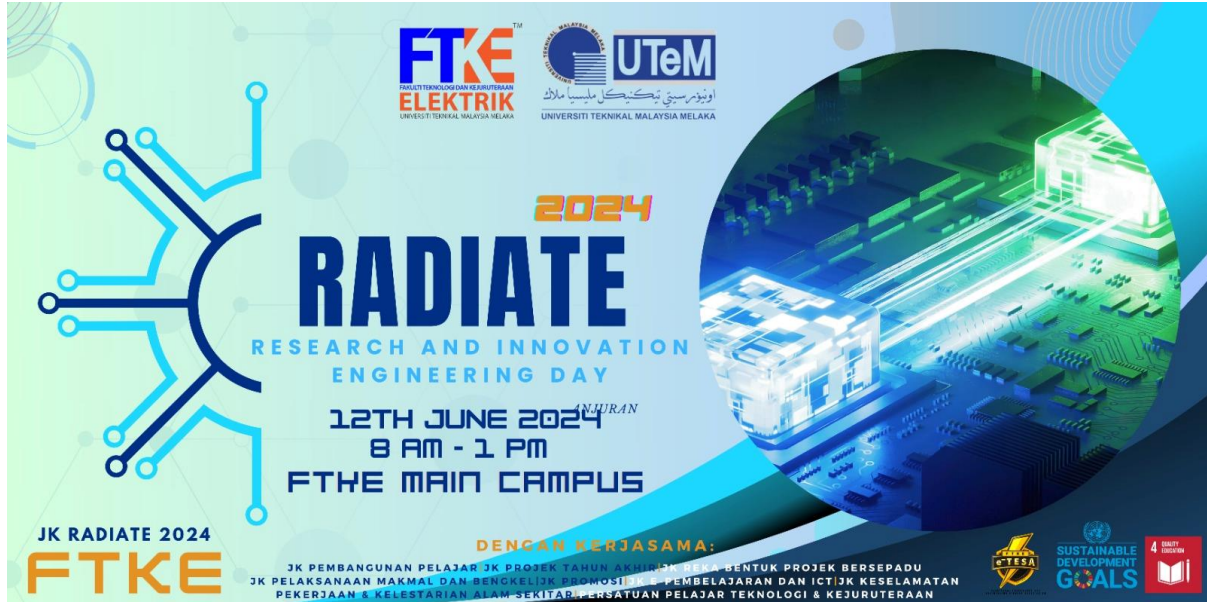


RESEARCH AND INNOVATION ENGINEERING DAY 2024 (RADIATE 2024)



The poster for RADIATE 2024 features a vibrant blue and green color scheme. On the left, a stylized circuit board graphic radiates from a central point. The right side is dominated by a large, circular inset showing a 3D rendering of a modern building with a complex, circuit-like facade. The background is filled with abstract geometric patterns and glowing lines.

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2024

RADIATE
RESEARCH AND INNOVATION
ENGINEERING DAY

12TH JUNE 2024
8 AM - 1 PM
FTKE MAIN CAMPUS

JK RADIATE 2024
FTKE

DENGAN KERJASAMA:

JK PEMBANCUNAN PELAJAR JK PROJEK TAHUN ANJARAN 2023/2024 UNTUK PROJEK BERSEPADU
JK PELAKSANAAN MAKMAL DAN BENGKEL/PROPOSISI/PEMBELAJARAN DAN ICT/IK KESELAMATAN
PEKERJAAN & KELESTARIAN ALAM SEKITAR/ERSATUAN PELAJAR TEKNOLOGI & KEJURUTERAAN

FTKESA
FACULTY OF TECHNOLOGY AND ENGINEERING
SUSTAINABLE
DEVELOPMENT
GOALS
4 QUALITY
EDUCATION

LIST OF WINNERS:

FINAL YEAR PROJECT (FYP) 2024



Student Name	Course	Supervisor Name	Title
MUHAMMAD MUZHAFAR BIN MOHAMMAD ZAWAWI	4 BELM	WAN MOHD BUKHARI BIN WAN DAUD	SMART PROSTHETIC CONTROL: EMG-BASED HAND PROSTHESIS WITH MACHINE LEARNING
FARDIN KABIR	4 BELM	FARIZ BIN ALI @ IBRAHIM	DESIGN AND DEVELOPMENT OF SENSING SYSTEM FOR AIR QUALITY AND TEMPERATURE IN UNMANNED AERIAL VEHICLES
MIRZA DANISH BIN MOHD ROSLI	4 BELG	JUNAINAH BINTI SARDI	ENERGY STORAGE DISPATCH STRATEGY FOR OPTIMIZING THE PERFORMANCE OF DISTRIBUTION NETWORK WITH PHOTOVOLTAIC AND ELECTRIC VEHICLE
LEAN HOONG LIM	4 BELM	MUHAMMAD FAHMI BIN MISKON	THE STUDY OF EFFECTIVE GRIP AND CUT OF PALM OIL FROND USING A DANGLE SAW MECHANISM DESIGN

CHAN YEOW CHUAN	4 BELM	FAUZAL NAIM BIN ZOHEDI	DESIGN AND DEVELOPMENT OF A SMALL UNDERWATER REMOTELY OPERATED VEHICLE (ROV) FOR MONITORING APPLICATION.
MUHAMAD AMIR AQIL BIN MUHAMAD NAZERI	4 BELG	GAN CHIN KIM	IMPACT OF EV ON DISTRIBUTION GRID
ABDULRAHMAN SUFYAN TAHA MOHAMMED AL-DAERI	4 BELM	NORHASLINDA BINTI HASIM	AN EFFICIENT INTEGRATED TRAFFIC LIGHT SYNCHRONIZATION CONTROL SYSTEM FOR REAL-TIME APPLICATIONS
MONTHER YOUSEF ABDULWASEA MOHAMMED	4 BELM	ZAMANI BIN MD. SANI	CORN CLASSIFICATION BASED ON QUALITY TO THE BUG/DISEASE USING ARTIFICIAL INTELLIGENT
YOONG KAH HAO	4 BELM	HAIROL NIZAM BIN MOHD SHAH	A DRIVER MONITORING AND ALERTING SYSTEM (DMAS) ON DRIVER HABITS ON ROAD
MUHAMMAD AKMAL BIN ABD AZIZ	4 BELG	MUHAMMAD FAHMI BIN MISKON	OPTIMAL ENERGY MANAGEMENT OF HYBRID PHOTOVOLTAIC AND BATTERY ENERGY STORAGE SYSTEM (BESS) FOR FTKE'S SOLAR LABORATORY

INTEGRATED DESIGN PROJEK (IDP) 2024



Student Name	Course	Supervisor Name	Title
MUHAMMAD HANIS IZWAN BIN KAMALRULZAMAN	3 BELG	DR. AZIAH KHAMIS	TRAFFIC SIGN RECOGNITION/ PPE DETECTION.
MUHAMMAD ARSHAD BIN AZAHARI			
JUSTIN A/L JOHN KENNEDY			
ANIS SYAZWANI BINTI ZAINI			
PHRAVEEN A/L VIJAYAN	3 BELG	EN. MOHAMAD RIDUWAN MD. NAWAWI	INTEGRATED SMART RAIN GAUGE SYSTEM WITH IOT MODULE FOR FLOOD ALERT APPLICATION
NABIL IMAN BIN KHUZAIRI			
RAIMI AFIF BIN ROSLAN			
DENISHKUMAR A/L BASKARAN			
MUHAMMAD ZULHILMI BIN RAZALI	3 BELG	DR FARHAN HANAFI	IOT EMPOWERED WATER QUALITY ASSESMENT IN AQUATIC ENVIRONMENT
ROHAIZUDDIN BIN RAHIMI			
SYED MUHAMMAD BAQIR BIN SYED MOHD EDIT			
VISHALINI A/P CHANDRAN			

MUHAMMAD DARWIS FITRI BIN YUSZUHAR			
MUHAMMAD AFIQ AKMAL BIN MOHAMMAD AMIR	3 BELG	P.M. DR.ROZAIMI BIN GHAZALI	AUTOMATED THICKNESS CONTROL FOR SLICER MACHINES IN ADVANCING QUALITY FOR FOOD MANUFACTURING
MOHAMAD FAHKRI AIMAN BIN YASIR			
MUHAMMAD FARHAN BIN MOHD FADZIL			
AMIR HAZIQ BIN NORDIN			
MUHAMMAD SYAZRI BIN MOHD GHAZALI			
MUKHRIZ BIN MAHMAD	3 BELG	DR. MOHD RUZAINI BIN HASHIM	PLC TRAINING KITS FOR SCHOOL STUDENTS
MUHAMMAD QARLIFF DANIAL BIN RAZMAN			
MUHAMMAD SIDDEQUE MUSZRIE BIN MUHAMMAD RIDZUAN			
NUR ATHIRAH NABILLA BINTI HIDZIR			
RAJA DANISH DANIAL BIN RAJA MOHD ARIFFIN	3 BELG	DR. NUR HAZAHSHA SHAMSUDIN	SMART VEHICLE ACCIDENT RESPONSE SYSTEM
YAP ZHI XUAN			
DANIAL HAKIM BIN PIDRUL ROSLI			
LUQMAN HAZIQ BIN SAHAILANI			
NATASYAH ELLYANA CHEE BINTI MUHAMMAD AMIN			
TAN ZI SHEN	3 BELM	ASSOC. PROF. IR. DR AHMAD ZAKI BIN HAJI SHUKOR	HUMAN FOLLOWING ROBOT FOR CARRYING HEAVY LOADS
TENG KAI HONG			
YIP CHUN KIT			
DHARNES A/L GANESON			
SARKUNAN A/L THANABALAN	3 BELM	TS. DR. MOHD FAID BIN YAHYA	DESIGN OF WALL CLIMBING INSPECTION ROBOT FOR CURVED STEEL STRUCTURES
SUTHAN A/L SUBENDRAN			
VIKNESH A/L SIVAKUMAR			
RUKISH A/L SEGARAN -	3 BELM	ASSOC. PROF. AHMAD ANAS BIN YUSOF	ROV SABERCAT- SUBMERSIBLE TELEOPERATED UNDERWATER APPARATUS
KISHEN A/L RAJANDREN -			
SARWIIN A/L SINATHAMBY			
SURESH A/L SIVALINGGAM			
FATHIAH HAZIRAH BINTI SAHARUDIN	3 BELM	DR. NORAFIZAH ABAS	

MOHD ASYRAF BIN A OSTHMAN@OTHMAN			DESIGN OF TRAY PLACING SYSTEM WITH TILTING AVOIDANCE MONITORING
MOHD KHAZRUDIN BIN MOHD YUNUS			
ZULAIKHA SHAZREENA BINTI ZAKARIA			

PROJEK DIPLOMA 2024



Student Name	Course	Supervisor Name	Title
RAAKOOL A/L LOGANATHAN	2 DEL	MOHD KHAIRI BIN MOHD ZAMBRI	SMART FLOOD LEVEL INDICATOR AND ALARM SYSTEM VIA IOT
MUHAMMAD ISYRAF RAFIUDDIN BIN MD ZULKANAIN	2 DEL	NURSABILLILAH BINTI MOHD ALI	ARDUINO-BASED ROBOTIC ARM FOR PICK AND PLACE OPERATIONS CONTROLLED VIA BLUETOOTH
MIFTA HURRAFI HAFIZI BIN DARWIS	2 DEL	SAZUAN NAZRAH BINTI MOHD AZAM	ELECTRIC VEHICLE SOLAR CHARGER AND MONITORING APPS.

MUHAMMAD SHAHRIL BIN ZUL FADLI	2 DEL	HAZRIQ IZZUAN BIN JAAFAR	LOAD FAULT DETECTION FOR ROBOTICS AND INDUSTRIAL AUTIMATIOM VIA ANDROID NOTIFICATION
MUHAMAD FARIS BIN MOHD ROZI	2 DEL	IRMA WANI BINTI JAMALUDIN	SOLAR POWERED LED STREET LIGHT WITH INTENSITY CONTROL
WAN NURBATRISYIA QISTINA BINTI WAN ROSSLE	2 DEL	MOHD SHAHRIEEL BIN MOHD ARAS	DEVELOPMENT OF REMOTELY OPERATED VEHICLE (ROV) FOR STEM EDUCATION
NURUL NAJIAH BINTI SHAHRL ANUAR	2 DEL	NUR ZAWANI BINTI SAHARUDDIN	SOLAR POWERED LED STREET LIGHT
MUHAMMAD FAHIM BIN YAZID	2 DEL	MOHD HAFIZ BIN JALI	SMART ENERGY AUDIT TOOL SYSTEM
JAYVELAN A/L LENGERBALAN	2 DEL	ARFAH SYAHIDA BINTI MOHD NOR	ARDUINO BASED SOLAR STREET LIGHT
GOO WEN QING	2 DEL	ARFAH SYAHIDA BINTI MOHD NOR	ARDUINO RADIO ALARM CLOCK

SPECIAL AWARD

Sponsor: Persatuan Simulasi Malaysia/Malaysian Simulation Society



Category	Student Name	Course	Supervisor Name	Title
FYP	MONTHER YOUSEF ABDULWASEA MOHAMMED	4 BELM	ZAMANI BIN MD. SANI	CORN CLASSIFICATION BASED ON QUALITY TO THE BUG/DISEASE USING ARTIFICIAL INTELLIGENT
FYP	MUHAMAD AMIR AQIL BIN MUHAMAD NAZERI	4 BELG	GAN CHIN KIM	IMPACT OF EV ON DISTRIBUTION GRID
IDP-32	MUHAMMAD HANIS IZWAN BIN KAMALRULZAMAN	3 BELG	DR. AZIAH KHAMIS	TRAFFIC SIGN RECOGNITION/ PPE DETECTION.
	MUHAMMAD ARSHAD BIN AZAHARI			
	JUSTIN A/L JOHN KENNEDY			
	ANIS SYAZWANI BINTI ZAINI			
PRODIP	RAAKOOL A/L LOGANATHAN	2 DEL	MOHD KHAIRI BIN MOHD ZAMBRI	SMART FLOOD LEVEL INDICATOR AND ALARM SYSTEM VIA IOT
PRODIP	MUHAMMAD SHAHRIL BIN ZUL FADLI	2 DEL	HAZRIQ IZZUAN BIN JAAFAR	LOAD FAULT DETECTION FOR ROBOTICS AND INDUSTRIAL AUTIMATIOM VIA ANDROID NOTIFICATION
PRODIP	JAYVELAN A/L LENGERBALAN	2 DEL	ARFAH SYAHIDA BINTI MOHD NOR	ARDUINO BASED SOLAR STREET LIGHT
PRODIP	NUR AISYAH BELLINDA BINTI MOUHAIZAN @ MOHD FADZIL	2 DEL	AHMAD AIZAN BIN ZULKEFLE	AUTOMATIC PET FOOD DISPENSER USING THE INTERNET OF THINGS (IOT)

Sponsor: IEEE Oceanic Engineering Society (OES Malaysia Chapter)



Category	Student Name	Course	Supervisor Name	Title
FYP	CHAN YEOW CHUAN	4 BELM	FAUZAL NAIM BIN ZOHEDI	DESIGN AND DEVELOPMENT OF A SMALL UNDERWATER REMOTELY OPERATED VEHICLE (ROV) FOR MONITORING APPLICATION.
IDP18	RUKISH A/L SEGARAN -	3 BELM	ASSOC. PROF. AHMAD ANAS BIN YUSOF	ROV SABERCAT-SUBMERSIBLE TELEOPERATED UNDERWATER APPARATUS
	KISHEN A/L RAJANDREN -			
	SARWIIN A/L SINATHAMBY			
	SURESH A/L SIVALINGGAM			
PRODIP	WAN NURBATRISYIA QISTINA BINTI WAN ROSSLE	2 DEL	MOHD SHAHRIEEL BIN MOHD ARAS	DEVELOPMENT OF REMOTELY OPERATED VEHICLE (ROV) FOR STEM EDUCATION
PRODIP	CHIU LIN	2 DEL	MOHD SAIFUZAM BIN JAMRI	DEVELOPMENT RC BOAT RESCUE

Sponsor: IEEE Dielectrics and Electrical Insulation Society (Malaysia Chapter)





Category	Student Name	Course	Supervisor Name	Title
FYP	ALDRICH BIN ATENG	BELG	AHMAD AIZAN BIN ZULKEFLE -	EXPERIMENTAL INVESTIGATION OF A PHOTOVOLTAIC PANEL WITH ALUMINIUM COOLING FINS UNDER NATURAL CONVECTION
IDP-42	PHRAVEEN A/L VIJAYAN	3 BELG	EN. MOHAMAD RIDUWAN MD. NAWAWI	INTEGRATED SMART RAIN GAUGE SYSTEM WITH IOT MODULE FOR FLOOD ALERT APPLICATION
	NABIL IMAN BIN KHUZAIRI			
	RAIMI AFIF BIN ROSLAN			
	DENISHKUMAR A/L BASKARAN			
	MUHAMMAD ZULHILMI BIN RAZALI			
PRODIP	MIFTA HURRAFI HAFIZI BIN DARWIS	2 DEL	SAZUAN NAZRAH BINTI MOHD AZAM	ELECTRIC VEHICLE SOLAR CHARGER AND MONITORING APPS.
PRODIP	MUHAMMAD FAHIM BIN YAZID	2 DEL	MOHD HAFIZ BIN JALI	SMART ENERGY AUDIT TOOL SYSTEM

Sponsor: IEEE Control Systems Society (Malaysia Chapter)



Category	Student Name	Course	Supervisor Name	Title
FYP	FARDIN KABIR	4 BELM	FARIZ BIN ALI @ IBRAHIM	DESIGN AND DEVELOPMENT OF SENSING SYSTEM FOR AIR QUALITY AND TEMPERATURE IN UNMANNED AERIAL VEHICLES
PRODIP	MUHAMMAD ISYRAF RAFIUDDIN BIN MD ZULKANAIN	2 DEL	NURSABILLILAH BINTI MOHD ALI	ARDUINO-BASED ROBOTIC ARM FOR PICK AND PLACE OPERATIONS CONTROLLED VIA BLUETOOTH

Sponsor: IEEE Robotics and Automation (Malaysia Chapter)





Category	Student Name	Course	Supervisor Name	Title
FYP	LEAN HOONG LIM	4 BELM	MUHAMMAD FAHMI BIN MISKON	THE STUDY OF EFFECTIVE GRIP AND CUT OF PALM OIL FROND USING A DANGLE SAW MECHANISM DESIGN
FYP	CHAN YAN KANG	4 BELM	MUHAMMAD HERMAN BIN JAMALUDDIN	DESIGN AND DEPLOYMENT OF AN IOT-BASED AGRICULTURE PESTICIDE SPRAYING SYSTEM FOR CUCUMIS MELO
FYP	NURAFIQAH ALIAH BINTI QHAIRUDDIN	4 BELM	NUR LATIF AZYZE BIN MOHD SHAARI AZYZE	PATH PLANNING AND LOCALIZATION FOR OUTDOOR AUTONOMOUS MOBILE ROBOT

Sponsor: IEEE Power & Energy Society (Malaysia Chapter)



Category	Student Name	Course	Supervisor Name	Title
FYP	MIRZA DANISH BIN MOHD ROSLI	4 BELG	JUNAINAH BINTI SARDI	ENERGY STORAGE DISPATCH STRATEGY FOR OPTIMIZING THE PERFORMANCE OF DISTRIBUTION NETWORK WITH PHOTOVOLTAIC AND ELECTRIC VEHICLE

Sponsor: IEEE Engineering in Medicine and Biology Society (Malaysia Chapter)





Category	Student Name	Course	Supervisor Name	Title
FYP	MUHAMMAD MUZHAFAR BIN MOHAMMAD ZAWAWI	4 BELM	WAN MOHD BUKHARI BIN WAN DAUD	SMART PROSTHETIC CONTROL: EMG-BASED HAND PROSTHESIS WITH MACHINE LEARNING
FYP	YOONG KAH HAO	4 BELM	HAIROL NIZAM BIN MOHD SHAH	A DRIVER MONITORING AND ALERTING SYSTEM (DMAS) ON DRIVER HABITS ON ROAD
FYP	AKMAL LUQMAN BIN SHAMSUL ANUAR	4 BELG	EZREEN FARINA BINTI SHAIR -	MULTIMODAL DEEP LEARNING OF POSTURE AND GAIT PATTERN CLASSIFICATION