe, #4 in Best Global Universities in France

Institute Archimedes Mathematics and Computer Science - AMI

AMU's Institute Archimedes Mathematics and Computer Science is dedicated to building a network of excellence in the fields of mathematics and computer science. The strengths of the institute are Data Science, Artificial Intelligence and Security.

Institute for Cancer and Immunology – ICI

The Institute for Cancer and Immunology is a leader in the development of cancer treatments, in particular by stimulating the patient's immune defenses for which they won the Nobel Prize for Medicine in 2018. The institute is working towards strengthening ties between the faculties of medicine, science and pharmacy to establish international programs of training, research and implementation.

Institute of Movement Science E.J. Marey – ISM

The ISM explores complex motor behavior and cognition, biomechanics, sociology and physiology. The main area of research is the study and modelling of human movement. To aid in research, the institute has invested in high-tech tools and equipment that analyze movement and the neurophysiological, biomechanical and muscular principles behind it.

Ocean Sciences Institute – OCEAN

AMU's Ocean Sciences Institute is involved in studies related to oceanography, climate science, digital and robotic sciences, marine engineering, maritime geography and history, ocean economics, and policy. OCEAN has created international partnerships with the likes of the Innovation Sea Cluster, IRD and IRSN to further the research undertaken, and discover means of implementing the findings. The primary challenges identified by OCEAN to tackle are studying oceanic ecosystems and discovering the effects of climate change on these systems, risk management and protection of coastal areas, creation of a digital model of the oceans utilizing ocean science data and observatory systems, and innovations in marine engineering.

IUPUI Engagement with Aix-Marseilles University

1. Purdue School of Engineering & Technology: Student exchange program

Heilbronn University of Applied Sciences

University Overview

Hochschule Heilbronn or Heilbronn University of Applied Sciences (HHN) is a public research university based in Heilbronn, Baden-Württemberg, Germany. Established in 1961, the institute has grown to a student capacity of roughly 8,200 students, and offers multiple courses at the Bachelors, Masters and PhD levels. The university is ranked highly among various German institutions and is renowned for its research. With over 220 partner universities and course offerings in numerous fields such as engineering, business, technology, and informatics, the institute prepares highly qualified and skilled individuals who excel in academic and industrial settings.

Leadership

Name: Prof. Dr.-Ing. Oliver Lenzen Title: Rector, Professor of Construction and Machine Elements Contact: rektor@hs-heilbronn.de

IUPUI Partnership Contact

Name: Prof. Dr. Martina Shakya Title: Head of MA Sustainable Tourism Development Contact: <u>martina.shakya@hs-heilbronn.de</u>

Name: Bettina Glaser Title: International Office Contact: <u>bettina.glaser@hs-heilbronn.de</u>

Basic Details

Website

https://www.hs-heilbronn.de/en

Campus(es)

Heilbronn – Sontheim Heilbronn – Bildungscampus Künzelsau Schwäbisch Hall

Rankings

EduRank Best Universities: #4161 in the World, #1135 in Europe, #166 in Germany

Automotive & mobility

The Institute for Automotive Engineering and Mechatronics (IKM) is an interdisciplinary research institute that focuses on topics including:

- Energy efficiency and electric mobility
- Intelligent transport processes
- Autonomous driving, traffic flow optimisation and safety
- Model-based development and simulation of vehicle systems
- Generational mobility and humanvehicle interaction

Digital living environments and health

The Institute for Medicine, Informatics and Economics (GECKO) is the centre of research into digital living environments and health. GECKO undertakes research and development at the interfaces between medicine, economics and informatics. Research topics include:

- *E-learning in medicine*
- Health economics
- Human-computer interaction
- Consumer health informatics
- Business processes

Materials Processing & Engineering

Competencies from materials processing technologies and engineering are pooled from across the faculties in the Institute for Automotive Engineering and Mechatronics (IKM).

Topics include:

- Materials testing and damage analysis
- Hardening processes and quality testing
- Surface analysis and determining the composition of materials
- Tribology and wear analysis
- Development of material-appropriate manufacturing processes

- Semi-finished production, forming and joining
- Simulation techniques for manufacturing processes.

IUPUI engagement with Heilbronn University

- 1. Purdue School of Engineering & Technology: Student exchange program
- 2. School of Health and Human Sciences: Student and faculty exchange program

University of Derby

University Overview

The University of Derby is a public university based in Derby, UK, that received university status in 1992. As the only university in Derbyshire, the University of Derby has grown to become internationally an recognized academic institution with reputation for excellence in a education and research, especially in the areas of business, sustainability, and science. The university offers multiple accredited and globally recognized courses and welcomes students from countless nations.

Leadership

Name: William Cavendish Title: Chancellor, Earl of Burlington Contact: governance@derby.ac.uk

IUPUI Partnership Contact

Name: Jessamie Self Title: International Office, University of Derby Contact: <u>J.M.Self@derby.ac.uk</u>

Basic Details

Website

https://www.derby.ac.uk/ContactDetails

Campus(es)

Two campuses: Derby and Chesterfield

- **Times Higher Education:** 601-800th in World University Rankings 2022, 201-250th in Young University Rankings 2022, 151-200th in Europeans Teaching Rankings 2019
- **QS Top University:** 1001-1200 in QS World University Rankings

Business, Economic & Social Policy

The University of Derby excels in business, economic and social policy research. The College of Business, Law and Social Sciences runs multiple research groups which address critical issues in applied economics and enterprise evaluation, supply chain management, tourism industry studies, and business sustainability. This research has allowed for regional, national and global impact in the business world, earning Derby a coveted reputation. Partners include Chatsworth, NHS, World Bank, Central Bank of Nigeria, UCLA, and Harvard University.

Data Science

The management, processing, analysis and usage of large data sets for maximum impact is undertaken by Derby's Data Science Research Center. Topics include innovations in data analytics, the Internet of Things (IoT),

complex networks, machine learning and artificial intelligence.

Biomedical Science

Biomedical Science research in the Human Sciences Research Center (HSRC) has been established to research pre- and post-pregnancy health, child development, physical activity for healthy lifestyle and behavior change, pain, anxiety, and addiction.

Public Service

Influencing policy and providing a workforce fit for the future, enhanced by strong leadership, digital skills, innovation and research impact.

Zero Carbon

Developing practical and influential initiatives across the region that drive change towards the realization of our sustainable future.

Creative Industries

Embracing the creating, designing, making, engineering and enterprising heritage of our place to energize the region's creative, civic and cultural heartlands and hinterlands.

IUPUI Engagement with the University of Derby

- **1. School of Liberal Arts:** Student exchange program
- 2. Sustainable Development Goals collaborations

Newcastle University

University Overview

Newcastle University is a public university that began operations in 1963. Renowned globally for its research, the university is at the of development forefront in technology, arts, and sustainability. The university features multiple accredited courses with a noteworthy example being the university's business school which has received triple-crown accreditation from AACSB, EQUIS and AMBA, placing the school among the most elite business schools in the world. Newcastle University offers programs in an array of fields, at the bachelors. and masters. postgraduate levels.

Leadership

Name: Prof. Chris Day Title: Vice-Chancellor and President Contact: <u>chris.day@ncl.ac.uk</u>

IUPUI Partnership Contact

Name: Adam Richardson Title: International Relations and Partnerships Officer Contact: <u>adam.richardson2@ncl.ac.uk</u>

Basic Details

Website

https://www.ncl.ac.uk

Campus(es)

Newcastle Campus, two International Campuses in Singapore and Malaysia

- **QS World Rankings 2022:** #134
- Times Higher Education World University Rankings 2022: 146th
- Times Higher Education Impact Rankings 2021: 15th in the world for sustainable development
- Awarded 5+ QS Stars for Overall Excellence in 2022

Ageing and Health

Newcastle University is at the forefront of Ageing and Health Research. Research areas include Cancer studies, Solutions for Healthier Lives, Ageing and Inequalities, and Regulatory Science. The university is also home to the Clinical Ageing Research Unit (CARU), a £5.5 million research facility funded by the Wellcome Trust and Wolfson Foundation.

Cities and Place

Newcastle University's Cities and Place research focuses on sustainable development in urban areas, specifically smart city development, sustainable energy solutions. biomedical informatics, and heritage conservation. Cities and place research connect Newcastle University with the Newcastle City Council, Indiana University. University of Pittsburgh, Northumbria University and Legal & General Investment Management.

Culture and Creative Arts

Research and development in the fields of culture and creative arts is a priority in Newcastle. Newcastle is also home to multiple TS Eliot prizewinners, the Scottish national poet laureate (The Scots Makar), Turner Prize nominees, and BBC Music award winners. To support this research, Newcastle has partnered with numerous organizations such as the Yale School of Arts, University of Bergen, UNESCO, The Lannan Foundation and CoHere, among others.

One Planet

Sustainability and resource management are key to the research at Newcastle University, in particular energy and water management, lowcarbon energy and transport, impact of plastics on the ocean, and species conservation. Newcastle has collaborated with international partners such as the National University Singapore, IIT Delhi, British Antarctic Survey, and the International Union for Conservation of Nature.

Data

Newcastle's data research includes biomedical informatics, data for manufacturing, data visualization, spatial analysis, streaming data modelling, and regulation of data driven technologies. Newcastle also leads the National Innovation Center for Data (NICD), a £30 million facility which promotes innovation through technical development and delivering practical data techniques into regional, national and global organizations.

Newcastle and the SDGs: Global Challenges Academy

Newcastle University is committed to the United Nations Vision 2030 and the UN's 17 Sustainable Development Goals (SDGs) which focus on establishing global sustainable development. The university's commitment is supported through work undertaken by the Global Challenges Academy.

Sustainable Water

The Global Challenges Academy dedicates a large number of resources to tackle water availability and consumption. For example, the Academy has a research hub focused on researching the global delta systems including the Mekong, Red River, and the Ganges-Brahmaputra-Meghna.

Food Security

The Global Challenges Academy research on food security aims to improve agritech innovation, food supply chains, consumer behavior, policy making and health. Examples of projects include unintentional vitamin A overdosing in South and Southeast Asia, and Central America, sustainable global potassium usage in Africa, Asia and Latin America, and Climate-Smart Agriculture in South Asia.

Sustainable Livelihoods

As the global population increases, projections show that cities in the developing world will grow by more than 2 billion people in the next 30 years. Developing solutions to enable sustainable livelihoods in low- and middleincome nations, and eliminating marginalization in urban and rural areas, is the focus of this research initiative. Projects undertaken in this category include:

- Networking New Opportunities for Artists in East Africa
- Utilizing Renewable Energy to Improve Rural Livelihoods in Sub-Saharan Africa
- Achieving Zero Poverty with Aquaculture in Tanzania
- Sustainable Livelihoods Through Education in Post-conflict countries in West Africa.

Women in Development

The Global Challenges Academy is contributing to the gender equality effort by identifying empowered women and giving them a platform to spread positive and inspirational narratives, developing a network of colleagues at Newcastle University who are working in the area of gender and development, and by forming global partnerships with women's groups and researchers in India and East Africa.

Tropical Peatlands

Peatlands cover only three percent of the global landscape but store more than twice as much carbon as the world's forests. Draining and burning of peatlands lead to high greenhouse gas emissions accounting for five percent of the global carbon budget. The Global Challenges Academy, in collaboration with UN Global Peatlands Initiative, is actively tackling this issue.

Creative Practice in Development

The Global Challenges Academy has identified a global need to generate and share knowledge about the contemporary art ecology in East Africa across disciplinary and national boundaries. By uniting visual artists, art professionals, organizations, funders, policy makes and other stakeholders, Newcastle University has helped facilitate collaborative workshops, aid artists develop sustainable livelihoods and build capacity in the creative industries of East Africa.

IUPUI Engagement with Newcastle University

- **1. School of Liberal Arts:** Student exchange programs
- 2. IUPUI Interdisciplinary Research collaborations: European Commission for a MSCA NUPACT COFUND and Erasmus+ program collaborations
- **3. Rivers of the Anthropocene:** a publication collaboration between IUPUI and Newcastle

MIDDLE EASTERN PARTNERS

Iran Saudi Arabia

University of Tehran & Tehran University of Medical Sciences

University Overview:

The University of Tehran (UT) is a public educational institution based in Tehran. With roots dating back to Jondi Shapur University with a history of over two millennia, UT was established in 1851 as Iran's first modern university. UT's central campuses are home to 48 faculties, 9 colleges, over 60 research centers, and more than 550 laboratories. UT also houses more than 160 educational departments.

The Tehran University of Medical Sciences (TUMS) is Iran's premier medical university, operated and administered by the Ministry of Health, Treatment, and Medical Education. In 1986, after the Islamic Revolution, all UT schools specializing in medical fields have operated independently as TUMS.

Leadership

Name: Prof. Mahmoud Nili Ahmadabadi Title: President Contact:

Email: mnili@ut.ac.ir

Address: Central Administration, University of Tehran, 16 Azar St. Enghelab Ave. Tehran, IRAN

IUPUI Partnership Contact

Name: Masoud Shariat Panahi Title: IUPUI-UT Joint Program Coordinator **Contact:**

Email: <u>enginter@ut.ac.ir</u>

Phone: +98 (21) 66409774, +98 (21) 66461024 *Address:* College of Engineering, University of Tehran Enghelab Ave, Tehran, IRAN

Basic Details

Website

https://ut.ac.ir/en

Campus(es)

Main Campus: Tehran, Iran Other campuses in Fouman, Jolfa, Karaj, Kish, Pakdasht, Qom, Rezvanshahr

- Times Higher Education World University Rankings: 801 – 1000th in World University Rankings 2022, 401 – 600th in Impact Rankings 2021, 104th in Asia University Rankings 2021
- **QS Top Universities Rankings:** #521 - 530 in QS World University Rankings, #26 in QS WUR in Petroleum Engineering, #301 – 500 in Graduate Employability Ranking
- US News and World Report: #353 in Best Global Universities, #58 in Best Global Universities in Asia, #1 in Best Global Universities in Iran

Research Center for Foreign Language Studies (ReCellT)

The Research Center for Foreign Language Studies (ReCellT) is the first research center in Iran which investigates and examines foreign language in all its aspects. Using an integrated research model named eLAMIC (Engineered e-Language Multiple Interfaces Concept), ReCellT analyzes form, content and style of interactions of foreign languages. Areas of research include Language-Based Engineering Studies. Language-Based Intermedial Studies, and, Language-Based Cultural and Translation Studies.

Research Center for Veterinary Toxicology

The Research Center for Veterinary Toxicology was established in 2007. The goal is to analyze factors ensuring the quality of livestock and agricultural products. Research topics include identification of poisons, livestock poisoning, remnants of drugs and pollutants in plants, and the effects of pollutants and medicines on humans and cattle.

Water & Soil Environmental Research Institute (WSERI)

UT crated the Water & Soil Environmental Research Institute (WSERI) in 2009. The center works to solve critical environmental issues, specifically in the context of developing water resources and quality of soil. The center is involved in comprehensive research, in addition to conducting training courses and workshops. Key areas of research include the application of Remote Sensing (RS) devices, and Geographic Information Systems (GIS), and development of artificial neural network-based models in environmental studies. Novel areas of study include utilization of earthworm technology for improved natural fertility, and flood zoning.

Advanced Materials Characterization Institute (AMCI)

UT established the Advanced Materials Characterization Institute (AMCI) in 2018 with the aim of being a leader in multidisciplinary materials research and development. The center utilizes state-of-the-art technology and а comprehensive research network to stay at the forefront of materials development. Scanning Electron Microscopes (SEMs) and Transmission Electron Microscopes (TEMs) are used for sample preparation purposes, with no constraint on the type of materials prepared. AMCI also offers training courses in an array of contexts including SEM usage training, thermal analysis courses, and sample preparation courses.

IUPUI Engagement with University of Tehran

- 1. Purdue School of Engineering & Technology: Joint academic programs
- 2. IU School of Dentistry (IUSD): Graduate student exchange programs

King Saud University

University Overview

King Saud University is Saudi Arabia's premier institute of higher education. It was established in Riyadh in 1957 by Prince Fahad al Saud. Today, KSU is renowned for being a pioneer in research and education in the Middle East. The institute offers degrees at bachelors, masters and postgraduate levels.

King Saud University has played a pivotal role in the economic growth of Saudi Arabia by creating scholars and professionals skilled in the various fields necessary to stimulate the economy.

Leadership

Name: Dr. Badran Al-Omar Title: Rector Contact: <u>rectoroffice@ksu.edu.sa</u>

IUPUI Partnership Contact

Name: Dr. Mezyad Alterkawi Title: Director, International Cooperation and Scientific Twinning Department, King Saud University, Saudi Arabia Contact: Email: mterkawi@hotmail.com Phone: +966504134805 (Cell)

Basic Details

Website

https://ksu.edu.sa/en/

Campus(es)

KSU campuses are located in Riyadh, Abha, and Qassim

- Times Higher Education World University Rankings: 351-400th in World University Rankings 2022, 101-200th in Impact Rankings 2019, 53rd in Asia University Rankings 2021
- **QS Top Universities:** #277 in QS World University Rankings, #51-60 in QS WUR Ranking in Dentistry, #6 in Arab Region Rankings
- QS 5 Stars Rating
- **US News and World Report:** #266 in Best Global Universities, #38 in Best Global Universities in Asia, #3 in Best Global Universities in Saudi Arabia

Center of Excellence in Information Assurance – CoEIA

King Saud University's Center of Excellence in Information Assurance is the first information security research center in the Middle East. The center was established to produce security solutions and increase information security levels in Saudi Arabia and the Middle East. The center also provides consultancy services to further its mission of national cyber security. CoEIA received a US patent for the invention of Automotive Cybersecurity in Connected and Autonomous Vehicles.

University Center for Research and Treatment of Autism

Recent studies in Saudi Arabia have shown growing rates of autism among children. Consequently, King Saud University is at the forefront of Autism Studies, working in partnership with Saudi Arabia's National Policy for Science and Technology. King Saud's University Center for Research and Treatment of Autism plays a key role in health mapping and development of treatment plans. The center is the first of its kind in the region.

Prince Sultan Institute for Environmental, Water and Desert Research

King Saud University is home to one-of-a-kind research institute that specializes in desert research. Established in 1986, the mission of the center is to engage with issues related to the Saudi Arabia's desert conditions, and to tackle desertification in the Arabian Peninsula. Environmental and water research and the development of water resources is also a priority.

Sustainable Energy Technologies Center – SET

The Sustainable Energy Technologies Center at King Saud University is poised to be a leader in developing energy solutions to meet the growing demands of Saudi Arabia. Researchers are engaged in the development of energy storage systems including batteries and super capacitors, and conversion technologies such as Nuclear, Solar, Wind, Hydrogen, Biomass and Geothermal. The center is also involved in research of desalination.

IUPUI Engagement with King Saud University

1. IU School of Dentistry (IUSD): Faculty training and research collaborations