

Warangkana Poomjeen

To: Wuttichai Boonruang; sarunyavud kangwanwongphaisan
Subject: RE: CommTECH Course 2020 Online Edition & e-Student Mobility at ITS Surabaya-Indonesia

จาก: CommTECH <commtech@its.ac.id>

ส่ง: 22 มิถุนายน 2563 16:04

ถึง: internationaloffice.its@gmail.com <internationaloffice.its@gmail.com>

ชื่อเรื่อง: CommTECH Course 2020 Online Edition & e-Student Mobility at ITS Surabaya-Indonesia



Dear Colleagues
(listed in bcc)

Warm greetings from ITS Surabaya, Indonesia !

We are writing this email to inform you about our virtual mobility program that you can offer to your students/staffs

We are happy to inform that we have launched our 1st virtual CommTECH program, CommTECH Course 2020 Online Edition. The program will be delivered by virtual, combination between academic activity and Indonesia culture. We offer 2 interesting courses for this August 2020

Sub Course A: Internet of Things (IoT) for Smart City Applications during the Pandemic

This course will be held on 3-14 August 2020 (Registration Deadline is 17 July 2020)

Sub Course B: Zero Waste Stores: A Way to Combat Plastics

This course will be held on 24 August – 4 Sept 2020 (Registration Deadline is 8 August 2020)

You may check from this link for further info <https://www.its.ac.id/international/study-at-its/short-program/commtech-camp/commtech-online-edition/>

You may also find syllabus, registration form and some poster about this program in this attachment

The fee of this program is USD 200 (USD 175 for ITS partner university). The fee will cover certificate, credit letter, material module and ITS/Indonesia souvenir.

This program is open for an active undergraduate/postgraduate students, staff, and Professor as well. We are hoping that you can assist us to distribute this information to your students/staff at your university. Feel free to contact me at commtech@its.ac.id / internationaloffice.its@gmail.com if your students/staffs have further questions.

In addition, we would like also to inform you that we have launched our e-mobility program next semester (fall semester). The program are consists of e-students exchange and e-internship program. The students don't need to pay anything to join e-student exchange and e-internship program. We are encouraging your students to take online mobility and the top best 3 of students will get a prize full scholarship for CommTECH program (face to face) in 2021.

You may visit this link for further info <https://www.its.ac.id/international/e-program/>

เรียน อธิการบดี

ด้วย Institut Teknologi Sepuluh Opember (ITS) ประเทศอินโดนีเซีย ประชาสัมพันธ์โครงการ 1st Virtual CommTECH (CommTECH Course 2020, Online Edition) จำนวน 2 หลักสูตร ดังนี้

1. Sub Course A: Internet of Things (IoT) for Smart City Applications during the Pandemic มีการเรียนการสอนระหว่างวันที่ 3-14 สิงหาคม 2563 (หมดเขตลงทะเบียนในวันที่ 17 ก.ค. 2563)
2. Sub Course B: Zero Waste Stores: A Way to Combat Plastics มีการเรียนการสอนระหว่างวันที่ 24 ส.ค. 2563 – 4 ก.ย. 2563 (หมดเขตการลงทะเบียนในวันที่ 8 ส.ค. 2563)

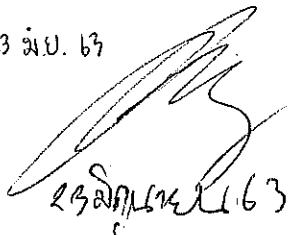
ทั้งนี้ นิสิตผู้สนใจสามารถศึกษารายละเอียดเพิ่มเติมได้ที่

<https://www.its.ac.id/international/study-at-its/short-program/commtech-camp/commtech-online-edition/>

จึงเรียนมาเพื่อโปรดพิจารณา เห็นควรเวียนคณะ/วิทยาลัย เพื่อประชาสัมพันธ์ผ่านระบบ E-doc เว็บไซต์มหาวิทยาลัย เว็บไซต์ กองพัฒนามาษาและกิจการต่างประเทศ เพจกองพัฒนามาษาและกิจการต่างประเทศ และเพจ NU International Scholarship ต่อไป

สวทศต

23 ม.ย. 63



23 มิถุนายน 63

สวทศต/อภทศศ

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๒๕ มิถุนายน ๖๓

Thank you very much for your kind attention and assistance. We are looking forward to welcoming your students in this program

Best regards

Muh. Wahyu Islami PM, ST (Mr.)

Junior Supervisor for International Short Term Program

ITS Global Engagement

ITS Surabaya - Indonesia



CommTECH Course 2020 Online Edition

Course Title : Internet of Things for Smart City Applications during the Pandemic

Instructor Coordinator : Astria Nur Irfansyah, Ph.D

Time : 3 – 14 August 2020

Synopsis

Internet of things, or IoT, has the potential to unlock possibilities that were unthinkable in the past. Combined with technologies such as telecommunications, big data, and machine learning, IoT is set to have significant impact in many areas, such as health, transportation, smart city, agriculture, and many more. Due to the current pandemic situation, the use of IoT technology has been forecasted to further increase. In this CommTECH Course 2020 Online Edition, we will cover the three main parts of an IoT system, namely the sensor or node device, the communications network and protocol, and the web service. Participants will work in groups and be guided to have hands-on experience, with the minimum requirements of a mobile phone and computer to build prototypes and proof of concepts. In this course, we will see how IoT technology can be applied in a smart city application and combined with machine learning as a supporting technology during the pandemic.

Tentative Schedule

Time	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	Introduction & Overview	Session 1: Microcontrollers & Sensors	Session 2: LoRa & Wifi, and MQTT protocol	Session 3: IoT web services	Session 4: Build a telemetry system
Week 2	Session 5: Group Presentation	Session 6: Computer vision	Session 7: Machine learning	Session 8: Build a face mask detector	Session 9: Group presentation

*Please kindly note that the session will be combined with fun/cultural activities such as Fun Indonesian Language, Indonesia Virtual Dance, Surabaya Story, etc

Details of sessions:

1. Introduction & Overview:
The philosophy, potential, and general architecture of an IoT system will be discussed.
2. Session 1: Microcontrollers & Sensors
This session deals with the sensor node subsystem of an IoT system. Basic microcontroller and sensors technology will be introduced, and programming of a simulated microcontroller with sensors will be performed as hands-on experience.





3. **Session 2: LoRa & Wifi, and MQTT protocol**
The next part of an IoT is the communications layer. LoRa and Wifi are two main examples of wireless technology in IoT, and MQTT as the communications protocol will be introduced since it is among the popular protocols for IoT data transactions. Programming exercises using MQTT protocol using Python will be part of the hands-on tasks.
4. **Session 3: IoT webservices**
The final component of an IoT system that is discussed is the web service that connects and processes data from all the nodes. In this session, we will cover an existing IoT platform service as the example project.
5. **Session 4: Build a telemetry system**
We combine all the parts from previous sessions to build a working telemetry system through the Internet. Data visualization will be added in this session to show sensor readings in a more visually appealing manner.
6. **Session 5: Group presentation #1**
Participants will present their prototypes for discussion and all groups may compete for a prize (if available). Each group should present their first telemetry prototype that is relevant to a smart city context.
7. **Session 6: Computer vision**
The next part of the course will integrate more artificial intelligence aspect to the subject. In this session, we will go through the basics of using Python for computer vision using OpenCV for Python library.
8. **Session 7: Machine learning**
Using PyTorch, we will learn simple steps to perform machine learning tasks in computer vision. Due to time limitations, most if not all of the theoretical background of mathematics and deep learning theory requirements will be skipped, and a more hands-on approach will be covered. Interested participants are however highly encouraged to learn more on the subjects separately.
9. **Session 8: Build a face mask detector**
By combining computer vision and machine learning, in this session we will implement a face with or without a mask detector. This is useful in the monitoring or enforcement of the compliance of people wearing face masks in public places during the pandemic.
10. **Session 9: Group presentation #2**
In this session, each group present their work of a computer vision implementation that detects the number of people in a picture frame that wears face masks. Points will be given based on the detection performance: how many correct faces can be detected, what is the accuracy, and what is the speed of detection?



Registration Form

Application for CommTECH Course 2020 Online Edition
please choose the sub courses below:

- Sub Course A: Internet of Things (IoT) for Smart City Applications during the Pandemic (3-14 August 2020)
 Sub Course B : Zero Waste Stores: A Way to Combat Plastics (24 August – 4 Sept 2020)

Personal Information

Full name :

Date of Birth:

Passport Number:

Institution / University :

Country of Citizenship:

Male

Female

Please describe your motivation to join this program: (please use additional paper if needed)

NOTE: Please describe your motivation why do you want to join this program

Academic/Professional Reference		
Please provide the name and contact information of your reference.		
Last Name:	First Name:	
Street:		
City:	State:	Zip/Postal Code:
Phone: (including area/country code)	Email:	
Occupation:	School/Faculty:	
Agreement		
I have read the program descriptions, including the application policies and procedures, and I feel that I would benefit from CommTECH program. I certify that all information I have provided in this form is correct and accurate to the best of my knowledge.		
<hr/>		(If applicant is under 18 years old of age, parental approval is required.)
		Date :

For you want to join this program, please send this registration form with:

- Scanned passport
- Scanned students/staffs/lecturers I.D or statement letter that you are staff or lecturers from your university
- We will send you the payment invoice after you send your application to us

Deadline:

Sub Course A: 17 July 2020

Sub Course B: 8 August 2020

CONTACT PERSON:

Mr. Muh. Wahyu Islami PM, S.T.

ITS Global Engagement

Institut Teknologi Sepuluh Nopember (ITS)

Rectorate Building 1st Floor

Campus ITS Sukolilo Surabaya 60111, Indonesia

Telp/Fax : +62-31-5923411

Email: commtech@its.ac.id / internationaloffice.its@gmail.com



CommTECH Course 2020 Online Edition

Course Title : Zero Waste Stores: A Way to Combat Plastics
Instructor Coordinator : Assoc. Prof. Dr. Maria Anityasari, S.T., ME
Dates : 24-31 August, 1-4 September 2020
Allocated Time : 6 hours per day for courses & fun language & cultural activities

Synopsis

In the last decade, the issues on plastics have caused serious concern all over the world. Many efforts have been made to reduce the amount of plastic waste, especially for packaging. One of those efforts is the emerging of stores that removes packaging from end customers. This effort is commonly known as *Zero-Waste Store*. It is a store that sells goods in bulk and encourages customers to bring containers to take their products home.

In this CommTECH Course 2020 Online Edition, participants will learn the business process of Zero Waste Store (ZWS) in different countries and explore the implementation of ZWS in their own country. Furthermore, three aspects of ZWS implementation will be discussed, including people's willingness to shop in a ZWS, Life Cycle Management (LCM), and the use of technologies to enhance the ZWS success.

This course is designed for undergraduate students from various fields who want to learn new knowledge and methods in business process, statistics, and system design. Participants will also have great opportunities to develop soft skills and cross-cultural understanding, as they will work in a group to have hands-on experiences including conducting survey, reviewing scientific resources, generating ideas, and analysing the ideas. In addition to that, participants will have opportunities to experience different cultures in the fun activities designed especially for online learning.

Schedule & Detailed of Sessions

Day 1 (Monday)

Courses:

- Introduction & Overview of the Program
- Plastic Problems Worldwide
- Plastic Problems in Indonesia: Real Facts from the Field (Speaker: CEO of ECOTON)
- Worksheet 1: Scrutinizing Plastic Problems in Your Country

Language & Cultural Activities:

- Fun Indonesian Language
- Campus Tour

Day 2 (Tuesday)

Courses:

- Think Loudly (Discussion of Worksheet 1)
- Zero Waste Store Initiatives Worldwide
- Zero Waste Store Initiatives in Indonesia
- Worksheet 2: Finding Zero Waste Store Initiatives in Your Country

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Rectorate Building 1st Floor
ITS Campus, Sukolilo, Surabaya 60111 Indonesia
Phone/Fax: +62-31-5923411





Language & Cultural Activities:

- Fun Indonesian Language
- Traditional Dance

Day 3 (Wednesday)

Courses:

- Think Loudly (Discussion of Worksheet 2)
- Business Process of Zero Waste Stores
- Managing Business Process of Zero Waste Stores (Speaker: CEOs of Zero Waste Stores)
- Worksheet 3: Identifying the Most Challenging Aspects in Operating Zero Waste Stores

Language & Cultural Activities:

- Fun Indonesian Language
- Traditional Instrument

Day 4 (Thursday)

Courses:

- Think Loudly (Discussion of Worksheet 3)
- People Willingness to Shop in Zero Waste Stores
- Basic Statistical Analysis
- Worksheet 4: Designing an Online Survey

Language & Cultural Activities:

- Fun Indonesian Language
- Indonesia Updates

Day 5 (Friday)

Courses:

- Basic Life Cycle Management (LCM)
- Life Cycle Management Analysis for Zero Waste Stores Implementation
- Worksheet 5: Defining Goals and Scope of Life Cycle Management Analysis of Zero Waste Stores Implementation

Language & Cultural Activities:

- Fun Indonesian Language
- East Java and Surabaya Updates

Day 6 (Saturday)

Language & Cultural Activities:

- Surabaya City Tour

Day 7 (Monday)

Courses:

- Grouping
- Project Allocation
- Group Work on Worksheet 4 & 5
- Presentation & Feedbacks





Day 8 (Tuesday)

Courses:

- Technologies in Zero Waste Stores' Operation
- Group Work

Day 9 (Wednesday)

Courses:

- Group Work

Day 10 (Thursday)

Courses:

- Discussion & Progress Review
- Group Work

Day 11 (Friday)

Courses:

- Presentation & Feedbacks
- Reflection
- Awarding & Closing





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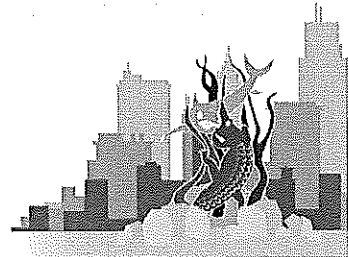
Join our CommTECH 2020!

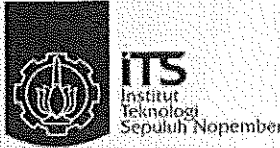


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CommTECH Course 2020 Online Edition

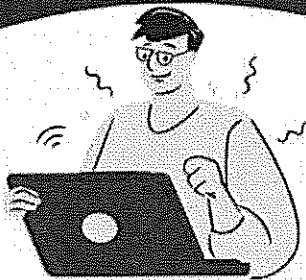
August - December 2020





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Online



Student Mobility

(One semester e-exchange and e-Internship)

FALL SEMESTER 2020 AT ITS SURABAYA

Application deadline: 31 August 2020

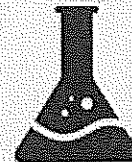
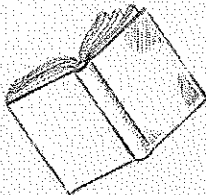


Win 3* full scholarships for
CommTECH 2021

<https://www.its.ac.id/international/study-at-its/short-program/commtech-camp/>

Scholarship Coverage:

Program Fee
Accommodation during Program
Scheduled Meals during Program
(excluding flight ticket)



*Top 3 participants will be selected
based on final grade and participation in online
cultural activity)

More information please contact:
Ms. Bilqis (intl.admission@its.ac.id)