



# SPECTRUM

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## Community

HAPYBOT Medical Robots

## Facilities

Sawasdee Thailand Virtual Summer Program

## Main Feature

World First COVID-19 Saliva Test



## World University Rankings

Mahidol University has once again seen the hard work of faculty members and staff across the university reflected through prominent positions in global university rankings. The Quacquarelli Symonds (QS) World University Rankings 2021, Times Higher Education (THE) World University Rankings 2020 and Impact Rankings 2020, and the Round University Rankings (RUR) 2020, have each recognized Mahidol University's continued development in teaching, research and academic services. Each of these ranking systems and organizations uses a different methodology, weighing up the various roles of universities in the modern world.



### Quacquarelli Symonds (QS) 2021

In the QS 2021 World University Rankings, Mahidol University moved up 62 places from last year, receiving a global rank of 252. Mahidol University was also at the top of Thailand's rankings in 4 subject areas: Medicine; Medicine and Life Sciences; Pharmacy; and Linguistics. The QS World University Rankings evaluate universities according to 6 key metrics: academic reputation, employer reputation, faculty / student ratio, citations per faculty, international faculty ratio, and international student ratio. For the subject rankings, the weighting of each component varies to more accurately represent the priorities of academic work in that field.



### Times Higher Education (THE) 2020

In the THE World University Rankings 2020, Mahidol University maintained our position at the top of Thailand's table, where we have been for the past 5 years. The THE World University Rankings measure 13 performance indicators grouped into 5 areas: teaching, research, citations, international outlook, and industry income.



### Times Higher Education Impact Rankings 2020

In our first year of submission for the THE Impact Rankings, Mahidol University entered the tables in the top 300 globally. The Impact Rankings, which began in 2019, seek to measure and report how each university's work contributes to the realization of the United Nations' Sustainable Development Goals (SDGs). The rankings incorporate standard academic programs and research, as well as the events, student activities, facilities, and many other projects which show the university's work towards promoting sustainable development. Mahidol University did particularly well with respect to SDG3, Good Health and Wellbeing; SDG12, Responsible Consumption and Production; SDG 13, Climate Action; and SDG17, Partnerships for the Goals. Our success in these rankings reflects the university's aim to use our expertise and resources to support sustainable development in Thailand and beyond.



### Round University Ranking (RUR) 2020

In the RUR 2020 Rankings, Mahidol University was recognized as the Number 1 university in Thailand. The RUR rankings measure 20 indicators across the 4 main areas of teaching, research, international diversity and financial sustainability.

## Virtual Medical Education Forum



On 19<sup>th</sup> June 2020, Prof. Banchong Mahaisavariya, Acting President of Mahidol University, took part in the online *Council Meeting of the Belt and Road International Medical Education Alliance (BRIMEA) and the 4<sup>th</sup> International Forum on Higher Education*. This year's forum was focused on establishing an active response to the global fight against the COVID-19 pandemic, as well as promoting reform and development of medical education, and building a community with a shared future in medical education.

Prof. Mahaisavariya was invited to be a Keynote Speaker at the Forum on the topic of "Co-Building the Communication of Medical Education: Post-COVID Medical Education". During his speech, he highlighted the importance of online teaching and tele-medicine during the COVID-19 pandemic, but noted that online teaching cannot be a long-term replacement for hands on learning and patient contact, which are particularly important for senior medical students to gain valuable experience.

BRIMEA is an academic organization which promotes higher medical education, founded jointly by China Medical University, and medical colleges, nursing schools and other healthcare institutions in countries along the "Belt and Road". At present, there are 45 member institutions across the region. BRIMEA aims to share global medical and health resources, improve medical education and promote mutual benefit among institutions and countries.

This year, medical education experts and scholars from 52 medical education institutions across 13 countries attended the forum; with more than 44,000 teachers, healthcare workers and administrators watching the live online transmission of the forum.

## Sustainability Webinar

On 18<sup>th</sup> June 2020, Assoc. Prof. Kitikorn Charmondusit, Acting Vice President for Environment and Sustainable Development, Mahidol University, gave a keynote speech for the National Sustainability Leaders Meeting 2020 webinar, organized by UI GreenMetric World University Rankings, IPB University and Universitas Indonesia.

Assoc. Prof. Charmondusit spoke on the topic of "The Urgency of Sustainability Leader in University: The Experience of Mahidol University, Thailand". After presenting the context of Mahidol University, Assoc. Prof. Charmondusit discussed the structure and responsibilities of the Division of Physical Systems and Environment, and how this promotes environmentally friendly policies and procedures across the university. This includes the Sustainable Development Unit, which has the objectives of driving and deploying the sustainability policy of Mahidol University; monitoring and evaluating eco-university indicators; and collaborating with relevant networks and organizations at the national, regional and global levels.

The work of Assoc. Prof. Kitikorn Charmondusit and the Division of Physical Systems and Environment has led to Mahidol University being ranked as Thailand's Number 1 eco-university and Number 75 globally in the UI GreenMetric World University Rankings.



## HAPYBOT Helping Medical Staff

As the COVID-19 pandemic has spread across the world, many hospitals have been overwhelmed with medical and support staff working around the clock to provide healthcare for those in need. Along with the stretching of human resources, the pandemic has also put healthcare staff at risk of infection, which in addition to the tragic deaths which this has caused, can also promote the spread of the disease to other patients, and further stretch services by forcing staff to take sick leave.

Universities, governments and businesses around the world have been investigating many solutions to this issue, such as improving the supply chains for Personal Protective Equipment (PPE) supplied to hospital staff (see Spectrum Vol. 27 No. 1). On 29<sup>th</sup> May 2020, Mahidol University held a press conference to announce another innovative solution for stretched healthcare services, and to entitle the importance of medical robot deployment and Mahidol University policy to support robot deployment in current situation.



Prof. Banchong Mahaisavariya, Acting President of Mahidol University, presented 3 HAPYBOTs which will be used to support human staff at 3 of Mahidol University's affiliated hospitals: Chakri Naruebodindra Medical Institute, Faculty of Medicine Ramathibodi Hospital; Golden Jubilee Medical Center, Faculty of Medicine Siriraj Hospital; and Hospital for Tropical Diseases, Faculty of Tropical Medicine. The robots, which were developed in collaboration with the National Science and Technology Development Agency (NSTDA) and Netbay Public Co., Ltd., are capable of moving as quickly as humans, and can support medical staff by performing tasks such as tracking and aiding patients in a ward, and delivering meals, medical equipment and medicine. Having the HAPYBOT to provide this support also reduces the level of contact which medical staff need to have with infected patients.

The press conference was hosted in collaboration with the NSTDA and Netbay Public Co., Ltd. at Faculty of Tropical Medicine, Mahidol University. Alongside Prof. Mahaisavariya, Prof. Pairash Thajchayapong, Chairman of Academic and Technical Board to Manage the Spreading Situation of COVID-19; Prof. Piyamit Sritara, Dean, Faculty of Medicine Ramathibodi Hospital; Asst. Prof. Weerapong Phumratanapapin, Dean, Faculty of Tropical Medicine; Assoc. Prof. Teera Kolladarungkri, Director of the Golden Jubilee Medical Center; and Mr. Pichit Viwatrujirapong, Chief Executive Officer, Netbay Public Co., Ltd.; discussed the benefits of the HAPYBOT in healthcare settings and the roles which universities and private-sector companies can play in supporting healthcare innovation during the pandemic and beyond.



Prof. Mahaisavariya explained that “The robots can serve as a go-between for doctors and patients or those being monitored. They can interact via high-resolution video conference with low latency, helping doctors to screen the infected and perform an initial diagnosis. Nurses, meanwhile, can maneuver the robots remotely, lowering the risk of contracting the virus”. He also noted that the HAPYBOT only cost half of the price of similar robots imported from abroad.



## International Relations Knowledge Sharing



In recent months, many parts of university life have had to adapt to the 'new normal' so that universities can continue to provide teaching and academic services under any social distancing restrictions in their respective countries. Although Thailand has not been as severely affected as many countries, and classes are expected to return to normal at the start of the coming Academic Year in August and September 2020, our faculties, colleges and institutes have had to find new ways of helping prospective students to learn more about their programs, facilities, and student life.

One example is the Virtual Open Days organized by Mahidol University International College (MUIC), entitled *Unlock Your Future*, on 20<sup>th</sup> – 21<sup>st</sup> June 2020. Over the 2 days, MUIC hosted 5 live-streamed 'episodes' featuring Assoc. Prof. Chulathida Chomchai, Dean of MUIC, with MUIC lecturers, students, and special guests. The virtual events were streamed live on Facebook Live, and are still available to view in full at: [facebook.com/mahidol.inter/](https://facebook.com/mahidol.inter/)

**Live Ep. 1 *Unlock Your Future*** – focused on worldwide education trends with a panel of speakers including Assoc. Prof. Chulathida Chomchai, Dean of MUIC, and Ms. Patchari Raksawong and Mr. Pobek Pornpongmetta, two MUIC alumni and current News Presenters for MCOT and MONO29 TV channels respectively.

**Live Ep. 2 *Unlock Your Choice*** – looked at study and career opportunities in the fields of Science, Business Administration and Entrepreneurship, with lecturers from MUIC's Science Division and Tourism and Hospitality Management Division giving insights.

**Live Ep. 3 *Unlock Your Choice II*** – expanded on the previous episode by covering the fields of Design, Journalism, Languages, Humanities, and Diplomacy, with input from lecturers from MUIC's Fine and Applied Arts Division, Social Science Division, and Humanities and Languages Division as resource speakers.

**Live Ep. 4 *Unlock Your Limit*** – featured several of MUIC's current students and an MUIC alumna who shared their experiences of studying at the College and how the learning environment, student activities, and facilities helped them to gain valuable learning experiences in addition to their studies.

**Live Ep. 5 *Unlock Your Potential*** – explored the postgraduate opportunities at MUIC on the Master of Business Administration (MBA) and Master of Management in International Tourism and Hospitality Management (MM) programs.

For MUIC's undergraduate programs starting in September 2020, applications will close in mid-July; but it is also possible to apply to start in January 2021. For more information about MUIC's programs and applications, see: [muic.mahidol.ac.th/eng/](https://muic.mahidol.ac.th/eng/)

You can also learn about programs and applications at other faculties, colleges and institutes across Mahidol University here: <https://mahidol.ac.th/>



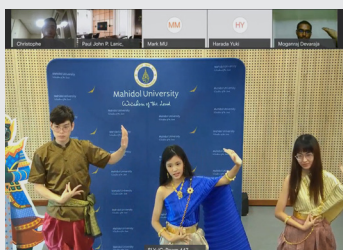
# Main Feature

## Sawasdee Thailand Virtual Summer Program



With the global COVID-19 pandemic preventing student mobility in the foreseeable future, International Relations Division, Mahidol University, has been developing a new virtual Sawasdee Thailand summer program to provide students at our partner universities around the world with the opportunity to take part in virtual mobility activities over the summer break, and gain valuable intercultural experience

The program is based on our Sawasdee Thailand summer program which, in summer 2019, welcomed 83 students from 7 countries. The new virtual delivery combines pre-recorded sessions with live discussions and demonstrations and group activities, allowing students to take part in Thai language, cooking, and dancing classes, and learn more about Thai culture, society and traditions; while interacting with our local students and students from other partner universities around the world.



The main program will take place from 3<sup>rd</sup> – 14<sup>th</sup> August 2020, with pre-recorded classes available from 1<sup>st</sup> August so that students can gain a foundational understanding of the topics before taking part in the live classes and discussions. Students will be assigned groups (of 4 - 5 students per group) and will have discussions to exchange ideas and opinions after the full class sessions. The program includes a combination of Courses, Employability Skills Sessions and Exclusive Sessions.

### Courses

- Introduction to Thailand and Thai Culture
- Characteristics of Thai People
- Everyday Thai Language Skills
- Body – Mind Wellness: Preparing for the Unpredictable
- Introduction to Thai Food
- Thai Cooking Techniques
- Thai Herbs and Traditional Medical Wisdom
- Thai Society Through Entertainment Media
- Thai Dance and National Costume

### Employability Skills Sessions

- Systematic Thinking
- Self-Awareness and Self Esteem
- Intrapersonal Communication

### Exclusive Sessions

- Exclusive Cultural Exchange with MU students
- Thai Cooking Class
- Thai Dancing

Applications for the program are open from 1<sup>st</sup> – 20<sup>th</sup> July 2020. The full program fee is USD 200 per student, but universities which send 10 or more students will receive a 10% discount on the costs. For more information about the Sawasdee Thailand virtual program, contact: [sawasdee.mahidol@gmail.com](mailto:sawasdee.mahidol@gmail.com)

# Program Highlight

## *Graduate-Level Accreditation by MusiQue*

Building on the success of achieving Bachelor's program European "MusiQuE" accreditation in 2019, the College of Music, Mahidol University, has become the first university music program in Southeast Asia to gain graduate-level accreditation through the MusiQuE Accreditation Process. The College underwent program reviews for the Master of Arts (M.A.) and Master of Music (M.M.) programs, receiving strong marks across all standards from the European quality review. This achievement in graduate degree program quality highlights the College of Music's commitment to excellence and the continual improvement of teaching and learning. The accreditation of the M.A. and M.M. programs will be valid until the year 2025.



Speaking about the importance of the College of Music continuing to pursue accreditation through MusiQuE, Dr. Narong Prangcharoen, Dean of the College of Music, explained "The College of Music's main mission is to serve the Mahidol University mission to be a world-class university so achieving international accreditation is quite important to help elevate the standard of the College of Music, so we can serve as an example of how peer review and critical reflection can help to foster new ideas and perspectives."

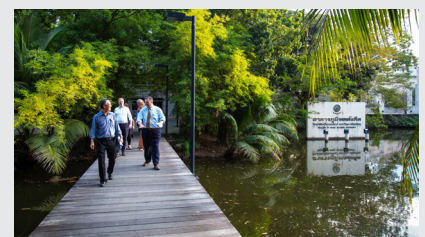


MusiQuE (Music Quality Enhancement) is an independent external evaluation body dedicated to the continuous improvement of the quality of higher music education across Europe and beyond. Originally a part of the Association of European Conservatories, MusiQuE became an independent body in 2015. In 2017 the College of Music, Mahidol University, underwent an institutional review which credited the College with being a "truly exceptional institution". This positive review prompted encouragement for the College to pursue individual program accreditation.

Following a comprehensive and rigorous quality assurance review process by the MusiQuE review committee, the accreditation obtained from European MusiQuE marks another big step forward for the College of Music, as well as Thailand's music education at the graduate level. "This significant achievement further ensures our dedication and commitment to quality in terms of programs, faculty, students, research, supporting facility, and internationalization", stated Darin Pantoomkomol, the Associate Dean for Academics and Research at the College of Music. He went on to add that "Through our commitment to quality enhancement, the College of Music is working rigorously for accreditation in our two doctoral programs, including Doctor of Music and Doctor of Philosophy in music in a very near future."

The College of Music, Mahidol University, will next prepare for program accreditation for both its Doctor of Philosophy (Ph.D.) and Doctor of Music (D.M.) programs, with the review visit scheduled to take place in November 2020.

To allow students to specialize their studies towards their musical passions and their career aims, the international Master of Music program offers 5 majors: Performance and Pedagogy; Music Composition; Conducting; Collaborative Piano; and Jazz. The program also offers 2 study plans, with both a thesis option and thematic paper option; and students have the opportunity to study both Western and traditional Thai styles and instruments. To learn more about the Master of Music and other programs and events at the College of Music, Mahidol University, visit: [music.mahidol.ac.th/](http://music.mahidol.ac.th/)





# Students

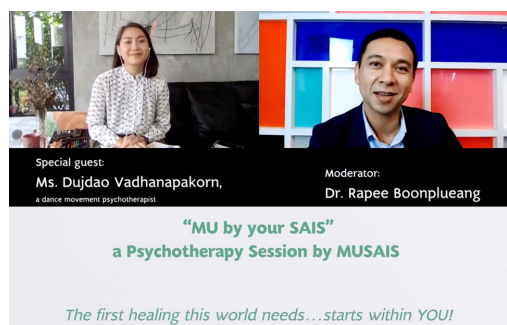
## *Stay Home Activities with MUSAIS*

In recent months, many countries have brought in compulsory or advisory 'lockdowns', requesting that residents stay at home and limit their face-to-face contact with other people, in order to reduce the spread of COVID-19. In many countries, as in Thailand, such restrictions are beginning to lift, and life is moving to a 'new normal'. These lockdowns have had a big impact on all of our mental health, particularly those living in difficult situations and those living alone with limited human contact.

For many international students, being isolated at home, but far away from their families, some of whom may have been in much more severely affected countries, this was an understandably stressful situation. While Mahidol University Student, Academic and International Services (MUSAIS) Office provided support for students who wished to return home early in the pandemic, many decided to stay in Thailand.

MUSAIS has continued to provide support for Mahidol University's international students, whether still in Thailand or having already returned to their home countries, to make sure they are able to stay safe and look after their physical and mental health, whilst continuing to take part in their studies and social and extra-curricular activities to the greatest extent possible. As a part of this, MUSAIS has organized a series of *Stay Home with MUSAIS* activities.

The Quarantine Bingo activity was organized by MUSAIS to help students get inspired to try new activities whilst at home. Contestants completed bingo forms with activities they had been taking part in already, which were then used in a bingo-style game. Winners of the first round were sent a surprise food hamper, and asked to use this in creating their own social media content. The winners of the second round of Quarantine Bingo received streaming gift cards to help keep them entertained during lockdown.



address mental and emotional health issues during lockdown and beyond.

Now that restrictions have lifted in Thailand, Ms. Vadhanapakorn will be leading a physically-distanced face-to-face workshop on Dance Psychotherapy in July. Mahidol University students can look out for updates on this and other MUSAIS activities here: <https://www.facebook.com/OPINTER.Mahidol/>



I am fortunate to receive this gift, and I am excited, touched, and overwhelmed by the fact that students are carefully taken care of even when we are away from school. I couldn't more thankful.

#MubymySAIS  
#stayhomewithMUSAIS



## *World First COVID-19 Patient Stem Cell Donation*



With the global COVID-19 pandemic putting strain on healthcare systems around the world, and numbers of patients in some countries climbing into the hundreds of thousands, it is easy to forget that a wide range of medical conditions are still affecting people at the same level they were previously, and that now there may be new barriers to those people receiving treatment. Alongside providing treatment for COVID-19 patients, Mahidol University's hospitals have been continuing to provide life-saving treatments for many health issues, with one interesting case at Ramathibodi Hospital, which made international news, showing how the COVID-19 pandemic can make treatments for other conditions more complex.

7-year-old Jintakan 'Jean' Boonklomjit was born with thalassemia, a blood condition which results in lower hemoglobin levels, and can cause a wide range of complex issues. In Jean's case, as for most thalassemia patients, the most promising treatment was a stem cell transplant. Finding a suitable donor who is not a relative of the patient is only a 1 in 20,000 to 50,000 chance, and so Jean's 5-year-old brother Sila 'Jio'

Boonklomjit bravely agreed to provide the bone marrow donation from which the stem cells were taken.

However, on the day of the stem cell donation, it was discovered that Jio was infected with COVID-19. In addition to the health effects which this could have for Jio, as the stem cells could also be infected, it was considered too risky to give the transplant to Jean, because with her existing health condition and the effects of the chemotherapy which she had been treated with previously, becoming infected with COVID-19 could potentially be fatal.

With Jio, as well as his mother Sasiwimol, being infected with COVID-19, the family had to be separated to prevent spreading the infection. The children's father Suchai described this very difficult time. "I admit that I almost collapsed. I felt that disasters would never end. As the stem cell transplant for Jean that we were hoping for approached, we were struck with the bad news that our son was infected with COVID-19. My wife also had it. Everyone had to be separated in our worst time. If I had been in another situation, I would have been completely in the dark. Despite the concern, I rest assured that our family was in the care of doctors at Ramathibodi Hospital."



Miraculously it was found that the stem cells donated by Jio were free from COVID-19 and so the world first transplant involving a COVID-19 infected patient went ahead, performed by Assoc. Prof. Usanarat Anurathapan of Faculty of Medicine Ramathibodi Hospital, and overseen by stem cell expert Prof. Suradej Hongeng, Asst. Dean for Research, Faculty of Medicine Ramathibodi Hospital. Both Jio and Jean are recovering well from the transplant with the support of medical staff from Ramathibodi Hospital.

## *World First Non-invasive COVID-19 Test*



Faculty of Medicine Ramathibodi Hospital, Mahidol University.

Standard tests for COVID-19 use a Nasopharyngeal and throat swab, which is inserted deep into the nasal cavity. In addition to being very uncomfortable for the person being tested, this method can also cause them to cough or sneeze, which risks transmission to the medical staff taking the sample. This results in a number of problems; a high degree of Personal Protective Equipment (PPE) is needed by those performing tests, and needs to be changed between tests, in order to prevent possible transmission to medical staff or other patients. This process takes time and so reduces the testing capacity of hospitals and other test centers, and makes it difficult to perform mobile testing. Also, the invasiveness of the procedure can result in many false negatives, and make self-testing problematic.

A team of researchers, led by Dr. Ekawat Pasomsub, Chief of Virology Unit, Faculty of Medicine Ramathibodi Hospital, has developed the world's first non-invasive test for COVID-19. This new testing method uses a saliva sample, instead of a Nasopharyngeal and throat swab, to identify those infected with the disease. It is much easier to take a saliva sample, and patients are able to produce and submit their own sample, making the testing process much more efficient. It is also possible to get the test results within 90 minutes, and the test has been found to have 87% sensitivity and 95% specificity.



In the next stage of the project, Dr. Pasomsub and his team will investigate the efficacy of pooling saliva samples prior to testing. If it is possible to pool the samples together and test the pooled sample, whilst still being able to identify which individual patients are testing positive, the cost of performing the tests will be a fraction of the current costs. This will help to support widespread and non-invasive testing across the world.





