



INSTITUTE OF TECHNOLOGY
UNIVERSITY OF MORATUWA

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INSIDE

- Feature Article
- Academic Events & Services
- Appointments, Promotions, Personal Achievements, Awards & Recognition
- Cultural Events
- Sports News
- Communal & Other Events
- Feature Article



Contents

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Feature Article

PAGE 04

Academic Events & Services

PAGE 06

Appointments, Promotions, Personal Achievements, Awards & Recognition

PAGE 14

Cultural Events

PAGE 20

Sports News

PAGE 22

Communal & Other Events

PAGE 24

Feature Article

PAGE 25

Feature Article

The Future of Engineering Technology Education: Preparing for the Age of AI

Artificial intelligence (AI) is rapidly transforming the way we live and work, opening up new job opportunities and rendering some conventional jobs out of date. As this era advances, worries about its effects on employment have become common place. While automation of responsibilities at work can boost productiveness and performance, it may additionally lead to process displacement and other financial and socially demanding situations. The upward thrust of AI has particularly made an impact on the gig market, the job market made up of freelance work and short-term contracts, with groups using it to automate duties in customer service and information evaluation, thus shifting closer to more freelance and contract-based work.

The integration of AI is fast becoming familiar in the discipline of engineering technology, and therefore it is extremely important for educational establishments to keep pace with these modifications and revise their courses to equip students with the necessary knowledge and skills to succeed in evolving work environments. As industries across various sectors go through immense changes with the speedy development of rising technologies, it is vital for engineering technology educational programs to be updated with AI-particular coursework and experience. This article explores the key ways in which engineering technology education can be updated to satisfy the demands for a workforce with cutting-edge skills wherein AI plays an increasingly major role.

Revised Curriculum

One of the main adjustments that needs to be made to engineering technology academic programs is the incorporation of AI specific coursework (Lee et al., 2021). This consists of courses on Artificial Intelligence, Machine Learning, Natural Language Processing, Data Analysis, and Computer vision (Zhang & Wang, 2021). Additionally, undergraduate students need to be given hands-on experience with AI equipment and technologies, including virtual assistants, chatbots, and image popularity software programs (Kim, 2021). This will provide students with the ability and the know-how that is important to work with AI in their destined careers.

Collaboration with Industry

Another key factor to consider when updating engineering technology educational courses is collaboration with enterprise (Smith, 2021). Educators and industry experts should work together to perceive the specific AI-related capabilities and know-how which might be expected by the industry, and include coursework and educational packages to deal with the necessary requirements. Partnering with businesses to provide students with internships or other opportunities will be of immense benefit when operating with AI in actual work settings.



Dr. K. Galappaththi
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Diversity and Inclusion

As with any instructional application, variety and inclusion must be a priority whilst updating engineering era training (Gupta & Singh, 2021). This consists of making sure that students from underrepresented groups have access to AI-centered coursework and education programs and should be given identical opportunities to learn and enjoy using such technologies. Additionally, educators must create a supportive and inclusive environment that welcomes students from all backgrounds.

Soft Skills Development

In addition to technical competencies, engineering technology students also need to be taught soft skills such as critical thinking, problem solving, communication and teamwork which are crucial for functioning in an AI-pushed world (Lee et al., 2021). These skills will be of vital importance for students to succeed in work environments wherein AI is being increasingly used to automate routine tasks, thus leaving people to focus on more complex and creative work.

Future of Work

As the gig economic system continues to grow, it's crucial for engineering technology instructional packages to produce students for a workforce that increasingly values flexibility and adaptability. This includes developing student's capabilities such as self-management, entrepreneurship, and digital literacy, in addition to providing them with opportunities to develop a strong network of expert contacts. In conclusion, the integration of AI in engineering technology training gives rise to both demanding situations and possibilities. The courses need to adapt to satisfy the requirements of a changing job market and equip undergraduate students with the abilities and knowledge important to be successful during the age of AI and beyond.

In addition, as the development of AI has given rise to the gig economic system, engineering technology instructional programs should prepare students for the changing nature of work. Educators can train students the appropriate diverse structures and tools that are needed for locating gig work as well as offer training on advertising skills, economic control, and settlement negotiation.

Furthermore, with the shift from habitual, repetitive responsibilities to extra complicated creative tasks, students ought to be geared up with the competencies and the know-how necessary to conform to changes in the job market and tackle roles that require critical thinking, problem solving, and creativity. By doing so, educators can ensure that students are well equipped with the skills and the knowledge necessary to succeed in the rapidly changing job market.

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Academic Events & Services

Annual Survey Camp for the 2018 /2019 Batch of Civil Engineering Technology Students

The Division of Civil Engineering Technology successfully conducted the annual survey camp for the second group of 2018-19 batch of students (100) at the International Institute of Irrigation and Water Management (KITI), Kothmale from 17th September 2022 to 22nd September 2022. The survey camp is an essential component of the Civil Engineering Technology course, since it forms a strong base for the students to develop essential soft and hard skills such as teamwork, communication, presentation, leadership, planning, technical, and instrument handling.



The camp was conducted for a duration of 05 days and the students were able to gain hands-on experience in the use of surveying instruments and the essentials of practical applications under real-life field conditions, which enhanced their theoretical and practical knowledge in engineering surveying. The camp concluded with an enjoyable and memorable campfire organized by the students on the last day of the camp.



The Division commends the excellent leadership of Dr. (Mrs.) N.P.K. Semananda as the officer-in-charge of the survey camp. Further, the Division is grateful for the support given by Mr. Udara Bulathsinghala and Mr. Dinal Wickramasinghe in organizing this successful survey camp and for all the academic and non-academic staff members who participated at the camp. The Division would like to thank the Director and the Senior Assistant Bursar of ITUM for providing the necessary financial support and other requirements amidst constraints.

Field Visit to Coca-Cola Beverages Sri Lanka

Experience gained through field visits is highly beneficial for students in their future careers, as well as for the success of their academic work.

Semester 2 Chemical Engineering Technology students in the Division of Polymer and Chemical Engineering Technology visited the Coca-Cola Beverages Sri Lanka facility on 11th November 2022. Several members of the Divisional academic staff accompanied the students. Staff members of the company facilitated the field visit.



Field Visit to Cargills Kist Production Plant



Semester 4 Chemical Engineering Technology students in the Division of Polymer and Chemical Engineering Technology visited the Cargills Kist Production Plant (Cargills Agrifoods Ltd.), Katana, on 14th November 2022. Staff members of the plant facilitated the field visit and briefed the students on the production process and the necessary utility requirements etc. This field visit exposed the students to an actual industrial environment which provided information for their academic work.

Field Visit to Ratmalana Wastewater Treatment Plant

The NDT Civil Engineering students of the 2019/2020 batch visited the Ratmalana Wastewater Treatment Plant and the Karadiyana Waste Management Site in December, 2022. This field visit was undertaken as a requirement of the Environmental Engineering module. At the Ratmalana Wastewater Treatment Plant, the students were able to receive first-hand experience of wastewater treatment mechanisms which they had previously learnt in class.



At the Karadiyana Waste Management Site the students were exposed to a new perspective of the solid waste management problem in the country. The Officers in Charge of the project guided the students through the landfill area emphasizing the importance of source separation for sustainable solid waste management.

Division of Information Technology Conducts a Tech Talk Session on “How to prepare a personal profile before entering the IT Industry”

The Division of Information Technology seeks to develop students’ personalities through soft skills development while keeping them informed and prepared to adopt new and current technologies in the IT sector. As a part of this endeavour, the Division of Information Technology, in association with the ITUM Computer Society conducted a successful student awareness programme on “How to prepare a personal profile before entering the IT Industry”, as a part of the workshop series, “Industrial Workshops with Expertise”. Mrs. Sewmi Rajapaksha, an experienced industry professional currently working as a cloud Engineer at Chmeondis, Germany was invited to contribute as the resource person for this session. The session was held on 27th September 2022 via the zoom platform.



CV Writing Workshop

The Industrial Training Unit of ITUM organized a number of training workshops, such as workshops on CV writing, Personal Grooming, and Personality Development for the 2019 batch of NDT students. However, each academic discipline was required to give training sessions unique to their own domains. Accordingly, the Division of Information Technology conducted a CV writing workshop on 2nd November 2022 with the objective of evaluating students’ CVs and providing feedback on how to improve them further, before presenting them to the industry. All academic staff members volunteered their time to maximize their contribution to this programme, and students enthusiastically participated in the workshop.

Series of Mock Interview Sessions

Prior to the ITUM career fair of 2022, all disciplines were required to conduct mock interviews in order to give students real time experience in facing interviews at the career fair. The Division of Information Technology organized mock interviews in the month of November 2022 for all the students of batch 2019. An interviewer from the industry, one of the students, and a staff member from the Division participated in each mock interview. All interviews were conducted online. Each student was allotted a maximum of 30 minutes, and the interviewer was permitted to select a question based on his or her area of expertise to guide the students through the interview process. Representatives from well-known companies participated in the mock interviews and the students were provided feedback to help them overcome their shortcomings.

The Division of Textile & Clothing Technology Seeks Stronger Industry-academia Collaboration

In a bid to establish a stronger collaboration with the textile industry, the Division of Textile & Clothing Technology organized a Divisional forum on 30th November 2022. The forum was initiated as a part of the ITUM career fair 2022, and representatives from various private sector textile companies were invited to participate in the forum. The aim of the forum was to foster an open dialogue and explore ways of enhancing relationships between the industry and the members of the academic staff of the Division.



The forum also provided an opportunity for industry representatives to learn more about the academic activities of the Division, including the research projects being undertaken by students with the objective of establishing a better understanding of the needs and expectations of both parties and to identify opportunities for collaboration.

ITUM English Club

The ITUM English Club was formed in November 2022 under the guidance of the English language Teaching Unit of ITUM with the objectives of developing students' communication skills in English and promoting literary interests among students. The club envisages creating a student community that understands and shares feelings and appreciates diversity. Every effort will be taken to give students the opportunity to enhance their creativity and develop their critical thinking and leadership skills.

The following students were elected as office bearers for the year 2022/ 2023:

- President : Mr. K.R.N. Kumarage
- Vice President : Mr. R. D. A. U. Rathnasiri
- Secretary : Mr. S. Thasharath
- Asst. Secretary : Ms. T. H. F. Sahanaz
- Treasurer : Ms. W. M. M. M. Wasundara
- Members : Mr. M. J. M. Jusly
: Ms. N. N. R. Siriwardhana
: Ms. K. M. P. S.Kariyapperuma
: Ms. J. A. S. Ninnadie
: Mr. N. M. Munseeth
: Ms. H. M. F. Zulfa
: Ms. S. N. Dikkumbura



Best Presenters' Competition 2022

The English Language Teaching Unit (ELTU) of ITUM conducted its first ever Best Presenters' Competition in December 2022. After two preliminary rounds, the top 10 presenters out of 650 first-year students, were selected to compete in the final round. The final round event was organized and conducted by the members of the ITUM English Club.

After a closely contested competition, Mr. M. P. A. Madushanka of the Division of Civil Engineering Technology who delivered his presentation on the topic, 'Success Vs. Humanity' emerged the winner while Ms. G. M. S. T. Thilakarathne from the Division of Electrical, Electronics & Telecommunication Engineering Technology and Mr. L. A.W. D. Dewapriya from the Division of Textile & Clothing Technology became 1st and 2nd runners up respectively.



The Presenters with the members of the ITUM English Club & the Staff



Other participants with outstanding presentation skills who took part in the final round were P.V.D.C. Padukka from the Division of Polymer & Chemical Engineering Technology, K. De Silva and M. J. M. Jusly from the Division of Civil Engineering Technology, M. M. T. Kariyapperuma from the Division of Textile and

Clothing Technology, and M. M. T. Maduranga, M. A. Jayasooriya and T.M.D.L. Premawansa from the Division of Mechanical Engineering Technology.

The ELTU congratulates all the winners and participants for their outstanding performances at the "Best Presenters' Competition 2022", and appreciates the effort taken by the members of the ITUM English Club for organizing the event.



Career Fair 2022



Career Fair 2022, organized by the “Industrial Training, Career Guidance and Post Diploma Education Centre” of ITUM was held from 28th to 2nd December 2022 on the theme “Explore Potential Career Paths”. This was an unprecedented event at ITUM which is expected to assist in strengthening relationships between ITUM and the industry in diverse ways. The event was sponsored by MAS Holdings and co-sponsored by the NDT Alumni Association, ATG Lanka Private Ltd., and Hirdaramani Industries.

Following a series of student development programs organized and conducted by the “Staff Student Development Unit” (SSDU) of ITUM, the career fair week commenced with the session, “Personal Grooming and Stepping to the Industry” conducted by Mr. Mangala Jayasinghe, the Managing Director of THK Electrical Engineering (Pvt) Ltd, and ICS TEAM (Pvt) (Ltd) and Ms. Deepthi Perera, Director, THK Electrical Engineering (PVT) Ltd., and ICS TEAM Pvt. Ltd.

On the same day, an interesting panel discussion was held on the topic “Spin-off, Tech startups and Entrepreneurship” with the participation of three successful entrepreneurs, Mr. Heminda Jayaweera, Director, Effective Solutions (Pvt) Ltd. Japan and UK, Vibhava Solutions (Pvt) Ltd., and Ceylon Graphene Technologies, Dr. Rangika De Silva, Director, Scientific Research and Innovations at CodeGenInternational and Mr. Vikum Rajapakse, the co-founder and Managing Director of Kantale (Pvt) Ltd. who shared their personal experiences visualizing the milestones they had reached as successful entrepreneurs. The session was moderated by Dr. (Ms.) Nadeeka Tissera, Senior Lecturer attached to the Division of Textile and Clothing Technology.

On the second day of the event, the “Industry forum” was dedicated to building and strengthening relationships between the Institute and the industry with a view of discussing opportunities for collaborations, employment and internships.

One of the guest speakers, Dr. Shantha Yapa, the Chief Commercial Officer, Affiniti Innovations who spoke on the topic “Responsibility of a University Student on Regrowth of the Country’s Economy” shared his expertise and acumen in Information and Communication Technology making a lasting impression on the audience.



The speech by Eng. Jayavilal Meegoda, the Additional General Manager, Distribution Division 01 – CEB on “How Engineering Disciplines are interconnected with the industry” helped magnify the purpose of the event in the best possible way.



The Head of the Industrial Training, Career Guidance, and Post Diploma Education Centre of ITUM, Dr. (Mrs.) Somarathne and the Coordinator of the Centre Mrs. D.W.D.R. Chathurangi, also addressed the gathering.

The session ended with concluding remarks and the vote of thanks delivered by the Training Engineer of ITUM, Eng. Mr. Kamalnath Jinadasa.

Following the main industry forum, Divisional forums were held in each Division of the Institute to have a better understanding of the respective industries and to build connections.

The rest of the week was allocated for the interview sessions and industry representatives from reputed companies were invited to visit the Institute and select interns from among potential candidates from semester IV student.



Appointments, Promotions, Personal Achievements, Awards & Recognition and Retirements

Appointments

New Appointment as the Head of the Division of Mechanical Engineering Technology



Dr. P.D.C. Kumara was appointed as the Head of the Division of Mechanical Engineering Technology with effect from 1st August 2022.

New Appointment as the Head of the Division of Civil Engineering Technology



Mr. W.L.S Maduranga was appointed as the Head of the Division of Civil Engineering Technology with effect from 11th August 2022.

New Recruitments

ITUM is pleased to welcome the following new probationary lecturers who joined the academic staff in the Division of Polymer & Chemical Engineering Technology in August 2022.

Dr. S.G. J Perera

B.Sc. University of Sri Jayewardenapura, M.Sc. University of Sri Jayewardenapura, Ph.D. University of Moratuwa

Specialisation: Rubber Technology, Nanocomposites, Polymer Chemistry.

Dr (Eng.) H.G. Madhushika

B.Sc. (Hons) University of Moratuwa, PhD University of Moratuwa, AMIESL

Specialisation: Environmental Microbiology, Wastewater Treatment.

Promotions/ Personal Achievements



Dr. (Mrs.) P.B.T.K. Premarathne in the Division of Interdisciplinary Studies obtained her Ph.D from the Faculty of Graduate Studies, University of Kelaniya. Her Ph.D research was on the topic 'The Impact of Corrective Feedback on Fossilized Phonological Errors of Students Learning English as a Second Language.' She was also promoted to the Post of Senior Lecturer, Grade II in the Division of Interdisciplinary Studies with effect from 24th February 2021.



Eng. A.U.V.B. Bulathsinhala attached to the Division of Civil Engineering Technology of ITUM is reading for his PhD. at University of Moratuwa and won the 'Three-minute thesis challenge' organized by the Department of Civil Engineering, University of Moratuwa, held alongside the Civil Engineering research symposium 2022 on 1st of December 2022.



Mrs. R.L.C. Premathilaka, attached to the Division of Textile and Clothing Technology, ITUM as a Technical Officer participated in a fully-funded six-week international training program on "Textile Testing & Quality Control" in October 2022. The training program was conducted in Coimbatore, India by the South India Textile Research Association (SITRA). Theoretical and practical knowledge relevant to various areas of the textile industry, including medical textiles, was covered by the program.

Retirement



Mr. (Eng.) MIRT Fernando, a Senior Lecturer attached to the Division of Mechanical Engineering Technology retired from service after serving the Institute in many capacities. He was a former Head of the Division of Mechanical Engineering Technology and chaired many committees and was a member of the Board of Studies of ITUM. We wish him a healthy and joyous retirement.

Research News, Conferences & Publications

Institute of Technology, University of Moratuwa International Research Conference 2022

The Institute of Technology, University of Moratuwa International Research Conference 2022 (IRCITUM 2022) took place virtually on 28th October 2022, under the theme “Fostering Research through Collaboration & Innovation.” The conference featured a pre-conference session with renowned scholars and an inaugural session with speeches and a captivating dance performance.

The event commenced with the pre-conference held on 27th October, 2022. Four eminent scholars, Professor S. P. Kumarawadu from the Department of Electrical Engineering, University of Moratuwa, Professor Gehan Amaratunga from the Division of Electrical Engineering, University of Cambridge, Professor R. G. Ragel from the Department of Computer Engineering, University of Peradeniya, and Dr. Guna Hewa from the University of South Australia, captured the attention of the audience through their thought-provoking presentations.

Pre-conference (Resource Persons)



Professor. S. P. Kumarawadu
Department of Electrical Engineering,
Faculty of Engineering,
University of Moratuwa, Sri Lanka



Professor. Gehan Amaratunga
Division of Electrical Engineering,
Department of Engineering,
University of Cambridge, UK



Professor. R. G. Ragel
Department of Computer Engineering,
Faculty of Engineering,
University of Peradeniya, Sri Lanka



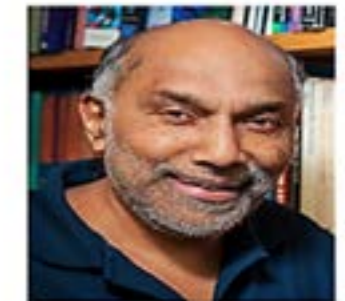
Dr. Guna Hewa
Civil and Water Engineering,
University of South Australia,
Australia

On the day of the Conference, the keynote address was delivered by Professor A. P. de Silva, an esteemed Emeritus Professor from the School of Chemistry and Chemical Engineering at Queen’s University Belfast. Professor de Silva drew the attention of the audience with an engaging and informative talk on “From Chemistry to Medical Diagnostics and Information Processing.” The occasion was further adorned by a captivating dance performance by Mrs. Lakni Kumarasiri and Mr. Thilina Dayananda from the Division of Interdisciplinary Studies, ITUM, which displayed a splendid integration of technology and dance.

19 research papers were presented at the Conference, across three parallel technical sessions, each chaired by Dr. (Mrs.) Premila Semananda, Dr. Sudarshana Perera and Dr. (Mrs.) Kaushika Premarathne. The papers covered diverse research areas, contributing to the dissemination of knowledge and fostering discussions among participants.

Mrs. M. M. P. D. Samarasekara, Dr. (Mrs.) W. B. M. Thoradeniya, Dr. (Mrs.) S.C. Mathugama, Dr. (Mrs.) K.M.W. Abeykoon, Dr. (Mrs.) G. K. Jayathunga, Dr. (Mrs.) D.D.G.A.D.S. Saparamadu, Dr. (Ms.) N. D. Tissera, Dr. R. N. Wijesena Dr. G.D.S. Perera, Mrs. L.P. Kumarasiri, Ms. W.V.W.H. Wickramarachchi, Mrs. H.A.S.L. Amarasinghe, Ms. A.K.D.K. Chathurangi, Ms. J.A.S.D. Bandara, Ms. W.E. Iroshani, Mr. A.U.V.B. Bulathsinhala, and Ms. K. G. A. S. Kariyawasam of ITUM presented their research findings at the conference.

Keynote Speaker



Professor. A.P. De Silva
School of Chemistry and Chemical Engineering,
Queen’s University Belfast, UK

IRCITUM 2022 aptly demonstrated ITUM’s dedication to excellence in research and the development of a vibrant research community.

Session chair at the 7th World Disability and Rehabilitation Conference

Dr. Kokila Abeykoon attended the 7th World Disability and Rehabilitation Conference (WDRC) 2022 held on 10th & 11th of November 2022 on virtual platform as a Reviewer, a member of the Scientific Committee, and a Session Chair.



Conference Presentations & Publications

International workshop on Leveraging Innovations for Infrastructure Development and Sustainable Industrialization

Dr. (Mrs.) Kokila Abeykoon presented a paper titled 'A Framework to Increase the manual performance of People without or with Physical Disabilities to Work in Industry' as the main author, at the international workshop on Leveraging Innovations for Infrastructure Development and Sustainable Industrialization held in November 2022 on virtual platform.

Indonesian Journal of Electrical Engineering and Computer Science

Mr. M. M. Mafroos, in the Division of Electrical, Electronics and Telecommunication Engineering Technology, published a paper in the Indonesian Journal of Electrical Engineering and Computer Science titled "Passively Q-switched erbium doped fibre laser based on graphene and carbon nanotube saturable absorbers" in October 2022, as the main author. <https://ijeecs.iaescore.com/index.php/IJEE>

Journal of Reinforced Plastics and Composites (Q1 journal)

Mr. S. Bandara, in the Division of Mechanical Engineering Technology published an article titled, *Sensory methods and machine learning based damage identification of fibre-reinforced composite structures: An introductory review* as the main author, in the Journal of Reinforced Plastics and Composites (Q1 journal) in December 2022. DOI: <http://dx.doi.org/10.1177/07316844221145972> <https://journalsearches.com/>

International Journal of English Language Teaching

Mrs. J. H. Umarlebbe, attached to the Division of Interdisciplinary Studies co-authored and published an article in Volume 15, No. 11 of the International Journal of English Language Teaching titled, *Maritime Students Meeting the Maritime Industry English Standards: An Analysis of Types of Sentences*, in Nov. 2022. ISSN 1916-4742 (Print) E-ISSN 1916-4750 (Online) DOI: 10.5539/elt.v15n11p84.

Frontiers in Psychology

Mrs. J. H. Umarlebbe, attached to the Division of Interdisciplinary Studies co-authored and published an article in Vol. 13 of Frontiers in Psychology (Oct. 2022) titled, *Conceptualization of head-heart-hands model for developing an effective 21st century teacher*. DOI: <https://doi.org/10.3389/fpsyg.2022.9687233>

Staff Development Programs

Awareness Session on Workshops in the Mechanical Engineering Technology Division

The Division of Mechanical Engineering Technology organized an awareness session for the non-academic staff within the Mechanical Engineering Technology Division. The purpose of this session was to provide guidance and instructions on safe and effective workshop practices. Senior Lecturer and Workshop-



in-charge, Mr. K.M Ranasiri, oversaw the session to ensure its successful execution. The primary objectives of this session were to enhance workshop skills, promote a better understanding of health and safety practices within workshop environments, and ultimately facilitate the overall advancement of workshop practices.



Online SD Request System for ITUM

The Systems Management Unit (SMU) of ITUM recently developed and implemented an online SD request system to streamline the process of requesting consumables and capital items. This new system aims to increase the efficiency of the earlier manual process of requesting consumables and capital items by reducing human involvement in tracking the progress of SD requests.

On 19th August 2022, the SMU of ITUM organized a user training session under the patronage of the Director of ITUM, Major General (Retired) S.K. Thirunavukarasu, to give academic and non-academic staff of ITUM hands-on training on using the online SD request system. The session was conducted by Mr. R. P. Suriyage, a Computer Programmer cum System Analyst of the SMU. The Director, the Deputy Registrar and the Divisional Heads attended the session.



Cultural Events



The 'ASANI 2022' Art festival was organized by the Art Subcommittee of the NDT Student Union with the intention of upholding aesthetic values of art and to exalt the essence of entertainment through cultural art in modern society. The festival was held from 03rd November 2022 to 25th November 2022 at ITUM premises, Diyangama and at the National Youth Centre Auditorium, Maharagama.

The program consisted of a series of inter-university music, dance and drama competitions held from 3rd November 2022 to 11th November 2022 at the Institute premises, in the run-up to the festival.



On 21st November 2022, the first day of the festival, an exhibition of Photography and Art, and a Poetry Competition took place alongside a Drama evening at ITUM premises. This was followed by a Cultural and Talent show of university students on 23rd November 2022 held at Dr. T.A.G. Gunasekara multifunctional hall, ITUM. The festival culminated in a grand musical extravaganza featuring Kasun Kalhara &



Umara Sinhawansa, staged at the National Youth Centre, Maharagama on 25th November 2022.

The event was exposed to an audience of over 2000 youth from various parts of the island. It also fulfilled a tremendous social responsibility of encouraging a group of young individuals to create a more promising future for underprivileged children who are held back from reaching their dreams due to economic constraints.



The events were successfully concluded and the memories were shared in the NDT official Facebook page and the NDT Voice YouTube channel.



Sports News

ITUM students show their prowess at the Sri Lanka Inter-University Championship 2022

Institute of Technology, University of Moratuwa (ITUM) proudly congratulates its students for their exceptional achievements in the recently concluded Sri Lanka Inter-University Championships 2022. The championships were held from 11th November to 13th December, and showcased the remarkable sporting talents of ITUM students across various sporting events.

The University of Moratuwa baseball team showed incredible prowess and sportsmanship to win the Baseball Championship, a testament to their skill and teamwork. Three students from ITUM, B. W. H. U. M. Fernando, W. M. G. B. Weerakoon, and S. G. G. Lahiru, played instrumental roles in securing this remarkable victory.



Inter-university Baseball Champions - 2022



In the Karate Championship, A. L. A. S. L. Liyanarachchi from ITUM displayed outstanding ability and dedication to win the Bronze Medal in the 67kg Kumite event, bringing recognition to the sport at ITUM. The Moratuwa University Volleyball (Women's) Team too performed remarkably well to take the 4th place in the championship. The team included P. K. S. Hemakanthi and A. K. Sandeepani from ITUM.

The Road Race Championship witnessed an impressive performance from ITUM, with six out of the seven-member University of Moratuwa team represented by ITUM students. Their enthusiasm and perseverance were evident as they crossed the finish line at the event held at Sabaragamuwa University of Sri Lanka.

The Athletic Championship held at the Sugathadasa Stadium in Colombo witnessed the participation of 17 students from ITUM who showcased their athletic prowess and sportsmanship representing University of Moratuwa. H.M.U.N.B. Hitihamu a talented hurdler from ITUM, performed exceptionally well in the 110M hurdles event to qualify for the final round and was placed 6th in a closely contested event.

The Rugby Championship was held at the University of Colombo. The University of Moratuwa team which included four ITUM students, D. U. A. U. Silva, O.D.S. Perera, B. C. Ravishka and W. L. D. Amarabandu qualified for the semi-finals. Their exceptional talent and teamwork were evident throughout the tournament.

ITUM students also participated in other championships, such as Elle, Volleyball, Hockey, Swimming, Basketball, Football, Wrestling, and Taekwondo. Their active involvement in a wide range of sporting events demonstrated their versatility and passion for physical excellence.

The achievements of these dedicated ITUM students reflect their relentless commitment and hard work. Their success serves as an inspiration to their peers and future generations of sports enthusiasts at ITUM.



A. L. A. S. L. Liyanarachchi



H.M.U.N.B. Hitihamu



Road race Team



Women's Volleyball Team

Communal & Other Events

Outreach Programs

Short Course - Certificate Course in Spoken English (CCSE- Group 2) Certificate Awarding Ceremony

The Certificate Course in Spoken English conducted by the English Language Teaching Unit of ITUM concluded on 17th December 2023 with a final day variety entertainment and the award of certificates to thirty-five students who successfully completed the course.

The highlight of the day was the variety entertainment presented by the students which aimed at giving them the confidence to speak in English and perform in front of an audience. Altogether twelve items were presented and amongst them the 'Modala 2023 Fashion Show' and the game show captivated the interest of the audience and the dramatic performance of the group which performed the last scene of 'Romeo and Juliet' became the main attraction of the event.

The Head of the Division of Interdisciplinary Studies, the Coordinator and the staff of the ELTU and members of the ITUM English Club participated in the event.



Feature Article

Four Ways to Help Students Stay Focused, and Engaged in a Task During a Lecture in a Large Classroom



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It is difficult for people to carry out a task passively for long, without losing attention. Several learning situations suffer from this problem, including when listening to lectures. There is plenty of evidence to show that learners lose attention at lectures within a short period of time. It is a known fact that a normal student's attention cycle lasts up to 10 to 12 minutes, or between 12 to 15 minutes. A study conducted by Cicekci & Sadik in 2019 found that students who take notes, significantly lose interest during a lecture, however, their attention increases somewhat towards the end, when the duration of the lecture was one hour or less, indicating that the central part of the lecture can be ineffective and requires suitable breaks during the lecture to boost students' attention.

Students' attention graph for a one-hour period, along with their attention span after lecture breaks or activities is given in Figure 1, below. (Source : <https://ayruz.com/how-the-learning-capacity-of-human-beings-vary-listening-to-long-lectures/>)

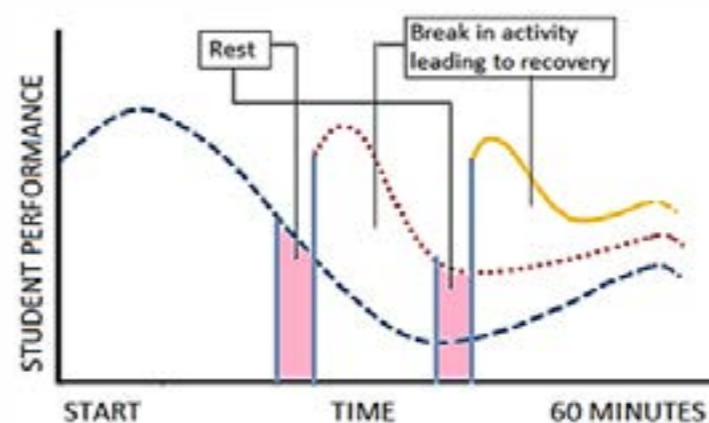


Figure 1 Students' attention graph

Figure 1 demonstrates that rests or breaks during a lecture can improve the attention span of students though it decreases again after a while. The graph shows the line declining towards the end of the first half of the lecture, and after the break there is recovery for a while, but it recedes again before showing a rise as the class finishes. However, the recovery rate will depend on the type of activities given or the way the speaker tackles the students during the break.

The most efficient way of gaining students' attention at a lecture is therefore to introduce lecture breaks. During lecture breaks, students can engage with different activities such as group activities, individual activities, presentations, discussions, quizzes, etc. However, performing these activities are time consuming and difficult to handle in large classes. Therefore, four types of practicable and enjoyable lecture break activities can be identified to gain student's attention in large classes.

Incomplete Lecture Notes / Guided Notes

The use of incomplete lecture notes is one approach that can be used as a lecture break to get students involved and engaged in the lecture. The lecture material is outlined as guided notes to be completed. The lecturer can leave space for students to fill in their notes on their own during the class (or as they watch a video, listen to a podcast, or read) rather than giving them all the information in every slide of the presentation. The lecturer can provide the framework and overview and students can be asked to add the specifics. Use of incomplete notes encourages ongoing engagement in the lecture and helps students to stay focused and at the same time helping them in organizing information.

Pair or Group Activities

Throughout the lecture, taking a few breaks and asking the students to turn to a neighbor to discuss their completed notes and encouraging students to fill in any gaps or clarify any areas of doubt by working together is another activity that can be used by a lecturer. It is beneficial to allow some time for questions before continuing the lecture for students to clarify their doubts. Also, conducting Think-Pair-Share (TPS) activities during the class will be beneficial in many ways. TPS activities help students to think individually about a topic / give an answer to a question or to a mathematical problem. It teaches students to share ideas with classmates and develop oral communication skills as well.

Standing Breaks

Standing breaks can be introduced approximately half way during a lecture and students can be asked to engage in a five-minute active break with stretching or relaxation. In a large classroom, it may be difficult to do stretching exercises but it is possible for students to engage in a few breathing exercises or standing yoga exercises for approximately three to four minutes. A visual such as a PowerPoint slide that mentions the benefits of standing breaks such as relieving strain in the spine, preventing back pain or the increase in the supply of oxygen to the body etc. can be displayed during the standing break, which will draw students' attention and encourage them to engage in standing breaks. Standing breaks will be more effective when there are movable chairs and tables in the lecture hall.

So far, only a few researches have compared the impact of continuous sitting, or the changes in physical, mental, and cognitive states due to standing breaks. A study team led by Bergouignan in 2016 discovered that test individuals who regularly take breaks from sitting, experience less fatigue than test individuals who sit continuously.

Making use of smartphones


To date, mobile phones have been a controversial addition to the classroom, because they can act as distractions and prevent students learning. However, mobile phones can be utilized as a learning tool during a lecture. There are various types of applications such as TopHat, Socrative.com, Padlet, Kahoot, Mentimeter, Quizalize etc. available to make the use of smartphones in the classroom more effective. All these applications increase student engagement and are relatively easy and fun to use, thus providing formative feedback to the lecturer.


Smartphones can be used in the classroom for assessment as well. Quizzes conducted during a lecture can be useful to the lecturer because they provide a chance for the lecturer to determine what students have understood and where clarifications have to be given.

While utilizing these techniques during a lecture, it is easy for the lecturer to engage the students' attention and keep them focused. Moreover, by making the students stay active and involved in tasks during the lecture will contribute towards achieve teaching and learning goals, especially when teaching large groups.




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