



Mahidol University
Faculty of Engineering

MAHIDOL ENGINEERING EXPO 2023

“CAPSTONE PROJECT PRESENTATION”

15 MAY 2023

PRINCE MAHIDOL HALL

Message from the Dean

On behalf of the Faculty of Engineering, Mahidol University, it is a great pleasure to organize Mahidol Engineering Maker Expo 2023 “ Capstone Project Presentation”, which is a showcase of 4th year students' projects to promote presentation practice and soft-skill, which is also important in addition to the body of knowledge for students as being potential engineers. In this event, students are able to exchange their knowledge and research with the faculty member, fellow students, experts from the industry (Industry Advisory Board), alumni, students, teachers, students from various schools and interested parties. The projects will be divided into four clusters: Healthcare Engineering, Logistics and Railway Engineering, Digital Engineering, and Sustainable and Environmental Engineering, which are also the main teaching and research clusters at the Faculty of Engineering, Mahidol University.

Lastly, I sincerely hope that all participating students will benefit from preparing to become qualified engineers. As well, participants are inspired to do something new and further develop knowledge to innovation for further progress of the country.



Assoc. Prof. Dr. Jackrit Suthakorn
Dean of Faculty of Engineering

กำหนดการ

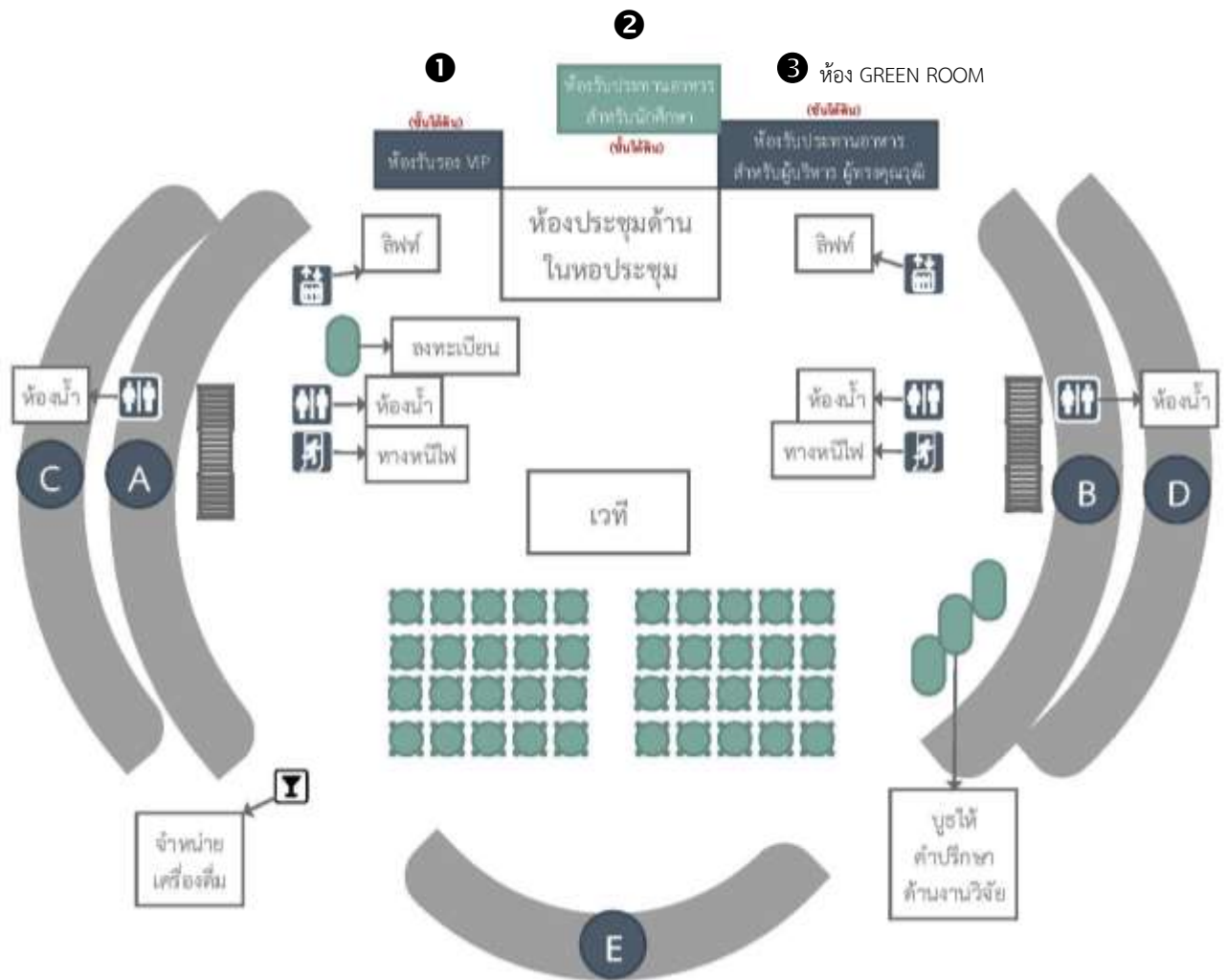
Mahidol Engineering Maker Expo2023 “Capstone Project Presentation”

วันจันทร์ที่ 15 พฤษภาคม 2566 เวลา 8.30 – 16.30 น.

ณ มหิตลลิตธาคาร มหาวิทยาลัยมหิดล จังหวัดนครปฐม

08.30 - 09.00 น.	ลงทะเบียนเข้าร่วมงาน
09.00 - 09.15 น.	พิธีกรกล่าวต้อนรับ และรับชมวีดิทัศน์แนะนำคณะวิศวกรรมศาสตร์
09.15 – 09.25 น.	พิธีกรกล่าวเรียนเชิญ ผศ.ดร.พรทิพย์ แก่งอินทร์ รองคณบดีฝ่ายวิชาการ กล่าวรายงานวัตถุประสงค์ของโครงการ
09.25 - 09.40 น.	พิธีกรกล่าวเรียนเชิญ รศ.ดร.จักรกฤษณ์ ศุทธากรณ์ คณบดีคณะวิศวกรรมศาสตร์ กล่าวเปิดงาน
09.40 – 12.00 น.	การนำเสนอโครงงานทางวิศวกรรม (Capstone Project Engineering) รูปแบบการนำเสนอแบบ Poster
09.40 – 11.00 น.	การเสวนา หัวข้อ “ภาวะเศรษฐกิจไทย: กับการปรับตัวของอุตสาหกรรม” โดย ภาคอุตสาหกรรมและกรมส่งเสริมอุตสาหกรรม
11.00 – 12.00 น.	การนำเสนอโครงงานทางวิศวกรรม (Capstone Project Engineering) รูปแบบการนำเสนอแบบ Pitching บนเวที
12.00 – 13.00 น.	พักรับประทานอาหารกลางวัน
13.00 – 14.30 น.	การนำเสนอโครงงานทางวิศวกรรม (Capstone Project Engineering) รูปแบบการนำเสนอแบบ Poster
13.00 – 14.30 น.	การนำเสนอโครงงานทางวิศวกรรม (Capstone Project Engineering) รูปแบบการนำเสนอแบบ Pitching บนเวที
14.30 – 16.00 น.	กิจกรรมบนเวที และคณะกรรมการรวมคะแนน - พิธีมอบรางวัลผลการเรียนดี และพิธีมอบเกียรติบัตรเชิดชูเกียรติด้านกิจกรรมนักศึกษา
16.00 – 16.30 น.	ประกาศผลการประกวด มอบรางวัล และถ่ายรูปหมู่ร่วมกัน
16.30 น.	กล่าวปิดงาน

แผนผังการจัดงาน
 MAHIDOL ENGINEERING MAKER EXPO 2023



POSTER ZONE

A: HEALTHCARE ENGINEERING

B: DIGITAL ENGINEERING

C, D: SUSTAINABILITY AND ENVIRONMENTAL ENGINEERING

E: LOGISTICS AND RAILWAY ENGINEERING

สัญลักษณ์

ห้อง

- ❶ ห้องรับรอง VIP สำหรับผู้บริหารคณะวิศวกรรมศาสตร์และผู้ทรงคุณวุฒิจากสถานประกอบการ
- ❷ ห้องรับประทานอาหารสำหรับนักศึกษา
- ❸ ห้อง GREEN ROOM สำหรับรับประทานอาหารกลางวัน (สำหรับผู้บริหารคณะวิศวกรรมศาสตร์และผู้ทรงคุณวุฒิจากสถานประกอบการ)

จุดบริการ

- จุดลงทะเบียนและรับอาหารว่าง
- สุขา ชาย / หญิง
- ลิฟท์บริการ
- POSTER ZONE

ชื่อย่อหลักสูตร

BI	BIOMEDICAL ENGINEERING (INTERNATIONAL PROGRAM)
CE	CIVIL ENGINEERING
CG	CHEMICAL ENGINEERING (INTERNATIONAL PROGRAM)
CHE	CHEMICAL ENGINEERING
CO	COMPUTER ENGINEERING
EE	ELECTRICAL ENGINEERING
IE	INDUSTRIAL ENGINEERING
II	INDUSTRIAL ENGINEERING (INTERNATIONAL PROGRAM)
ME	MECHANICAL ENGINEERING

ชื่อย่อ CLUSTER

HC	HEALTHCARE ENGINEERING
DI	DIGITAL ENGINEERING
SE	SUSTAINABILITY AND ENVIRONMENTAL ENGINEERING
LR	LOGISTICS AND RAILWAY ENGINEERING



QR CODE: Poster&Abstract

POSTER PRESENTATION: DIGITAL ENGINEERING (DI)

- CQ2** SYNTHESIS OF PROTEIN STRUCTURES WITH DEEP LEARNING MODEL
ADVISOR: ASST. PROF. DR. VASIN SUTTICHAYA
ADVISEE: THITIWUT MARAWANG / KANTAPAT THIENTHANAWINT /
PUWICH ROTCHANAKANOKCHOK
- CQ4** MAHIDOL ENGINEERING OPEN HOUSE IN METAVERSE
ADVISOR: DR. KONLAKORN WONGPATIKASEREE
ADVISEE: CHATTARIN MUKSAGUL / WACHIRAWIT PEERAPISARNPON
YANISA SUPHATSATHIENKUL / PHUMIKORN SEREESANTIWONG
- CQ5** FACE SYNTHESIS FROM CHILDHOOD IMAGE USING GENERATIVE ADVERSARIAL NETWORK
ADVISOR: ASST. PROF. DR. TANASANEE PHIENTHRAKUL
ADVISEE: KONLAWAT KHATHAPHET / KOMSAN TANTIKANKUN
TINH CHAISENA / PANOD LEKCHAROEN
- CQ6** DECEPTION OF AI PREDICTIONS BY ADVERSARIAL QR CODE
ADVISOR: DR. KARIN SUMONGKAYOTHIN
ADVISEE: WINN LADAWUTHIPHAN / KONGKIT CHATCHAWANHIRUN
PALAKORN KAMNOUNSING
- CQ7** THE WEBSITE THAT INTEGRATED THE E-COMMERCE DASHBOARD
ADVISOR: ASST. PROF. DR. MINGMANAS SIVARAKSA
ADVISEE: NATTHAWEE KOENGFAN / NICHAREE CHALERMSUKSRI /
SUPATTRA SAINIAM / SUPASSARA SUPOPARKH
- CQ8** WEB APPLICATION ENGINE TO TRANSLATE ATTACK DETECTION RULES FOR
SECURITY INFORMATION AND EVENT MANAGEMENT (SIEM)
ADVISOR: ASSOC. PROF. DR. SURATOSE TRITILANUNT
ADVISEE: WASAWAT PENGPRAXHON / KORAWIT WISETSUWAN / CHUTIWAT WATEK

- CO9** WEB APPLICATION FOR JOB HUNTING FROM ONLINE JOB ANNOUNCEMENTS
USING DATA MINING
ADVISOR: ASSOC. PROF. DR. RANGSIPAN MARUKATAT
ADVISEE: PUTTIMIT VIWATHARA / NAPAT CHEEPMUANGMAN /
PAKKAPOND PIPATTANASOOKMONGKOL
- EE3** TARGET FOLLOWING TROLLEY WITH REAL-TIME UWB TRACKING
ADVISOR: ASST. PROF. DR. TATCHA CHULAJATA
ADVISEE: NASAN VISUTDIPAT / SURADIT ANUKAN / THANAKORN SODTHAISONG
- EE6** #NAPS" NEURAL ASSISTED PROTECTIVE SYSTEM FOR LANE KEEPING ASSISTANT
SYSTEM
ADVISOR: ASST. PROF. DR. ZENG LERTMANORAT
ADVISEE: NUHPOL ARPASSOMPOB / PANJAWAT CHAINICHAYAKUL / APHISIT JANTORN
- EE7** DEVELOPMENT OF A VIDEOGRAPHY ASSISTING ROBOT
ADVISOR: ASST. PROF. DR. ARANEE PANGARAD
ADVISEE: KOMCHAN NANCHAROEN / THITIPA KHUCHAYAPOOM
PANNATHORN SANSERNKUN
- EE10** DESIGN OF A WIRE FEEDER SPEED CONTROLLER FOR DC MOTOR IN WELDING MACHINE
ADVISOR: ASST. PROF. DR. CHUTTCHAVAL JERAPUTRA
ADVISEE: NATTHA PATIMAPRAKORN / YANKAWEE SUPAPPAIBOON /
JETTAWAT KLONGBANCHE
- EE11** CONTROL OF A DC MOTOR FOR COLD WIRE FEEDER
ADVISOR: ASST. PROF. DR. CHUTTCHAVAL JERAPUTRA
ADVISEE: KAMONCHANOK SUTTHINON / NITTHON KUENPAN / PATHAPHON NARONG
- EE14** ADJUSTABLE LOAD WEIGHT LIFTING MACHINE USING ELECTROMAGNETIC FORCE
ADVISOR: ASSOC. PROF. DR. PHUMIN KIRAWANICH
ADVISEE: SORAWIT SONKRATAI / NATAKRIT JARUBENJALUCK /
UDOMCHAI THAMMANAWAN

- ME2** INVESTIGATION OF THE I-SHIFT AUTOMATIC TRANSMISSION CONTROLLER BY REVERSES ENGINEERING METHOD
ADVISOR: ASST. PROF. DR. SARAWOOT WATECHAGIT
ADVISEE: PHATTARAPOL KUNPRATRANON / SUWAPHOL WONGSAMMART
- ME4** AUTONOMOUS NAVIGATION WITHOUT SWAY FOR OVERHEAL CRANE WITH INFORMATION FROM WAREHOUSE MANAGEMENT SYSTEM
ADVISOR: ASST. PROF. DR. ITTICHOTE CHUCKPAIWONG
ADVISEE: TANATIP CHUNANG / NOPPARAT PAOMONGKHON / APITCHAYA YIMYEAM
- CE1** STRUCTURAL DESIGN TASKS AUTOMATION WITH REVIT, DYNAMO AND PYTHON
ADVISOR: ASSOC. PROF. DR. WONSIRI PUNURAI
ADVISEE: NISARAT PHONNA / CHAWEEWAN SUDADECH / CHACHAR HINVIRAA
SUPREYA SRIPATTANA
- IE7** DESIGN AND PRODUCE OF HIGH-EFFICIENCY PRINT SYSTEM WITH HIGH-FLEXIBILITY MACHINE PHASE 2
ADVISOR: DR. EAKKACHAI WARINSIRIRUK
ADVISEE: WANNAKARN KITTIMONGKONSUK / SUPAKARN SETKIT / THITIKAN MANHASAP
- II2** DESIGN AND DEVELOPMENT OF IOT AND VISION-BASED AUTOMATED SORTING SYSTEM
ADVISOR: ASST. PROF. DR. KIATTISAK SRITRAKULCHAI
ADVISEE: SAW THURA KYAW KYAW / SHAMMAH IBIYEMINABO
WEERAWANWONG RATHAPONGSAKORN

POSTER PRESENTATION: LOGISTICS AND RAILWAY ENGINEERING (LR)



QR CODE: Poster&Abstract

- CO1** MOBILE APPLICATION FOR TRAIN'S ROUTE PLANNING AND RECOMMENDATION
ADVISOR: ASST. PROF. DR. LALITA NARUPIYAKUL
ADVISEE: NASREEYA TIPPAYANONT / PHUWIT CHANTAFONG /
NORAWICH SAPAGITCHANCHAI / POJANUT ARAMVUTTANAGUL
- IE1** DESIGN OF A COLD CHAIN LOGISTICS OPERATIONS PROCESS FOR BLOOD AND SPECIMENS: A CASE STUDY OF YPS LOGISTICS CO., LTD.
ADVISOR: ASST. PROF. DR. TUANGYOT SUPEEKIT
ADVISEE: KIMITA PUMPUANG / RATTANAKORN AMPIBAL / ARUNEE CHAYACHARD
KANYARAT PRADITCHUSAKUN
- II1** CONTAINER LOADING OPTIMIZATION USING MATHEMATICAL MODEL: A CASE STUDY OF KAYAK MANUFACTURER IN THAILAND
ADVISOR: ASSOC. PROF. DR. THANANYA WASUSRI
ADVISEE: KHUNAT PUNGSETTHAKUL / YANISA PIMSOR /
CHANAKARN TANKITJAROEN / KANOKNAN SUVANNARATTANA
- II3** DESIGN OF HO SCALE MODEL TRAIN FOR 3D PRINTING
ADVISOR: ASSOC. PROF. DR. WARESSARA WEERAWAT
ADVISEE: RYAN KARL PUEBLO / TRISTIAN REYKJAVIK DELUBIAR / THU HOANG ANH TO
- II4** FEASIBILITY STUDY FOR THE EXPORT OF MAHACHANOK MANGO FROM THAILAND TO THE UNITED STATES OF AMERICA (USA)
ADVISOR: ASSOC. PROF. DR. THANANYA WASUSRI
ADVISEE: NICHAPA AMPHOL / CHUTINAN UDOMLARPPRASIT
CHAWIN MONGKORNKARN



QR CODE: Poster&Abstract

POSTER PRESENTATION: HEALTHCARE ENGINEERING (HC)

- BI1** IMAGE-GUIDED SURGICAL ROBOT FOR HAIR TRANSPLANT SURGERY
ADVISOR: ASSOC. PROF. DR. JACKRIT SUTHAKORN
ADVISEE: PONCHITA PRASERTSIN/ORNPREEYA ANANTAWILAILEKHA
- BI2** THE INTEGRATION OF MIXED REALITY TECHNOLOGY FOR PHYSICAL HEALTH PROMOTION IN PRE-ELDERLY PEOPLE
ADVISOR: ASST. PROF. DR. WARAKORN CHAROENSUK
ADVISEE: SALISA SATHIRAPAT / SUPARADA PATTARAPONGSATTI /
CHAWANRAT WISITPHONGPHIBOON
- BI3** MICROENCAPSULATION OF STEM CELL AND GROWTH FACTOR-LOADED MICROSPHERES TO SUPPORT LIVER FUNCTION IN ACUTE LIVER FAILURE
ADVISOR: ASSOC. PROF. DR. NORASED NASONGKLA
ADVISEE: TARISSAWAN THONGCHAI / PAWAT KANCHANADUSADE /
CHANIDAPHA NARAKORNPAIJIT
- BI4** A STUDY OF BRAIN RESPONSE TO THE PROPOSED PINK NOISE DURING DAYTIME NAP USING ELECTROENCEPHALOGRAM (EEG) ANALYSIS
ADVISOR: ASSOC. PROF. DR. PANYA KAIMUK
ADVISEE: BANTITA TUANGSUWAN / SANPHASIRI LEELASULEETHAM /
PANISA MANEEJAK
- BI5** HEALTH DATA INTEGRATION USING REAL-TIME DATA COLLECTION FRAMEWORK WITH FHIR INTERCONNECTIVITY
ADVISOR: DR. SONGPOL ONGWATTANAKUL
ADVISEE: THANACHOT THAVORNMONKOL / SUPAT YUTIBUN /
INGKCHARAT SRIYUTANA
- BI6** BORONIC ACID MODIFIED PIEZOELECTRIC-BASED BIOSENSOR SYSTEM FOR GLYCATED HEMOGLOBIN DETECTION
ADVISOR: ASST. PROF. DR. CHAMRAS PROMPTMAS
ADVISEE: PATHITTA KITTIMONGKOLSUK / CHINOROD TAVICHAI / PICHAYA CHAITHA

- BI7** REAL TIME PREDICTIVE MACHINE LEARNING MODEL USING PREICTAL PERIOD EEG SIGNAL IN INTRACTABLE SEIZURES
ADVISOR: ASSOC. PROF. DR. YODCHANAN WONGSAWAT /
ASSOC. PROF. DR. SOONTORN ORAINTARA
ADVISEE: PICHAMON PHATTHANAANUKUN / SIRAPAKIT LIMTRAGOOLTONGCHAI /
SAVINEE KHRAITHONG
- BI8** BRAIN-COMPUTER INTERFACE-BASED ATTENTION REHABILITATION FOR POST-BRAIN SURGERY PATIENTS (PILOT STUDY)
ADVISOR: ASSOC. PROF. DR. SOONTORN ORAINTARA /
ASSOC. PROF. DR. YODCHANAN WONGSAWAT
ADVISEE: PEETIMON ARUNWIRIYAHKIT / NOPARIN SMERWONG
- BI9** DEVELOPMENT OF EYE TRACKING TECHNOLOGY FOR SUPPORTING BEDRIDDEN PATIENTS
ADVISOR: ASSOC. PROF. DR. PANRASEE RITTHIPRAVAT
ADVISEE: YANISA THAWORNUPAJAROEN / NATHAMON ROENGWETSAWAT
- BI10** THE OPTIMIZATION OF CENTRIFUGAL BLOOD PUMP WITH A DEVELOPMENT OF MAGNETIC LEVITATING DRIVE REGARDING THE CONCERNS OF HEMOLYSIS REDUCTION FOR EXTRACORPOREAL MEMBRANE OXYGENATOR
ADVISOR: ASST. PROF. DR. PHORNPHOP NAIYANETR
ADVISEE: KANOKTHO SANTINONSET / KHANIN KONGSANITNART /
NOPPARUJ JONGSERECHOKE
- BI11** GALLIUM NANOMATERIAL MODIFIED WITH METAL-PHENOLIC NETWORK FOR BIOMEDICAL APPLICATION
ADVISOR: ASSOC. PROF. DR. BENCHAPORN LERTANANTAWONG
ADVISEE: INGKARAT WONGPRASERT / WARATCHAYA CHIMPHLEE
- BI12** DEVELOPMENT OF CT-MRI IMAGE FUSION SOFTWARE FOR FEM-BASED BRAIN LESION PREDICTION AND INTEGRATION TO THAILAND HEALTH DATASPACE
ADVISOR: DR. KEITA ONO
ADVISEE: PITCHAPA LOYCHAIYAPHUM / SUPPAKRIT PANYADEE /
TEELAPAT PRATHUMKAEW

- BI13** KIDNEY-TARGETED DRUG DELIVERY FOR RENAL FIBROSIS
ADVISOR: DR. SORACHA (THAMPHIWATANA) DECHAUMPHAI
ADVISEE: NAETI LIMHIRUN / BHU KOOSONGDHAM / SUJIRA MOONMIRAT
- BI14** POROSITY DETECTION DEVICE IN CANCELLOUS BONE USING ULTRASONIC PHASE VELOCITY AND ATTENUATION TECHNIQUE
ADVISOR: DR. PRACHA YAMBANGYANG
ADVISEE: PICHPAVIN PATTANAPO / TAMONWAN SINGPRASERT
- BI15** DNA METHYLATION OF CELL-FREE DNA IN URINE FOR CLEAR-CELL RENAL CELL CARCINOMA (CCRCC) DIAGNOSTICS
ADVISOR: DR. PORNPAT ATHAMONOLAP
ADVISEE: PIMCHAT YODUDOM / MANANCHAYA KONGKRIENGKRAI /
VISARUT RUNGPONGVANICH
- BI16** DEVELOPMENT OF DEEP LEARNING AND IMAGE DETECTION PLATFORM FOR BACTERIA TREATED WITH ANTIBIOTICS BY USING MICROSCOPE IMAGES
ADVISOR: DR. TITIPAT ACHAKULVISUT
ADVISEE: KORRAWIZ CHOTAYAPA / THANYATORN LEETHAMCHAYO /
PIRAYA CHINNAWONG
- CO3** ARTIFICIAL INTELLIGENCE MODEL FOR RECOGNITION OF INFANT CRYING SOUND
ADVISOR: DR. SUMETH YUENYOUNG
ADVISEE: WEERAWICH WONGCHATCHALIKUN / POSAWAT TANGON / SIRALAK TEEKHA
- EE1** A POSTURE DETECTION SYSTEM FOR POST-STROKE REHABILITATION TO SUPPORT OCCUPATIONAL THERAPISTS
ADVISOR: ASST. PROF. DR. TATCHA CHULAJATA
ADVISEE: PINIT MAITEESAKULKEEREE / PANUWAT RUENGBENJASAKUL
VEERAPAN VEERAWATKAIWAN / MONNAWAT TONGKAW
KHANAPHONG JIRANAPARAT / THAKSIN TANGBANJONGKIT

- EE2** DROWSINESS DETECTION USING ECG ON STEERING WHEEL
ADVISOR: ASSOC. PROF. DR. SURACHOKE THANAPITAK
ADVISEE: CHATDANAI HUTCHALEELAHA / NOPPARAT MOOSOOK / SIRAWIT KWANNATE
- EE5** EARBUDS-FREE HEARING AMPLIFIER
ADVISOR: DR. PHATTANARD PHATTANASRI
ADVISEE: RISARA POTONG / SIRADA SREEBURUM / PANAWAT VIKYATIPAT
- EE13** SHOES ODOR ELIMINATOR
ADVISOR: DR. PHATTANARD PHATTANASRI
ADVISEE: RARINDA PHOOLLEK / SALIRADA PHINWONGDUANG / THANITA SUKPOOL
- ME8** FINITE ELEMENT ANALYSIS OF POROUS STEMMED HIP PROSTHESIS
ADVISOR: ASSOC. PROF. DR. PANYA AROONJARATTHAM
ADVISEE: CHANON IMSOPON / POONNAWIT CHANPRATES / CHAWANPOP KHAMPHAN
- ME9** A BIOMECHANICAL STUDY OF EXTRA-NARROW IMPLANT BY FINITE ELEMENT ANALYSIS
ADVISOR: ASSOC. PROF. DR. EKACHAI CHAICHANASIRI
ADVISEE: THANAKORN SIRIWONGSOTORN / PHANPOOM BUPHAN
WORRAPAT SEEHABUT
- ME11** NUMERICAL STUDY OF CATARACT THERMAL RISK FACTORS IN THE HUMAN EYE WITH CONTACT LENS
ADVISOR: ASST. PROF. DR. PORNTHIP KEANGIN
ADVISEE: WITCHUDA SRIMUANG / WEERAYA NAROD
- ME13** A FEASIBILITY STUDY OF RUBBER-BEAD FORMING BY USING NATURAL RUBBER FOR 3-DIMENSIONAL PRINTING PARTS
ADVISOR: ASST. PROF. DR. WATCHARAPONG CHOOKAEW
ADVISEE: PHUWAMEST SONSIRI / NUTCHAR TACHAPICHAYAPUCKDEE
NADDHANAI DUANGTHIP

- ME14** EXPERIMENTAL STUDY OF BLOOD FLOW ON CORONARY ARTERY
ADVISOR: ASST. PROF. DR. AROM BOEKFAH
ADVISEE: KIATTISAK JANEM / TAWAN SAOSUT / SAHARAT MATCHIMA
- ME18** COMPUTATIONAL FLUID DYNAMIC (CFD) STUDY ON FLOW CHARACTERISTICS
AND FLUID-STRUCTURE INTERACTION IN CORONARY ARTERY
ADVISOR: DR. MACHIMONTORN PROMTONG
ADVISEE: PIYAANAN NOPARAT / ANON NAKSAWAT / MAMATCHIM PATTHAMARANGSITA
- IE2** DESIGN LOGISTICS MANAGEMENT FOR PATIENTS' TRANSPORTATION AND
INFORMATION SYSTEMS PROJECT
ADVISOR: ASSOC. PROF. DR. DUANGPUN KRITCHANCHAI
ADVISEE: CHOTIGRAN UNGKALA / PORNCBITA SANGPOLSIT /
WATCHAYADA TAKHAMTHAING
- IE3** THE DESIGN OF PHARMACEUTICAL'S INVENTORY MANAGEMENT POLICY OF
SOMDECH PHRA PINKLAO HOSPITAL
ADVISOR: ASSOC. PROF. DR. THANANYA WASUSRI
ADVISEE: CHITLADA SAEOSOT / PRASITA WATTANAPHONG
CHAYAKORN MANGKORNDCHCHAIYAKUL / PIMTHONG JIRAWATANAPISAN

POSTER PRESENTATION: SUSTAINABILITY AND ENVIRONMENTAL ENGINEERING (SE)



QR CODE:
Poster&Abstract

CHE1 PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF GREEN HYDROGEN ENERGY AND STORAGE SYSTEM
ADVISOR: CAPSTONE DESIGN PROJECT COMMITTEE,
DEPARTMENT OF CHEMICAL ENGINEERING
ADVISEE: KITTIPAD KITTIPOOM / PANALEE IGNACIO / AUTTAWIT THOUMRUNGROJ
SUCHALEE WONGTONGPRAPUN / BOONYAPORN SUNORAKUM /
PIYATHIDA KIATISILPIN

CHE2 PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF GREEN HYDROGEN ENERGY AND STORAGE SYSTEM
ADVISOR: CAPSTONE DESIGN PROJECT COMMITTEE,
DEPARTMENT OF CHEMICAL ENGINEERING
ADVISEE: CHAREEYA PONJAREON / DANAYA JEUMSOONGNOEN /
SIRAPOK KEAWTHANKUM / TARUBORN THIRAVANICH /
THANAPOL SUTTHIPHONG / LABHASSIREE TANSUTHEPVERAWONGSE

CHE3 PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF GREEN HYDROGEN ENERGY AND STORAGE SYSTEM
ADVISOR: CAPSTONE DESIGN PROJECT COMMITTEE,
DEPARTMENT OF CHEMICAL ENGINEERING
ADVISEE: JAY JAVIER FALLORIA / TANADON TIABWONG / LALIDAPHA SUTANAN
PORRAPA JANTARAPART / WITHEE PONWICHIT / SORNSAWAN JUNTALA

CHE4 PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF GREEN HYDROGEN ENERGY AND STORAGE SYSTEM
ADVISOR: CAPSTONE DESIGN PROJECT COMMITTEE,
DEPARTMENT OF CHEMICAL ENGINEERING
ADVISEE: KRITSANALAK THONGKAN / NIPAPORN RUNGJITVARANONT
MATURADA SUKSAARD / RATTIYA TANGRATNIYOM / KAMONLAK POLBOON

CHE5 PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF
GREEN HYDROGEN ENERGY AND STORAGE SYSTEM
ADVISOR: CAPSTONE DESIGN PROJECT COMMITTEE,
 DEPARTMENT OF CHEMICAL ENGINEERING
ADVISEE: MIDORI TANAKA / YOTSAYA NANTARATTIKUL /
 WATSAMON CHUPHUEAK / WINITTAYAKRON TURAKIT /
 ITTHEERAT PUTTARAK

CHE6 PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF
GREEN HYDROGEN ENERGY AND STORAGE SYSTEM
ADVISOR: CAPSTONE DESIGN PROJECT COMMITTEE,
 DEPARTMENT OF CHEMICAL ENGINEERING
ADVISEE: KRITTAPAT NAKEERUK / PONGSATORN TAPSUWAN
 PATIPHON KLONGYUT / CHANON CHERTCHUWONGTANAKORN
 PACHARAPORN PHOROD

CHE7 PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF
GREEN HYDROGEN ENERGY AND STORAGE SYSTEM
ADVISOR: CAPSTONE DESIGN PROJECT COMMITTEE,
 DEPARTMENT OF CHEMICAL ENGINEERING
ADVISEE: THARATIP PRATHUMTRI / KANNIKA JONGAUKSORN
 CHONNICHAKASEMCHITR / PATTAMON TRISANASUKA / NATTHANAN MITNOY

CG1 PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF
GREEN HYDROGEN ENERGY AND STORAGE SYSTEM
ADVISOR: CAPSTONE DESIGN PROJECT COMMITTEE,
 DEPARTMENT OF CHEMICAL ENGINEERING
ADVISEE: TAKUMI KODAMA / PHANTHILA WUTTITHAWEEWAT /
 THUNCHANOK WONGKUSAKDA / JIDAPHA PRUTTIVORAKUL /
 RATCHANON AKHARAPATTARANANT

- EE4** ENERGY HARVESTING FROM 2.45GHZ LOCAL WIRELESS NETWORK FOR SMALL ELECTRONIC DEVICES
ADVISOR: ASSOC. PROF. DR. SURACHOKE THANAPITAK
ADVISEE: NATCHA DEEDIT / NORANOP NARUNORAGULSOPIT /
WARISARA RUENGTINNAKORN
- EE8** A STEPLESS VOLTAGE STABILIZER
ADVISOR: ASST. PROF. DR. CHUTTCHAVAL JERAPUTRA
ADVISEE: CHATCHUEA PANPROMMIN / THANATCHAPORN PRANGCHAN
SMITH SEMSAN
- EE9** DESIGN OF LOW VOLTAGE INDUCTION MOTOR FOR TRICYCLE ELECTRIC TRUCK
ADVISOR: ASST. PROF. DR. CHUTTCHAVAL JERAPUTRA
ADVISEE: THANAKRIT CHUNNAWONG / SAKKAYA SIRIPATH
SIRIWACH TEERAVICHAYANGOON
- EE12** A STUDY OF COIL FORMATION FOR ELECTRIC VEHICAL WIRELESSES CHARGING
ADVISOR: DR. SOMNIDA BHATRANAND
ADVISEE: NAPASORN CHIMKET / MANLIKA NARKTHONG / WATUSIRI JITTAMARO
- ME1** IMPACT OF MICROCLIMATE IN ENERGY CONSUMPTION CASE STUDY IN NEAR-EQUATORIAL CLIMATE AREA
ADVISOR: ASST. PROF. DR. EKARIN SANGTHAMMARAT
ADVISEE: ORAPAN NGAMPETCH / KITTAYA DUANGPOOL / SIRASIT JIERNSAKWATANA
- ME3** DRYING KINETICS OF PINEAPPLE WITH HOT AIR
ADVISOR: ASSOC. PROF. DR. CHAKRIT SUVANJUMRAT
ADVISEE: AICH AMONVETCHAYAKUL / NATTHAPHON MEEBANGYANG
- ME5** THE STUDY OF SHEET METAL STAMPING BEHAVIOR BY MULTI-STAGE COLD FORMING USING FINITE ELEMENT METHOD
ADVISOR: ASST. PROF. DR. RUNG KITTIPICHAI
ADVISEE: PON KULKRITAPONG / HARANYAPOOM LIMUTHAITIP

- ME6** PERFORMANCE TESTING OF SPLIT-TYPE AIR CONDITIONING UNIT FROM VARIOUS TYPES OF CONDENSER INSTALLATION IN HIGH-RISING BUILDING
ADVISOR: ASST. PROF. DR. WORRASID TRUTSSANAWIN
ADVISEE: WISAROOT PRAJANPOL / NEERANAN WEERAPHOTCHANANAN
PATTARAPON HIRAN
- ME7** STUDY AND DESIGN FEASIBILITY OF GENERATION ELECTRICITY FROM BLOWER FAN WIND TURBINES
ADVISOR: ASST. PROF. DR. CHOKCHAI CHUTAKOSITKANON
ADVISEE: TANISON ARUNJEANG / PITAKPON PARATA / WIRAWUT MEKCHAI
- ME10** PHASE INFORMATION DETERMINATION FROM DYNAMIC BEHAVIOR MEASUREMENT FOR CONTACTLESS DYNAMIC SPINDLE TEST USING EDDY CURRENT BRAKE WITH TOOL TIP OF MULLING MACHINE
ADVISOR: ASSOC. PROF. DR. THANAPAT WANICHANON
ADVISEE: PAVARUTH LUXNAPIROM / VISHNU PHUENGMEE
PUNCHALAT KANJANAWIRUL
- ME12** COMPARISON STUDY IN OFFICE BUILDING ENERGY CONSUMPTION IN NEAR EQUATORIAL CLIMATE
ADVISOR: ASST. PROF. DR. EKARIN SANGTHAMMARAT
ADVISEE: KASEMSAK KATIWONGTHADA / RORSEE DENPETNONG /
DONLACHAI PHAEWATHANAROT
- ME15** HEAT TRANSFER ENHANCEMENT OF ARRANGEMENT OF DISCHARGE ELECTRODES IN CONFINING PLATES
ADVISOR: ASST. PROF. DR. JETSADAPORN PRIYADUMKOL
ADVISEE: NATHAKORN RODKLONGTAN / PIYAWAT YIMTHANOM
KRITSADA SUWANNARAT

- ME16** EXPERIMENTAL STUDY ON IMPROVING THE CONVECTION OF HORIZONTAL CYLINDER USING CORONO WIND
ADVISOR: ASST. PROF. DR. JETSADAPORN PRIYADUMKOL
ADVISEE: NAPASORN PREEDAPOL / PORAMET NAPHADOL / APISARA THUNGPRUE
- ME17** THE STUDY OF OPERATION CONDITION TO CREATE ACTIVATED CHARCOAL FOR GASIFICATION PROCESS
ADVISOR: ASST. PROF. DR. WATCHARONG CHOOKAEW
ADVISEE: PACHARADA CHANTARATAN / PHAKIN LUEKHUMNGAM
SIRAWISH RUJIKIETKUMJORN
- CE2** STRUCTURAL DESIGN OF MEDIUM-SIZE BUILDING WITH BASEMENT EXCAVATION IN SOFT CLAY
ADVISOR: ASST. PROF. DR. PONGPIPAT ANATANASAKUL
ADVISEE: SAKDINON JOMHONG / CHAIYAPHAT RUNGRUANGSRISAK
NATNICHA PONGPUTT / TREENETH LINGLOM / TEERAWAT INTHIDET
- CE3** STRUCTURAL DESIGN OF MEDIUM-SIZE BUILDING WITH BASEMENT EXCAVATION IN SOFT CLAY
ADVISOR: ASST. PROF. DR. PONGPIPAT ANATANASAKUL
ADVISEE: PAKORNKHANAT SIMSAWAT / CHAYAPUT DANGKON
JIRAWAT JONGPLUKKLANG / PREM PRADITTAN / PHOLAWAT PANICHEEP
- CE4** EVALUATION OF THE STRENGTH OF SCHOOL BUILDINGS ACCORDING TO BUILDING DESIGN STANDARDS FOR SEISMIC RESISTANCE
ADVISOR: ASSOC. PROF. DR. TERAPHAN ORNTHAMMARATH
ADVISEE: PRASAN KHANTHARAT / PICHAI BUASUN / VERANAN MANEERUTRUNGREANG
SUPAWIT KAOTANTONG / SALINLALAN TANGSATIEN
- CE5** SEISMIC VULNERABILITY ASSESSMENT OF AN OLD STRUCTURE IN SIRIRAJ HOSPITAL AREA
ADVISOR: ASSOC. PROF. DR. TERAPHAN ORNTHAMMARATH
ADVISEE: TANAKARN KLINPIKUN / THANAREE CHANTHET / NARADON CHAOSUAN
NONTAWAT ISLAM / MANATCHA DANMATAM

- CE6** STRUCTURAL INSPECTION AND ASSESSMENT OF BUILDING 2 IN FACULTY OF ENGINEERING, MAHIDOL UNIVERSITY
ADVISOR: DR. TOTSAWAT DAUNGWILAILUK
ADVISEE: THANYANAN YANGSUK / TIPPARAT KONGTONG /
THANAKORN TANONGTANACHAI / KANOKPHOL ONGSUWAN
PEERAPAT JUANCHAIYAPOOM
- CE7** STRUCTURAL INSPECTION AND ASSESSMENT OF BUILDING 2 IN FACULTY OF ENGINEERING, MAHIDOL UNIVERSITY
ADVISOR: DR. TOTSAWAT DAUNGWILAILUK
ADVISEE: ATITEP SEEHARUKSA / KORNVIT VONGTHANASOMBUT
NARABODEE TAKDUMRONGKUL / SINTORN NAMSEETAN
THITIPORN YAMKON
- CE8** DESIGNING OFFICIAL RESIDENCE
ADVISOR: ASST. PROF. DR. WASAPORN TECHAPEERAPARNICH
ADVISEE: NATTHANON KOLNAM / VARANYU SEEDAM / SUPPHAKRIT YOOYEN
SAHATSAWAT NUANSEETHONG
- CE9** DESIGNING OF AGRICULTURAL OFFICE SMALL SIZE
ADVISOR: ASST. PROF. DR. WASAPORN TECHAPEERAPARNICH
ADVISEE: JIRAPAT PLUENGTOOK / PIYAWAN YUNGUN / PHIMCHANOK NGAMSAI
PIMCHANOK WICHAI / OM POJASAN
- CE10** PLANNING AND DESIGN OF CANAL IRRIGATION SYSTEM OF THE LAM TA KONG LEFT BANK OPERATION AND MAINTENANCE PROJECTS
ADVISOR: ASSOC. PROF. DR. AREEYA RITTIMA
ADVISEE: WATCHARAPHONG DUANGSRI / VARAPORN HLAKBOON / SIRIPAT THANYA
- CE11** STRUCTURAL INSPECTION AND ASSESSMENT OF BUILDING 2 IN FACULTY OF ENGINEERING, MAHIDOL UNIVERSITY
ADVISOR: ASSOC. PROF. DR. AREEYA RITTIMA
ADVISEE: VACHILAVIT SAINOKAS / PEERADON SORNYING / NAMFON SASINTHON

- IE4** QUALITY CONTROL OF GLASS CONVEYING TO ANNEALING PROCESS
ADVISOR: ASSOC. PROF. SUPPHACHAI NATHAPHAN
ADVISEE: CHANACHAI DUSSADEEPRECHA / PONTIDA SENTHONG
 PHONTHANAPHAT PUTTHAPIWAT / SITTHINON RUANGNET
- IE5** IMPROVING THE SPIRITS FILLING PROCESS WITH DEFECTIVE CAPS SENSING SYSTEM
ADVISOR: ASSOC. PROF. SUPPHACHAI NATHAPHAN
ADVISEE: THITIRACH BOONSONGSIRIWAT / RATTANA JIAMUI /
 NATNICHAN SANITCHAI / PICHAYAPAK MEKWICHAI
- IE6** REDUCING DEFECTS IN DRYING PROCESS OF DOG TREATS
ADVISOR: ASSOC. PROF. SUPPHACHAI NATHAPHAN
ADVISEE: SIRIKANYA DARARUNG / NAHATAI SORNNARIYE
 PUNNAPORRN SUKHUNTHARAT
- IE8** DESIGN OF SMART MINI-UHT BASED ON IOTS
ADVISOR: DR. NOPPAKORN PHURAYA
ADVISEE: APHINYA CHANTRA / PITCHAWEE ANUNTAKULNATEE / PIMLAPHAT RATREE
- II5** PROTOTYPE PRODUCTION PROCESS TO DEVELOP BANANA PEEL TEA WITH
BANOFFEE FLAVOR COLD INFUSION PRODUCT
ADVISOR: ASST. PROF. DR. SUPPHACHAN RAJSIRI
ADVISEE: NATAPHAT LIAMTHAISONG / SASITORN CHAROENMEAUNG
 TANJAI CHANTHIAN
- II6** MALT FERMENTED BEVERAGE WITH NAKORNPATTHOM POMELO FLAVOR
ADVISOR: DR. NOPPAKORN PHURAYA
ADVISEE: PORNPHAN LALUM / CHONRADA THAOMOON / CHINNAWAT RIMCHAROEN
- II7** MELT-RESISTANT ICE CREAM FORTIFIED WITH OKARA FROM SOYBEAN MILK PROCESSING
ADVISOR: DR. DONLAPORN SAETAE
ADVISEE: CHANYAKAN SKULBORISUTSUK / TANVI SUPAPAS
 PHETPAILIN PHUANGPRADUB / AISYAH FILZAH SABRINA

- 118** GERMINATED RICE-BASED FERMENTED BEVERAGE WITH HERBAL FLAVOR ENHANCERS
ADVISOR: DR. DONLAPORN SAETAE
ADVISEE: THITHAT MANASVEVONG / PANITHI SUTHUMNIRUN
NARAKORN MOOPIMON
- 119** MULTISTAGE PRODUCTION PLANNING WITH DYNAMIC DEMANDS-A CASE STUDY OF DPO
ADVISOR: ASST. PROF. THANA SARTTRA
ADVISEE: KHUNTAMANEE SANANPRAI / JUTAMAS JANTREE / PHAILIN APITHANADON

LIST OF CAPSTONE PROJECT FOR EACH PROGRAM

BIOMEDICAL ENGINEERING PROGRAM

ID.	LIST OF CAPSTONE PROJECT	CLUSTER
BI1	IMAGE-GUIDED SURGICAL ROBOT FOR HAIR TRANSPLANT SURGERY	HC
BI2	THE INTEGRATION OF MIXED REALITY TECHNOLOGY FOR PHYSICAL HEALTH PROMOTION IN PRE-ELDERLY PEOPLE	HC
BI3	MICROENCAPSULATION OF STEM CELL AND GROWTH FACTOR-LOADED MICROSPHERES TO SUPPORT LIVER FUNCTION IN ACUTE LIVER FAILURE	HC
BI4	A STUDY OF BRAIN RESPONSE TO THE PROPOSED PINK NOISE DURING DAYTIME NAP USING ELECTROENCEPHALOGRAPH (EEG) ANALYSIS	HC
BI5	HEALTH DATA INTEGRATION USING REAL-TIME DATA COLLECTION FRAMEWORK WITH FHIR INTERCONNECTIVITY	HC
BI6	BORONIC ACID MODIFIED PIEZOELECTRIC-BASED BIOSENSOR SYSTEM FOR GLYCATED HEMOGLOBIN DETECTION	HC
BI7	REAL TIME PREDICTIVE MACHINE LEARNING MODEL USING PREICTAL PERIOD EEG SIGNAL IN INTRACTABLE SEIZURES	HC
BI8	BRAIN-COMPUTER INTERFACE-BASED ATTENTION REHABILITATION FOR POST-BRAIN SURGERY PATIENTS (PILOT STUDY)	HC
BI9	DEVELOPMENT OF EYE TRACKING TECHNOLOGY FOR SUPPORTING BEDRIDDEN PATIENTS	HC
BI10	THE OPTIMIZATION OF CENTRIFUGAL BLOOD PUMP WITH A DEVELOPMENT OF MAGNETIC LEVITATING DRIVE REGARDING THE CONCERNS OF HEMOLYSIS REDUCTION FOR EXTRACORPOREAL MEMBRANE OXYGENATOR	HC
BI11	GALLIUM NANOMATERIAL MODIFIED WITH METAL-PHENOLIC NETWORK FOR BIOMEDICAL APPLICATION	HC
BI12	DEVELOPMENT OF CT-MRI IMAGE FUSION SOFTWARE FOR FEM-BASED BRAIN LESION PREDICTION AND INTEGRATION TO THAILAND HEALTH DATASPACE	HC

ID.	LIST OF CAPSTONE PROJECT	CLUSTER
BI13	KIDNEY-TARGETED DRUG DELIVERY FOR RENAL FIBROSIS	HC
BI14	POROSITY DETECTION DEVICE IN CANCELLOUS BONE USING ULTRASONIC PHASE VELOCITY AND ATTENUATION TECHNIQUE	HC
BI15	DNA METHYLATION OF CELL-FREE DNA IN URINE FOR CLEAR-CELL RENAL CELL CARCINOMA (CCRCC) DIAGNOSTICS	HC
BI16	DEVELOPMENT OF DEEP LEARNING AND IMAGE DETECTION PLATFORM FOR BACTERIA TREATED WITH ANTIBIOTICS BY USING MICROSCOPE IMAGES	HC

CIVIL ENGINEERING PROGRAM

ID.	LIST OF CAPSTONE PROJECT	CLUSTER
CE1	STRUCTURAL DESIGN TASKS AUTOMATION WITH REVIT, DYNAMO AND PYTHON	DI
CE2	STRUCTURAL DESIGN OF MEDIUM-SIZE BUILDING WITH BASEMENT EXCAVATION IN SOFT CLAY	SE
CE3	STRUCTURAL DESIGN OF MEDIUM-SIZE BUILDING WITH BASEMENT EXCAVATION IN SOFT CLAY	SE
CE4	EVALUATION OF THE STRENGTH OF SCHOOL BUILDINGS ACCORDING TO BUILDING DESIGN STANDARDS FOR SEISMIC RESISTANCE	SE
CE5	SEISMIC VULNERABILITY ASSESSMENT OF AN OLD STRUCTURE IN SIRIRAJ HOSPITAL AREA	SE
CE6	STRUCTURAL INSPECTION AND ASSESSMENT OF BUILDING 2 IN FACULTY OF ENGINEERING, MAHIDOL UNIVERSITY	SE
CE7	STRUCTURAL INSPECTION AND ASSESSMENT OF BUILDING 2 IN FACULTY OF ENGINEERING, MAHIDOL UNIVERSITY	SE
CE8	DESIGNING OFFICIAL RESIDENCE	SE
CE9	DESIGNING OF AGRICUTURAL OFFICE SMALL SIZE	SE
CE10	PLANNING AND DESIGN OF CANAL IRRIGATION SYSTEM OF THE LAM TA KONG LEFT BANK OPERATION AND MAINTENANCE PROJECTS	SE

ID.	LIST OF CAPSTONE PROJECT	CLUSTER
CE11	STRUCTURAL INSPECTION AND ASSESSMENT OF BUILDING 2 IN FACULTY OF ENGINEERING, MAHIDOL UNIVERSITY	SE

CHEMICAL ENGINEERING PROGRAM

ID.	LIST OF CAPSTONE PROJECT	CLUSTER
CHE1	PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF GREEN HYDROGEN ENERGY AND STORAGE SYSTEM	SE
CHE2	PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF GREEN HYDROGEN ENERGY AND STORAGE SYSTEM	SE
CHE3	PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF GREEN HYDROGEN ENERGY AND STORAGE SYSTEM	SE
CHE4	PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF GREEN HYDROGEN ENERGY AND STORAGE SYSTEM	SE
CHE5	PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF GREEN HYDROGEN ENERGY AND STORAGE SYSTEM	SE
CHE6	PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF GREEN HYDROGEN ENERGY AND STORAGE SYSTEM	SE
CHE7	PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF GREEN HYDROGEN ENERGY AND STORAGE SYSTEM	SE

CHEMICAL ENGINEERING PROGRAM (INTERNATION PROGRAM)

ID.	LIST OF CAPSTONE PROJECT	CLUSTER
CG1	PROCESS TECHNOLOGY SELECTION, DESIGN, AND ECONOMIC EVALUATION OF GREEN HYDROGEN ENERGY AND STORAGE SYSTEM	SE

COMPUTER ENGINEERING PROGRAM

ID.	LIST OF CAPSTONE PROJECT	CLUSTER
CO1	MOBILE APPLICATION FOR TRAIN'S ROUTE PLANING AND RECOMMENDATION	LR
CO2	SYNTHESIS OF PROTEIN STRUCTURES WITH DEEP LEARNING MODEL	DI
CO3	ARTIFICIAL INTELLIGENCE MODEL FOR RECOGNITION OF INFANT CRYING SOUND	HC
CO4	MAHIDOL ENGINEERING OPEN HOUSE IN METAVERSE	DI
CO5	FACE SYNTHESIS FROM CHILDHOOD IMAGE USING GENERATIVE ADVERSARIAL NETWORK	DI
CO6	DECEPTION OF AI PREDICTIONS BY ADVERSARIAL QR CODE	DI
CO7	THE WEBSITE THAT INTEGRATED THE E-COMMERCE DASHBOARD	DI
CO8	WEB APPLICATION ENGINE TO TRANSLATE ATTACK DETECTION RULES FOR SECURITY INFORMATION AND EVENT MANAGEMENT (SIEM)	DI
CO9	WEB APPLICATION FOR JOB HUNTING FROM ONLINE JOB ANNOUNCEMENTS USING DATA MINING	DI

ELECTRICAL ENGINEERING PROGRAM

ID.	LIST OF CAPSTONE PROJECT	CLUSTER
EE1	A POSTURE DETECTION SYSTEM FOR POST-STROKE REHABILITATION TO SUPPORT OCCUPATIONAL THERAPISTS	HC
EE2	DROWSINESS DETECTION USING ECG ON STEERING WHEEL	HC
EE3	TARGET FOLLOWING TROLLEY WITH REAL-TIME UWB TRACKING	DI
EE4	ENERGY HARVESTING FROM 2.45GHZ LOCAL WIRELESS NETWORK FOR SMALL ELECTRONIC DEVICES	SE
EE5	EARBUDS-FREE HEARING AMPLIFIER	HC
EE6	"#NAPS" NEURAL ASSISTED PROTECTIVE SYSTEM FOR LANE KEEPING ASSISTANT SYSTEM	DI
EE7	DEVELOPMENT OF A VIDEOGRAPHY ASSISTING ROBOT	DI
EE8	A STEPLESS VOLTAGE STABILIZER	SE

ID.	LIST OF CAPSTONE PROJECT	CLUSTER
EE9	DESIGN OF LOW VOLTAGE INDUCTION MOTOR FOR TRICYCLE ELECTRIC TRUCK	SE
EE10	DESIGN OF A WIRE FEEDER SPEED CONTROLLER FOR DC MOTOR IN WELDING MACHINE	DI
EE11	CONTROL OF A DC MOTOR FOR COLD WIRE FEEDER	DI
EE12	A STUDY OF COIL FORMATION FOR ELECTRIC VEHICAL WIRELESSES CHARGING	DI
EE13	SHOES ODOR ELIMINATOR	HC
EE14	ADJUSTABLE LOAD WEIGHT LIFTING MACHINE USING ELECTROMAGNETIC FORCE	DI

INDUSTRIAL ENGINEERING PROGRAM

ID.	LIST OF CAPSTONE PROJECT	CLUSTER
IE1	DESIGN OF A COLD CHAIN LOGISTICS OPERATIONS PROCESS FOR BLOOD AND SPECIMENS: A CASE STUDY OF YPS LOGISTICS CO., LTD.	LR
IE2	DESIGN LOGISTICS MANAGEMENT FOR PATIENTS' TRANSPORTATION AND INFORMATION SYSTEMS PROJECT	HC
IE3	THE DESIGN OF PHARMACEUTICAL'S INVENTORY MANAGEMENT POLICY OF SOMDECH PHRA PINKLAO HOSPITAL	HC
IE4	QUALITY CONTROL OF GLASS CONVEYING TO ANNEALING PROCESS	SE
IE5	IMPROVING THE SPIRITS FILLING PROCESS WITH DEFECTIVE CAPS SENSING SYSTEM	SE
IE6	REDUCING DEFECTS IN DRYING PROCESS OF DOG TREATS	SE
IE7	DESIGN AND PRODUCE OF HIGH-EFFICIENCY PRINT SYSTEM WITH HIGH-FLEXIBILITY MACHINE PHASE 2	DI
IE8	DESIGN OF SMART MINI-UHT BASED ON IOTS	SE

INDUSTRIAL ENGINEERING PROGRAM (INTERNATIONAL PROGRAM)

ID.	LIST OF CAPSTONE PROJECT	CLUSTER
II1	CONTAINER LOADING OPTIMIZATION USING MATHEMATICAL MODEL: A CASE STUDY OF KAYAK MANUFACTURER IN THAILAND	LR
II2	DESIGN AND DEVELOPMENT OF IOT AND VISION-BASED AUTOMATED SORTING SYSTEM	DI
II3	DESIGN OF HO SCALE MODEL TRAIN FOR 3D PRINTING	LR
II4	FEASIBILITY STUDY FOR THE EXPORT OF MAHACHANOK MANGO FROM THAILAND TO THE UNITED STATES OF AMERICA (USA)	LR
II5	PROTOTYPE PRODUCTION PROCESS TO DEVELOP BANANA PEEL TEA WITH BANOFFEE FLAVOR COLD INFUSION PRODUCT	SE
II6	MALT FERMENTED BEVERAGE WITH NAKORNPATTHOM POMELO FLAVOR	SE
II7	MELT-RESISTANT ICE CREAM FORTIFIED WITH OKARA FROM SOYBEAN MILK PROCESSING	SE
II8	GERMINATED RICE-BASED FERMENTED BEVERAGE WITH HERBAL FLAVOR ENHANCERS	SE
II9	MULTISTAGE PRODUCTION PLANNING WITH DYNAMIC DEMANDS-A CASE STUDY OF DPO	SE

MECHANICAL ENGINEERING PROGRAM

ID.	LIST OF CAPSTONE PROJECT	CLUSTER
ME1	IMPACT OF MICROCLIMATE IN ENERGY CONSUMPTION CASE STUDY IN NEAR-EQUATORIAL CLIMATE AREA	SE
ME2	INVESTIGATION OF THE I-SHIFT AUTOMATIC TRANSMISSION CONTROLLER BY REVERSES ENGINEERING METHOD	DI
ME3	DRYING KINETICS OF PINEAPPLE WITH HOT AIR	SE
ME4	AUTONOMOUS NAVIGATION WITHOUT SWAY FOR OVERHEAL CRANE WITH INFORMATION FROM WAREHOUSE MANAGEMENT SYSTEM	DI
ME5	THE STUDY OF SHEET METAL STAMPING BEHAVIOR BY MULTI-STAGE COLD FORMING USING FINITE ELEMENT METHOD	SE

ID.	LIST OF CAPSTONE PROJECT	CLUSTER
ME6	PERFORMANCE TESTING OF SPLIT-TYPE AIR CONDITIONING UNIT FROM VARIOUS TYPES OF CONDENSER INSTALLATION IN HIGH-RISING BUILDING	SE
ME7	STUDY AND DESIGN FEASIBILITY OF GENERATION ELECTRICITY FROM BLOWER FAN WIND TURBINES	SE
ME8	FINITE ELEMENT ANALYSIS OF POROUS STEMMED HIP PROSTHESIS	HC
ME9	A BIOMECHANICAL STUDY OF EXTRA-NARROW IMPLANT BY FINITE ELEMENT ANALYSIS	HC
ME10	PHASE INFORMATION DETERMINATION FROM DYNAMIC BEHAVIOR MEASUREMENT FOR CONTACTLESS DYNAMIC SPINDLE TEST USING EDDY CURRENT BRAKE WITH TOOL TIP OF MULLING MACHINE	SE
ME11	NUMERICAL STUDY OF CATARACT THERMAL RISK FACTORS IN THE HUMAN EYE WITH CONTACT LENS	HC
ME12	COMPARISON STUDY IN OFFICE BUILDING ENERGY CONSUMPTION IN NEAR EQUATORIAL CLIMATE	SE
ME13	A FEASIBILITY STUDY OF RUBBER-BEAD FORMING BY USING NATURAL RUBBER FOR 3-DIMENSIONAL PRINTING PARTS	HC
ME14	EXPERIMENTAL STUDY OF BLOOD FLOW ON CORONARY ARTERY	HC
ME15	HEAT TRANSFER ENHANCEMENT OF ARRANGEMENT OF DISCHARGE ELECTRODES IN CONFINING PLATES	SE
ME16	EXPERIMENTAL STUDY ON IMPROVING THE CONVECTION OF HORIZONTAL CYLINDER USING CORONO WIND	SE
ME17	THE STUDY OF OPERATION CONDITION TO CREATE ACTIVATED CHARCOAL FOR GASIFICATION PROCESS	SE
ME18	COMPUTATIONAL FLUID DYNAMIC (CFD) STUDY ON FLOW CHARACTERISTICS AND FLUID-STRUCTURE INTERACTION IN CORONARY ARTERY	HC