



UNIVERSITI
TEKNOLOGI
PETRONAS

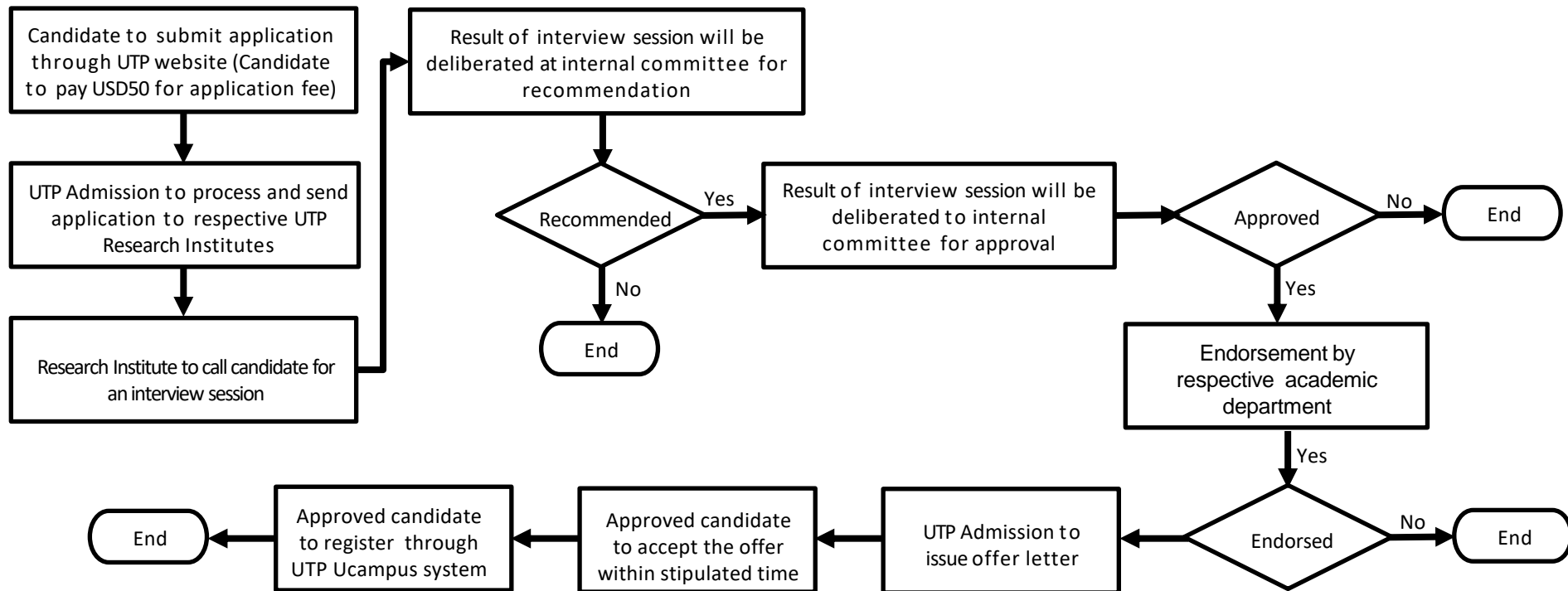
GRADUATE ASSISTANTSHIP (GA) SCHEME

General Info

- Meeting UTP entry requirements as per stated [HERE](#). Minimum CGPA 3.25 (out of 4.00) or equivalent.
- Pass English requirements with a minimum score of:
 - Engineering : IELTS (5.0) or TOEFL (500), Non-Engineering : IELTS (6.0) or TOEFL (500)
- The GA Scheme covers:
 - Tuition fees
 - Monthly stipend
MSc Student: RM1,800.00/ PhD Student: RM2,300.00
 - Research Methodology course fee (first attempt only)
 - The maximum duration for the GA is up to 42 months for PhD studies and 24 months for Master's by research studies, respectively.
- Students are required to perform duties as below:
 - perform 22 research days per month
 - carry out 126 TA hours per semester, equivalent to 252 TA hours per year
- Resources Fee and Viva Fee will be borne by students



GRADUATE ASSISTANTSHIP (GA) SCHEME Application Flow



Required documents for submission

1. Copy of passport
2. Curriculum Vitae
3. Full transcript of your highest academic qualification
4. Research Proposal based on research areas
5. IELTS or TOEFL or English Medium Letter

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Smart Communities for Smart Living	Green & Clean Energy	Liquid Biofuel	Biodiesel	Dr. Lam Man Kee, catalyst - AP Dr Anita Ramli	MSc/PhD in Chemical Engineering
			Bioethanol	Dr. Lam Man Kee	MSc/PhD in Chemical Engineering
			Bio-oil	Dr Chai Yee Ho	MSc/PhD in Chemical Engineering
		Gas Biofuel	Biohydrogen	Dr. Muhammad Rashid	MSc/PhD in Chemical Engineering
			Biomethane	Prof. Dr. Masaharu Komiyama	MSc/PhD in Chemical Engineering
		Solid Biofuel	Torrefied biomass	Dr Noridah Osman	MSc/PhD in Chemical Engineering
			Activated carbon	Dr. Nor Adilla Rashidi, Mr Azry Borhan	MSc/PhD in Chemical Engineering
		Other Biomass & Biochemicals	Microalgae Larvae	Dr. Lam Man Kee Dr. Lim Jun Wei	MSc/PhD in Chemical Engineering
			Lignin, Cellulose, Xylan	AP Dr Anita Ramli	MSc/PhD in Chemical Engineering
			Glycerol	AP Dr Anita Ramli	MSc/PhD in Chemical Engineering
			Biomaterial/ Biocomposites	Dr Chai Yee Ho	MSc/PhD in Chemical Engineering
		Water Electrolysis	Electrolyte Development Electrode development & analysis	Dr Nik Abdul Hadi	MSc/PhD in Chemical Engineering
		Solar Assisted Hydrogen Production	High temperature solar thermal system development Integrated solar system development	Dr Khairul Habib	MSc/PhD in Chemical Engineering
		Adsorption	Simulation Assessment Material development	Dr Jundika Candra Kurnia	MSc/PhD in Chemical Engineering

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Smart Communities for Smart Living	Water & Waste	Water Pollution	Water Treatment	AP Dr Muhd Raza UI Mustaffa Prof Dr Shamsul Rahman M Kutty	MSc/PhD in Chemical Engineering MSc in Civil Engineering
			Membrane	Dr Nik Abdul Hadi Dr Nonni	MSc/PhD in Chemical Engineering
			Ion Exchange	Dr Ho Yeek Chia Dr Lavania AP Dr Muhd Raza UI Mustaffa Dr Teh Hee Min	MSc/PhD in Chemical Engineering
			Coagulants	Prof Dr Shamsul Rahman M Kutty	MSc in Civil Engineering
			Modelling	AP Dr Muhd Raza UI Mustaffa Dr Husna Takaijudin Dr Teh Hee Min	MSc/PhD in Civil Engineering
		Wastewater	Biological Treatment	Prof Dr Shamsul Rahman M Kutty Ts Dr Lavania Baloo	MSc/PhD in Civil Engineering
			Chemical Treatment	Dr Ho Yeek Chia Prof Dr Shamsul Rahman M Kutty	MSc/PhD in Civil Engineering
			Advanced Treatment Systems	Ts Dr Lavania Baloo Dr Ho Yeek Chia, Prof Dr Shamsul Rahman M Kutty AP Dr Muhd Raza UI Mustaffa	MSc/PhD in Civil Engineering
			Hydrocyclonic Separation	Dr Nik Abdul Hadi Dr Nonni	MSc/PhD in Civil Engineering
		Water Resource & Environment	Coastal	Dr Teh Hee Min	MSc in Civil Engineering
			Watershed management	AP Dr Muhd Raza UI Mustaffa Dr Husna Takaijudin	MSc/PhD in Civil Engineering
			River Management	AP Dr Muhd Raza UI Mustaffa Dr Husna Takaijudin	MSc/PhD in Civil Engineering
			Hydraulic Structures	Dr Teh Hee Min	MSc in Civil Engineering
		Sludge	Sludge Management – Water and Wastewater	Prof Dr Shamsul, Dr Lavania	MSc/PhD in Civil Engineering
			Energy generation	Prof Dr Shamsul, Dr Lavania	MSc/PhD in Civil Engineering
		Solar Desalination	Integrated Solar Still	AP Dr Syed Ihtsham Gilani	MSc in Civil Engineering/MSc PhD in Civil Engineering/Applied Science

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Smart Communities for Smart Living	Materials	Low Carbon Construction Materials	Cement Replacement materials	Prof. Dr Nasir Shafiq	MSc/PhD in Civil Engineering
			High Performance concrete and asphalt	Prof. Dr Nasir Shafiq Dr Muslich Hartadi Sutanto	MSc/PhD in Civil Engineering
			Geopolymer binders	Prof. Dr Nasir Shafiq Dr Muslich Hartadi Sutanto	MSc/PhD in Civil Engineering
			Oil Well Cementing	Prof. Dr Nasir Shafiq	MSc/PhD in Civil Engineering
			Carbon Capture Construction Materials	Prof. Dr Nasir Shafiq AP Ts Dr Amila Dr Muslich Hartadi Sutanto	MSc/PhD in Civil Engineering
		Recycling and Decommissioning	Recycled aggregates & waste for construction material	Prof. Dr Nasir Shafiq AP Ts Dr Amila Dr Muslich Hartadi Sutanto	MSc/PhD in Civil Engineering
			Offshore & Onshore decommissioning	AP Ts Dr Amila	MSc/PhD in Civil Engineering
		BIM in Green Construction	Building information modelling for low carbon design	Prof. Dr Nasir Shafiq AP Ts Dr Amila	MSc/PhD in Civil Engineering
		Nano Binders	Graphene application in concrete	Prof. Dr Nasir Shafiq	MSc/PhD in Civil Engineering
			Nano-silica from agro waste	Prof. Dr Nasir Shafiq	MSc/PhD in Civil Engineering

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Smart Communities for Smart Living	Social & Community Well-Being	Social Business	Social Business	AP Ts Dr. Shahrina AP Ts Dr. Wan Fatimah AP Dr. Hasbullah	Masters/PhD in Management
			Risk Assessment & Investment	AP Dr. Maran Marimuthu AP Dr Lai Fong Woon Dr. Hasbullah Dr Kashif AP Dr. Poon	Masters in Management PhD Social Science and Humanities
			Social Finance	AP Dr. Maran Marimuthu AP Dr Lai Fong Woon Dr. Hasbullah Dr Kashif AP Dr. Poon AP Dr. Satirenjit	Masters /PhD of Social Science and Humanities
		Community Wellbeing	Circular Economy for Societal & Business Transformation	AP Dr. Ting Ding Hooi AP Dr Maran Marimuthu Dr. Amjad	Masters/PhD in Management
		Low Carbon Economy	Social, Economic Impact Assessments (SEIA)	AP Dr. Ahmad Shahrul Nizam AP. Ts Dr. Shahrina Dr. Rohani/Ms Hezlina	Masters/PhD in Management
			Net Zero Community	AP Dr. Ahmad Shahrul Nizam Isha Dr. Amjad	Masters/PhD in Management
			CCUS Socio Economic Impact	AP Dr. Ahmad Shahrul Nizam AP. Ts Dr. Shahrina Dr. Rohani Ms. Mashitah	Masters/PhD in Management
		Education for Sustainable Development	Digital Literacy for Marginal Group	AP Dr. Ts Shahrina AP Dr. Ts Wan Fatimah Dr. Roselind Dr. Chong Su Li Dr. Hairuzila Dr. Ridhuan	Masters /PhD of Social Science and Humanities
			Environmental humanities	AP Dr. Ting Ding Hooi AP Dr Maran Marimuthu Dr. Amjad AP Dr Poon Wai Ching	Masters /PhD of Social Science and Humanities

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Smart Communities for Smart Living	Education for Sustainable Development	Applied Linguistics & Practices	Communication Skills	Dr. Roselind Dr. Chong Su Li Dr. Hairuzila/Dr.Ridhuan	Masters in Management PhD Social Science and Humanities
			Safety Communication	AP Dr. Ts Shahrina Dr. Rohani Salleh AP Dr. Ahmad Shahrul Nizam Dr. Ridhuan	Masters/PhD in Management
		Governance	Governance Sustainable Development Model	AP Dr Nuri AP Dr. Satirenjit Dr Ridhuan Dr. Pisol	Masters/PhD in Management
			Governance Performance	AP Dr Nuri Dr Ridhuan Dr. Pisol AP Dr. Hasbullah AP Dr. Satirenjit	Masters/PhD in Management
	Social & Community Well-Being	Public Policy	Sustainable Social Policy	AP Dr Nuri Dr Ridhuan Dr. Pisol AP Dr. Hasbullah AP Dr. Satirenjit	Masters in Management PhD Social Science and Humanities
			Sustainable Energy Policy Framework	AP Dr Nuri Dr Ridhuan Dr. Pisol AP Dr. Hasbullah AP Dr. Satirenjit	Masters/PhD in Management
		Organizational Sustainability	Talent Management	Dr. Rohani Salleh AP Dr. Ahmad Shahrul Nizam	Masters/PhD in Management
			Organisational Culture	Dr. Rohani Salleh AP Dr. Ahmad Shahrul Nizam Dr. Ridhuan	Masters/PhD in Management
			HSE Management	AP Dr. Ahmad Shahrul Nizam Dr. Rohani Salleh	Masters/PhD in Management

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Enhancing Wellness for Higher Productivity	Neurotechnology	Assessment	Neuroergonomics	AP Dr Ibrahima Faye	MSc/PhD in Electrical & Electronics Engineering
			Mental Stress	AP Dr Tang Tong Boon	MSc/PhD in Electrical & Electronics Engineering
			Fatigue / Safety	AP Dr Tang Tong Boon	MSc/PhD in Electrical & Electronics Engineering
			Dementia	AP Dr Tang Tong Boon	MSc/PhD in Electrical & Electronics Engineering
			Neurodiagnostics	AP Dr Mohd Zuki Yusoff Dr Norashikin Yahya AP Dr Tang Tong Boon	MSc/PhD in Electrical & Electronics Engineering
			Neuroinformatics	Dr Ho Tatt Wei	MSc/PhD in Electrical & Electronics Engineering
			Neuromarketing	AP Dr Ibrahima Faye	MSc/PhD in Electrical & Electronics Engineering
		Intervention	Quality Education	AP Dr Mohd Zuki Yusoff AP Dr Ibrahima Faye AP Dr Syed Saad Azhar Ali	MSc/PhD in Electrical & Electronics Engineering
			Brain Computer Interface	AP Dr Mohd Zuki Yusoff AP Dr Ibrahima Faye	MSc/PhD in Electrical & Electronics Engineering
			Neurofeedback	AP Dr Syed Saad Azhar Ali	MSc/PhD in Electrical & Electronics Engineering
			Autism	AP Dr Mohd Zuki Yusoff Dr Norashikin Yahya	MSc/PhD in Electrical & Electronics Engineering
			Addiction	Dr Ho Tatt Wei	MSc/PhD in Electrical & Electronics Engineering
			Hyperscanning	AP Dr Mohd Zuki Yusoff AP Dr Ibrahima Faye	MSc/PhD in Electrical & Electronics Engineering

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Enhancing Wellness for Higher Productivity	Assistive & Rehabilitation Technology	Wearable & Visualization Technology	Cognitive Frailty	AP Dr Nasreen Bt Badruddin AP Ir Dr Irraivan Al Elamvazuthi	MSc/PhD in Electrical & Electronics Engineering
			Neurorehabilitation	AP Ir Dr Irraivan Al Elamvazuthi	MSc/PhD in Electrical & Electronics Engineering
			Exoskeleton Technology	AP Ir Dr Irraivan Al Elamvazuthi	MSc/PhD in Electrical & Electronics Engineering
			Drowsiness	AP Dr Nasreen Bt Badruddin	MSc/PhD in Electrical & Electronics Engineering
			Virtual Therapy App	AP Ts Dr Dayang Rohaya Awang Rambli Ts Dr Suziah Sulaiman	MSc/PhD in Information Technolgy
			UI/UX Stroke Rehabilitation	Ts Dr Suziah Sulaiman AP Ts Dr Dayang Rohaya Awang Rambli	MSc/PhD in Information Technolgy
		Computer aided analytics & predictions	Resilient (Mindfulness)	Dr Lila Iznita Izhar	MSc/PhD in Electrical & Electronics Engineering
			Prediction of third molar eruption	Dr Lila Iznita Izhar	MSc/PhD in Electrical & Electronics Engineering
			Medication Management for Elderly	AP Dr Nasreen Bt Badruddin	MSc/PhD in Electrical & Electronics Engineering
			Patient Appointment System	Ts Dr Suziah Sulaiman AP Ts Dr Dayang Rohaya Awang Rambli	MSc/PhD in Information Technolgy
			Collateral Vessels Detection	Dr Azrina A Aziz	MSc/PhD in Electrical & Electronics Engineering
			Myocardial Infarction Risk Prediction	AP Ir Dr Irraivan Al Elamvazuthi	MSc/PhD in Electrical & Electronics Engineering

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Enhancing Wellness for Higher Productivity	Structural Health	Vibration and Structural fatigue	Vibration Fatigue and Condition-\ Based, Monitoring	Dr Nabihah Sallih	MSc/PhD in Mechanical Engineering
			Fluid-Structure Interaction	Dr Nabihah Sallih	MSc/PhD in Mechanical Engineering
		Computational simulation prognostics & diagnostics for structures	Numerical Modelling	Dr Nabihah Sallih AP Dr Ahmad Majdi Abdul Rani Dr Azlan Ahmad	MSc/PhD in Mechanical Engineering
			Life Cycle Impact Analysis	Dr Azlan Ahmad	MSc/PhD in Mechanical Engineering
			Software Defect Prediction and Detection	Ts Dr Helmi M Rais Ts Saipunidzam Mahamad	MSc in Information System/Information Technology PhD in Information System/Information Technology
		Materials & manufacturing	Additive Manufacturing & Reverse Engineering	Dr Nabihah Sallih Dr Nurul Azhani Yunus Dr Azlan Ahmad AP Dr Ahmad Majdi Abdul Rani	MSc/PhD in Mechanical Engineering
			Smart Composites	Dr Nabihah Sallih Dr Nurul Azhani Yunus Dr Azlan Ahmad AP Dr Ahmad Majdi Abdul Rani	MSc/PhD in Mechanical Engineering

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Green Mobility for Smart Community	Infrastructure Engineering	Tunelling & Trenchless Technology	Geohazards	AP Ir Dr Hisham Mohamad Ms Niraku Rosmawati Ahmad	MSc/PhD in Civil Engineering / Geoscience
			Maintenance System	AP Dr Ainul Akmar Mokhtar	MSc/PhD in Civil / Mechanical / Petroleum Engineering
			Optimization of Asset Utilization	Ir Dr Idris Othman Dr Ehsan Nikbakht Jarghouyeh	MSc/PhD in Civil / Mechanical Engineering
			Underground Utilities & Tunnels	AP Ir Dr Hisham Mohamad	MSc/PhD in Civil / Petroleum Engineering
			Railway	AP Ir Dr Hisham Mohamad	MSc/PhD in Civil / Mechanical / Electrical & Electronics Engineering
			Pipelines	AP Ir Dr Zahiraniza Mustafa	MSc/PhD in Civil / Mechanical / Petroleum Engineering
		Control System	IoT Front-End Hardware	AP Dr M Haris M Khir Dr Illani Mohd Nawi	MSc/PhD in Electrical & Electronics Engineering / Information Technology
			Cloud & Data Management	Dr Mior Azman Meor Said	MSc/PhD in Electrical & Electronics Engineering / Information Technology
			4G / 5G Antenna	Dr Mior Azman Meor Said	MSc/PhD in Electrical & Electronics Engineering
			RFID / WIFI / LORAWAN	AP Dr M Haris M Khir	MSc/PhD in Electrical & Electronics Engineering / Information Technology
		Field Instrumentation & Monitoring	Fibre Optic Sensors	AP Ir Dr Hisham Mohamad	MSc/PhD in Civil / Electrical & Electronics Engineering
			MEMS Sensors	AP Dr M Haris M Khir	MSc/PhD in Electrical & Electronics Engineering
			Real-Time Monitoring	Dr Mior Azman Meor Said	MSc/PhD in Civil / Mechanical / Electrical & Electronics Engineering / Information Technology
			Customized Sensors	AP Dr M Haris M Khir	MSc/PhD in Electrical & Electronics Engineering
			PCB Board	AP Dr M Haris M Khir Dr Illani Moh Nawi	MSc/PhD in Electrical & Electronics Engineering
		Computational Modelling	Structural & Non-linear Dynamic Modelling	AP Ir Dr Mokhtar Awang	MSc/PhD in Mechanical/Civil/Chemical/Petroleum Engineering
			Fluid-Structure Interaction	AP Ir Dr Zahiraniza Mustafa	MSc/PhD in Mechanical/Civil/Petroleum Engineering
			Soil-Structure Interaction	AP Ir Dr Hisham Mohamad	MSc/PhD in Civil Engineering
			Geospatial Intelligence	Dr Mior Azman Meor Said	MSc/PhD in Civil Engineering / Geoscience
			Engineering Designs	AP Ir Dr Hisham Mohamad	Msc/PhD in Mechanical/Civil/Electrical & Electronics Engineering

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Green Mobility for Smart Community	E Mobility	Energy Management	Battery / Thermal Management	AP Ir Dr Mokhtar Awang Dr Mior Azman Meor Said	MSc/PhD in Electrical Electronics/Chemical/Mechanical/Applied Science
			Battery Management System (BMS)	Dr Saiful Azrin M Zulkifli	MSc/PhD in Electrical Electronics/Chemical/Mechanical/Applied Science
			Transportation Analysis of EV & AV	Dr Dimas Bayu Endrayana	MSc/PhD in Civil Engineering
			Embedded System	Dr Saiful Azrin M Zulkifli	MSc/PhD in Electrical & Electronics Engineering
			Charging Infrastructure	AP Ir Dr Masri Bin Baharom Dr Saiful Azrin M Zulkifli	MSc/PhD in Electrical Electronics /Mechanical Engineering
		Hydrogen / Biofuel Engine	Biofuel Blending & Production	AP Ir Dr Masri Bin Baharom AP Dr Zainal Ambri Abdul Karim	MSc/PhD in Mechanical/ChemicalEngineering/Applied Science
			Performance Testing on Engines	AP Dr Zainal Ambri Abdul Karim Dr Mhadi Abaker Ismael	MSc/PhD in Electrical Electronics/Mechanical Engineering
			Syngas Production	Prof Ir Dr Shaharin Anwar Sulaiman	MSc/PhD in Mechanical/Chemical Engineering
			Special Engines Development	AP Ir Dr Masri Bin Baharom Prof Dr A Rashid A Aziz	MSc/PhD in Mechanical/Electrical Electronics Engineering
		System & Vehicle Design	Drone & UGV Technology	AP Dr M Haris M Khir Dr Saiful Azrin M Zulkifli Ir Dr Mark Ovinis	MSc/PhD in Mechanical/Electrical Electronics/Information Technology
			Special Vehicle Development	Prof Dr A Rashid A Aziz AP Ir Dr Masri Baharom Mr M Syaifuddin Mohd	MSc/PhD in Electrical Electronics/Mechanical Engineering
			Manipulator Development (Robotics)	AP Dr M Haris M Khir Dr Saiful Azrin M Zulkifli Dr M Azman Zakariya	MSc/PhD in Electrical Electronics/Mechanical Engineering

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Green Mobility for Smart Community	E Mobility	Additive Manufacturing & Joining Technology	Friction Stir Welding	AP Ir Dr Mokhtar Awang AP Dr Srinivasa Rao Pedapati	MSc/PhD in Mechanical Engineering
			3D Printing	Dr Khurram Altaf	MSc/PhD in Mechanical Engineering
			Digital Casting	Dr Khurram Altaf	MSc/PhD in Mechanical Engineering/Information Technology
			Advanced Materials for Additive Manufacturing	Dr Khurram Altaf	MSc/PhD in Mechanical Engineering
			Design of Electrical Machines	Mr M Syaifuddin Mohd	MSc/PhD in Mechanical/Electrical Electronics Engineering
Green Mobility for Smart Community	Operation Engineering	Asset Performance	Reliability Engineering	Dr Hilmi Hussin AP Dr Ainul Akmar Mokhtar AP Ts Dr Masdi Muhammad	MSc/PhD in Mechanical/Civil Engineering
			Asset Integrity	Dr Hilmi Hussin AP Dr Ainul Akmar Mokhtar AP Ts Dr Masdi Muhammad Mr M Faizairi M Nor Dr M Zaki Abdullah	MSc/PhD in Mechanical/Civil Engineering
			Life Cycle Cost Analysis	Dr Hilmi Hussin AP Dr Ainul Akmar Mokhtar AP Ts Dr Masdi Muhammad	MSc/PhD in Mechanical/Civil/Chemical Engineering
			Asset Life Study	Dr Hilmi Hussin AP Dr Ainul Akmar Mokhtar AP Ts Dr Masdi Muhammad	MSc/PhD in Mechanical/Civil/Chemical Engineering
		Risk Management	Risk-Based Maintenance	Dr Hilmi Hussin AP Dr Ainul Akmar Mokhtar AP Ts Dr Masdi Muhammad	MSc/PhD in Mechanical/Civil/Chemical Engineering
			Risk-Based Inspection	Dr Hilmi Hussin AP Dr Ainul Akmar Mokhtar AP Ts Dr Masdi Muhammad	MSc/PhD in Mechanical/Chemical Engineering

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Green Mobility for Smart Community	Operation Engineering	Maintenance Optimization	Predictive Analytics	Dr Mohamed Latheef Mr Ts A Izuddin Zainal Abidin Mr Ts Faizal Ahmad Fadzil Mr Ts Jale Ahmad Dr Hilmi Hussin AP Dr Ainul Akmar Mokhtar AP Ts Dr Masdi Muhammad	MSc/PhD in Mechanical/Chemical/ information Technology/Applied Science
			Prescriptive Analytics		
		Problem-solving techniques	Production System Simulation	Mr Ts A Izuddin Zainal Abidin Mr Ts Faizal Ahmad Fadzil Mr Ts Jale Ahmad Dr Hilmi Hussin AP Dr Ainul Akmar Mokhtar AP Ts Dr Masdi Muhammad	MSc/PhD in Mechanical/Chemical/ information Technology/Applied Science
			Mathematical Optimization		
		Decision Analysis	Queuing Theory	AP Dr Ainul Akmar Mokhtar AP Ts Dr Masdi Muhammad	
			Transportation		
		Managing Operations	Inventory Management	Dr Hilmi Hussin AP Dr Ainul Akmar Mokhtar AP Ts Dr Masdi Muhammad Mr M Faizairi M Nor	MSc/PhD in Mechanical/Chemical/ information Technology/Applied Science
			Supply Chain Management		
			Lean Manufacturing		
			Scheduling, Quality System (Six Sigma)		
		Designing Operations	Production Systems	Dr Hilmi Hussin AP Dr Ainul Akmar Mokhtar AP Ts Dr Masdi Muhammad Mr M Faizairi M Nor	MSc/PhD in Mechanical/Chemical/ information Technology/Applied Science
			Operations Strategy		
			Production & Capacity Planning		
			Location Strategy		
			Materials Requirement Planning (MRP / ERP)		
Forecasting					

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Digital Transformation	Smart Digital Infrastructure & Services	Artificial Intelligence Based Approaches: Smart Services	Visualization	1 Assoc Prof Ts Dr Norshakirah Bt A Aziz-CERDAS Ts Dr Emelia Akashah - CERDAS Assoc Prof Ir Dr Idris Ismail- CSE Dr Madiyah Omar- CSE	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Optimization	Assoc Prof Dr Hanita Bt Daud-MaSS Assoc Prof Ts Dr Mahmud Othman-MaSS Dr Rajalingam A/L Sokkalingam-MaSS Assoc Prof Dr Hitham Seddiq Alhassan Alhussian-CERDAS6. Dr Montasir Osman Ahmed Ali-OEC Assoc Prof Ir Dr idris Ismail- CSE Dr Madiyah Omar- CSE Assoc Prof Dr Vijanth Sigayan Asirvadam-CSE	MSc/PhD in Information Systems MSc/PhD in Information Technology
		Artificial Intelligence Based Approaches: Smart Supply Chain	Generative Models	Ts Dr Hilmi Hasan-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Concept Drift	Assoc Prof Dr Manzoor Ahmed Hashmani-HPC3 Assoc Prof Dr Toni Anwar-HPC3 Assoc Prof Dr Hitham Seddiq Alhassan Alhussian-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
		Artificial Intelligence Based Approaches: Smart Operation & Maintenance	Prescriptive Analytics	Ts Dr Yew Kwang Hooi-HPC3 Assoc Prof Dr Toni Anwar-HPC3 Assoc Prof Dr Izzatdin B A Aziz-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Streaming Analytics	Assoc Prof Dr Said Jadid Abdulkadir-CERDAS Ts Dr Mohd Hilmi B Hasan-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Predictive Analytics	1. Ts Dr Yew Kwang Hooi-HPC3 2. Assoc Prof Dr Toni Anwar-HPC3 3. Zazilah May-HPC3 4. Assoc Prof Dr Hanita Bt Daud-MaSS 5. Assoc Prof Ts Dr Mahmud Othman-MaSS 6. Dr Rajalingam A/L Sokkalingam-MaSS 7. Assoc Prof Dr Izzatdin B A Aziz-CERDAS 8. Assoc Prof Ir Dr Idris Ismail- CSE 9. Dr Madiyah Omar- CSE	MSc/PhD in Information Systems MSc/PhD in Information Technology

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Digital Transformation	Smart Digital Infrastructure & Services	Mathematical & Statistical Based Approaches: Smart Design & Construct	Data Pre-processing	Assoc Prof Dr Dhanapal Durai Dominic P-POSCOM Assoc Prof Ts Dr Norshakirah Bt A Aziz-CERDAS Assoc Prof Ir Dr Idris Ismail- CSE	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Meta Heuristics	Assoc Prof Dr Dhanapal Durai Dominic P-POSCOM Assoc Prof Ts Dr Norshakirah Bt A Aziz-CERDAS Assoc Prof Ir Dr Idris Ismail- CSE	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Soft Computing	Assoc Prof Dr Dhanapal Durai Dominic P-POSCOM2. Assoc Prof Ts Dr Jafreezal B Jaafar-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Semantic Analysis	Dr Nurul Aida Osman-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Sentiment Analysis	Assoc Prof Dr Dhanapal Durai Dominic P-POSCOM Assoc Prof Dr Manzoor Ahmed Hashmani-HPC3 Ts. Dr Aliza Sarlan-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Enterprise Analytics Platform	Ts Dr Yew Kwang Hooi-HPC3. Ts. Dr Emelia Akashah P Akhir-CERDAS Ts Dr Emelia Akashah – CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
	Mathematical & Statistical Based Approaches: Smart Precision	Machine Learning	Ts Dr Yew Kwang Hooi-HPC3 Assoc Prof Dr Toni Anwar-HPC3 Zazilah May-HPC3 Assoc Prof Dr Manzoor Ahmed Hashmani-HPC3 Assoc Prof Ts Dr Mohd Fadzil B Hassan-CERDAS Assoc Prof Dr Vijanth Sagayan Asirvadam-CSE Prof Dr Nor Hisham Hamid- CSE	MSc/PhD in Information Systems MSc/PhD in Information Technology	

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Digital Transformation	Smart Digital Infrastructure & Services	Mathematical & Statistical Based Approaches: Smart Precision	Deep Learning	Ts Dr Yew Kwang Hooi-HPC3 Assoc Prof Dr Toni Anwar-HPC3 Zazilah May-HPC3 Dr M Nordin B Zakaria-HPC3 Assoc Prof Dr Manzoor Ahmed Hashmani-HPC3 Assoc Prof Dr Hanita Bt Daud-MaSS Assoc Prof Ts Dr Mahmud Othman-MaSS Dr Rajalingam A/L Sokkalingam-MaSS Ts Dr Mohd Hilmi B Hasan-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Business Intelligence	Assoc Prof Dr Dhanapal Durai Dominic P-POSCOM Ts Dr Yew Kwang Hooi-HPC3 Assoc Prof Dr Toni Anwar-HPC3 Assoc Prof Dr Manzoor Ahmed Hashmani-HPC3 Assoc Prof Ts Dr Norshakirah Bt A Aziz-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
		Data Storage	Database Design	Assoc Prof Dr Rehan Akbar-POSCOM Ts Dr Shuib B Basri- COINN Dr Abdul Rehman Gilal- POSCOM Ts Dr Yew Kwang Hooi-HPC3 Assoc Prof Dr Hanita Bt Daud-MaSS Assoc Prof Ts Dr Mahmud Othman-MaSS Dr Rajalingam A/L Sokkalingam-MaSS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Database Modelling	Assoc Prof Dr Rehan Akbar-POSCOM Ts Dr Shuib B Basri-COINN Dr Abdul Rehman Gilal-POSCOM Ts Dr Yew Kwang Hooi-HPC3	MSc/PhD in Information Systems MSc/PhD in Information Technology

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Digital Transformation	Smart Digital Infrastructure & Services	Data Security	Database Security	Dr Abdul Rehman Gilal-POSCOM	MSc/PhD in Information Systems MSc/PhD in Information Technology
		Data Governance	Data Quality	Assoc Prof Dr Rehan Akbar-POSCOM	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Data Architecture	Assoc Prof Dr Rehan Akbar-POSCOM Ts Dr Emelia Akashah - CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Database Intelligence	Assoc Prof Dr Dhanapal Durai Dominic P-POSCOM Ts Dr Yew Kwang Hooi-HPC3	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Data Harmonization	Ts Dr Shuib B Basri-POSCOM	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Sentiment Analysis	Assoc Prof Dr Dhanapal Durai Dominic P-POSCOM Dr Ahmad Sobri Hashim-POSCOM Ts Dr Emelia Akashah - CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Software Quality & Improvement	Ts Dr Shuib B Basri-POSCOM Dr Abdul Rehman Gilal-POSCOM Assoc Prof Dr Toni Anwar-HPC3 Assoc Prof Dr Manzoor Ahmed Hashmani-HPC3 Ts Dr Lukman B A Rahim-HPC3	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Software Engineering	1. Ts Dr Shuib B Basri-POSCOM 2. Dr Abdul Rehman Gilal-POSCOM 3. Dr Ahmad Sobri Hashim-POSCOM 4. Assoc Prof Dr Rehan Akbar-POSCOM 5. Assoc Prof Dr Toni Anwar-HPC3 6. Ts Dr Yew Kwang Hooi-HPC3 7. Ts Dr Lukman B A Rahim-HPC3	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Data Warehouse	Assoc Prof Dr Rehan Akbar-POSCOM	MSc/PhD in Information Systems MSc/PhD in Information Technology

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Digital Transformation	Smart Digital Infrastructure & Services	Cybersecurity System Modelling	Security Architecture And Models	Dr Abdul Rehman Gilal-POSCOM Dr Lukman AB Rahim-HPC3	MSc/PhD in Information Systems MSc/PhD in Information Technology
		Mathematical & Statistical Approach In Cybersecurity	Modeling	Ts Dr Savita A/P K. Sugathan-POSCOM Ts Dr Lukman B A Rahim-HPC3 Dr Mohana Sundaram A/L Muthuvalu-MaSS Dr Nooraini Bt Zainuddin-MaSS Ts Dr Hamzah B Sakidin Assoc Prof Dr Vijanth Sagayan Asirvidam -CSE	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Number Theory	Assoc Prof Dr Hanita Bt Daud-MaSS Assoc Prof Ts Dr Mahmud Othman-MaSS Dr Rajalingam A/L Sokkalingam-MaSS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Bayesian Network	Assoc Prof Dr Hanita Bt Daud-MaSS Assoc Prof Ts Dr Mahmud Othman-MaSS Dr Rajalingam A/L Sokkalingam-MaSS Assoc Prof Dr Vijanth Sagayan Asirvidam-CSE Prof Dr Nor Hisham Hamid- CSE	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Probabilistic Methods	Ts Dr Savita A/P K. Sugathan-POSCOM Assoc Prof Dr Dhanapal Durai Dominic P-POSCOM Assoc Prof Dr Hanita Bt Daud-MaSS Assoc Prof Ts Dr Mahmud Othman-MaSS Dr Rajalingam A/L Sokkalingam-MaSS Assoc Prof Dr Vijanth Sagayan Asirvidam-CSE Prof Dr Nor Hisham Hamid- CSE	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Optimization Problems	Assoc Prof Dr Hanita Bt Daud-MaSS Assoc Prof Ts Dr Mahmud Othman-MaSS Dr Rajalingam A/L Sokkalingam-MaSS Assoc Prof Dr Dhanapal Dhurai Dominoc P-POSCOM Assoc Prof Dr Vijanth Sagayan Asirvadam-CSE	MSc/PhD in Information Systems MSc/PhD in Information Technology

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Digital Transformation	Smart Digital Infrastructure & Services	Digital Governance	Digital Quality Platform Service Standard	Ts Dr Emelia Akashah Bt Patah Akhir-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			IT Standard and Audit	Dr. Rehan Akbar-POSCOM Dr Shuib Basri-POCOM Dr. Savita-POSCOM Assoc Prof Ts Dr Norshakirah Bt A Aziz-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Digital Quality Platform Service Matrix	Assoc Prof Ts Dr Norshakirah Bt A Aziz-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
		Digital Project Management	Digital Project Management)	Dr. Rehan Akbar-POSCOM Dr Shuib Basri-POCOM Ts Dr Savita A/P K. Sugathan-POSCOM Assoc Prof Dr Izzatdin B A Aziz-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Digital Strategy and Roadmap	Ts Dr Savita A/P K. Sugathan-POSCOM Assoc Prof Dr Dhanapal Durai Dominic P-POSCOM Assoc Prof Dr Izzatdin B A Aziz-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
		Policy, Guideline & Standards	Digital Processes and Policies,	Assoc Prof Dr Noreen Izza Arshad-POSCOM Ts Dr Savita A/P K. Sugathan-POSCOM Assoc Prof Ts Dr Jafreezal B Jaafar-CERDAS Ts Dr Emelia Akashah - CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
		Digitalization of Content	Digital Object	Dr Sobri Ahmad -POSCOM	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Gamification	Ts Dr Savita A/P K. Sugathan-POSCOM	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Digital Marketing	Ts Dr Savita A/P K. Sugathan-POSCOM	MSc/PhD in Information Systems MSc/PhD in Information Technology

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Digital Transformation	Smart Digital Infrastructure & Services	Digital Twin	Web Analytics	Dr Kamaluddeen Usman Danyaro-CERDAS	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Art of Pitching	Assoc Prof Dr Noreen Izza Arshad-POSCOM Ts Dr Savita A/P K. Sugathan-POSCOM	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Design Essentials (UX, UI etc)	Assoc Prof Dr Noreen Izza Arshad-POSCOM Ts Dr Savita A/P K. Sugathan-POSCOM	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Immersion, Interaction	Assoc Prof Dr Toni Anwar-HPC Ts Dr Yew Kwang Hooi-HPC3 Dr M Nordin B Zakaria-HPC3	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Imagination	Assoc Prof Dr Dhanapal Durai Dominic P-POSCOM	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Computer Vision	Ts Dr Yew Kwang Hooi-HPC3	MSc/PhD in Information Systems MSc/PhD in Information Technology
		VR/AR/XR/MR	UX on Dashboard	Assoc Prof Dr Noreen Izza Arshad-POSCOM Ts Dr Savita A/P K. Sugathan-POSCOM	MSc/PhD in Information Systems MSc/PhD in Information Technology
			UX on Business Intelligence	Dr Sobri Ahmad -POSCOM	MSc/PhD in Information Systems MSc/PhD in Information Technology
		Integrated Storage Structure	Cloud Database	Ts Dr Lukman B A Rahim-HPC3	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Block Chain	Assoc Prof Dr Manzoor Ahmed Hashmani-HPC3 Assoc Prof Ts Dr Low Tang Jung-HPC3	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Linked Graph	Ts Dr Yew Kwang Hooi-HPC3	MSc/PhD in Information Systems MSc/PhD in Information Technology
			Ontology	Ts Dr Yew Kwang Hooi-HPC3	MSc/PhD in Information Systems MSc/PhD in Information Technology

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Digital Transformation	Smart Digital Infrastructure & Services	CPS Modernization	Cloud Cyber-physical System Cyber-security	Dr. Rehan Akbar-POSCOM Abdul Rehman Gilal-POSCOM Ts Dr Lukman B A Rahim-HPC3	MSc/PhD in Information Systems MSc/PhD in Information Technology
		Industry IoT- Computer System	Cloud	Assoc Prof Dr Fawnizu Azmadi B Hussin-CSE	MSc/PhD in Electrical and Electronics Engineering
			Advanced analytics	Assoc Prof Dr Dhanapal Durai Dominic P-POSCOM Assoc Prof Ir Dr Idris B Ismail-CSE Nazleeni Samiha Bt Haron-CERDAS	MSc/PhD in Electrical and Electronics Engineering
			Computing	Assoc Prof Dr Fawnizu Azmadi B Hussin-CSE Assoc Prof Dr Vijanth Sagayan a/l Asirvadam-CSE Prof Dr Nor Hisham Hamid- CSE	MSc/PhD in Electrical and Electronics Engineering
			Interfacing, Embedded system	Assoc Prof Dr Fawnizu Azmadi B Hussin-CSE Ir Dr Patrick Sebastian-CSE Assoc Prof Ts Dr Low Tang Jung-HPC3 Assoc Prof Dr Toni Anwar-HPC3	MSc/PhD in Electrical and Electronics Engineering
		Image/Video Processing	Assoc Prof Dr Fawnizu Azmadi B Hussin-CSE Dr Madiyah Omar-CSE Ts Dr Yew Kwang Hooi-HPC3 Zazilah May-HPC3 Assoc Prof Dr Manzoor Hashmani-HPC3	MSc/PhD in Electrical and Electronics Engineering	
		Industry IoT- System Identification	Digital twin	Assoc Prof Ir Dr Idris B Ismail-CSE Dr Madiyah Omar-CSE Ts Dr Yew Kwang Hooi-HPC3 Assoc Prof Dr Toni Anwar-HPC3 Assoc Prof Dr Manzoor Hashmani-HPC3 Dr Tuan Mohammad Yusoff Shah B Tuan Ya-HPC3	MSc/PhD in Electrical and Electronics Engineering

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Digital Transformation	Smart Digital Infrastructure & Services	Industry IoT- System Identification	Computational Mathematic	Assoc Prof Dr Vijanth Sagayan a/l Asirvadam-CSE Dr Tuan Mohammad Yusoff Shah B Tuan Ya-HPC3 Dr Nooraini Zainuddin-MaSS Ts Dr Hamzah Sakidin-MaSS Dr Mohana Sundaram A/L Muthuvalu-MaSS Dr Dennis Ling Chuan Ching -MaSS	MSc/PhD in Electrical and Electronics Engineering
			Signal Analysis	Assoc Prof Ir Dr Idris B Ismail-CSE	MSc/PhD in Electrical and Electronics Engineering
		Industry IoT- Energy & Utilities	Data	Nazleeni Samiha Bt Haron-CERDAS	MSc/PhD in Electrical and Electronics Engineering
			Regulatory	Ts Dr Aliza Bt Sarlan-CERDAS	MSc/PhD in Electrical and Electronics Engineering
		Plant Process - Instrumentation & control	Topology Measurement	Assoc Prof Ir Dr Idris B Ismail-CSE Dr Madiyah Omar-CSE	MSc/PhD in Electrical and Electronics Engineering
		Plant Process - Optimization	Process Integration	Assoc Prof Dr Fawnizu Azmadi B Hussin-CSE Dr Madiyah Omar-CSE	MSc/PhD in Electrical and Electronics Engineering
			Plant Data Analytics	Assoc Prof Dr Fawnizu Azmadi B Hussin-CSE Dr Madiyah Omar-CSE Assoc Prof Ir Dr Idris B Ismail-CSE Assoc Prof Dr Izzatdin B A Aziz-CERDAS	MSc/PhD in Electrical and Electronics Engineering
		Connectivity	Agile 5G Cell	Dr Socheatra Soeung-CSE	MSc/PhD in Electrical and Electronics Engineering

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Digital Transformation	Smart Digital Infrastructure & Services	Network	RF	Dr Cheab Sovuthy-CSE Dr Socheatra Soeung-CSE	MSc/PhD in Electrical and Electronics Engineering
			Microwave	Dr Cheab Sovuthy-CSE Dr Socheatra Soeung-CSE	MSc/PhD in Electrical and Electronics Engineering
			Wireless Network	Assoc Prof Dr Fawnizu Azmadi B Hussin-CSE Dr Micheal Driberg-CSE Assoc Prof Ir Dr Idris B Ismail-CSE Assoc Prof Dr Toni Anwar-HPC3 Assoc Prof Ts Dr Low Tang Jung-HPC3 Ts Abdullah Sani B Abd Rahman-CERDAS	MSc/PhD in Electrical and Electronics Engineering
			Wireless Security	Assoc Prof Dr Fawnizu Azmadi B Hussin-CSE Assoc Prof Dr Toni Anwar-HPC3 Assoc Prof Ts Dr Low Tang Jung-HPC3 Ts Abdullah Sani B Abd Rahman-CERDAS	MSc/PhD in Electrical and Electronics Engineering
		Energy Harvesting Sensor Networks & Modeling	Dr Micheal Driberg-CSE Assoc Prof Dr Izzatdin B A Aziz-CERDAS	MSc/PhD in Electrical and Electronics Engineering	
		Implementation Of 5G	Fully Integrated 5G IoT Sensors	Assoc Prof Dr Fawnizu Azmadi B Hussin-CSE Dr Micheal Driberg-CSE Assoc Prof Ir Dr Idris B Ismail-CSE	MSc/PhD in Electrical and Electronics Engineering

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Digital Transformation	Smart Offshore Infrastructure	Asset Health Monitoring	Automated Data Acquisition	Ir Dr M Mubarak A Wahab -OEC Dr. Ahmad Mahamad Al-Yacouby-OEC	MSc/PhD in Civil Engineering
		Pipeline Health Monitoring	Data Analysis & Interpretation	Ir Dr M Mubarak A Wahab Dr. Ahmad Mahamad Al-Yacouby Zazilah May-HPC3 Assoc Prof Ir Dr Idris Ismail-CSE	MSc/PhD in Civil Engineering
			Assessment & Life Extension	Ir Dr M Mubarak A Wahab -OEC Dr. Ahmad Mahamad Al-Yacouby-OEC Zazilah May-HPC3	MSc/PhD in Civil Engineering
		Automated & Smart Decision Support System (DSS)	Communication Driven DSS	Ir Dr M Mubarak A Wahab -OEC Dr. Ahmad Mahamad Al-Yacouby-OEC	MSc/PhD in Civil Engineering
			Data-driven DSS	Assoc Prof Ir Dr Idris B Ismail-CSE Ir Dr M Mubarak A Wahab -OEC Dr. Ahmad Mahamad Al-Yacouby-OEC	MSc/PhD in Civil Engineering
			Model-driven DSS	Assoc Prof Dr Dhanapal Durai Dominic P-POSCOM Assoc Prof Ir Dr Idris B Ismail-CSE Ir Dr M Mubarak A Wahab Dr. Ahmad Mahamad Al-Yacouby Assoc Prof Ir Dr Idris B Ismail-CSE	MSc/PhD in Civil Engineering

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Digital Transformation	Smart Offshore Infrastructure	Decommissioning	Offshore Assets & Pipelines Reuse & Recycling	Dr Ng Cheng Yee-OEC	MSc/PhD in Civil Engineering
		Offshore Project Management	Digitalization Of Offshore Project Management (BIM)	Dr. Rehan Akbar-POSCOM Dr Wesam Salah Alaloul-OEC	MSc/PhD in Civil Engineering
			Advanced Work Packaging	Dr Wesam Salah Alaloul-OEC	MSc/PhD in Civil Engineering
		Carbon Footprint Of Offshore Projects	Embedded CO2	Dr Wesam Salah Alaloul-OEC	MSc/PhD in Civil Engineering
			Emitted CO2	Dr Wesam Salah Alaloul-OEC	MSc/PhD in Civil Engineering
	Smart Materials for Circular Economy	Self-healing Materials	Graphene Materials For Pipeline & Asset]	Ts Dr Mohamed Shuaib-COINN Dr Lee Kean Chuan-CSE Assoc Prof Dr Bashar S. Mohammed-OEC	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
		Conversion / Management	Generation / Conversion - Flexible PV	Dr Siti Nur Azella Zaine-COINN	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
			Generation / Conversion - Hydrogen production Waste to Energy	Ts. Dr. Beh Hoe Guan-COINN Dr Hayyiratul Fatimah Mohd Zaid-COINN	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
		Composite Materials	Offshore Infrastructures & Maintenance	Assoc Prof Dr Bashar S. Mohammed-OEC Dr Wesam Salah Alaloul-OEC Dr Montasir Osman Ahmed Ali-OEC	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
		Storage	Conducting polymer	Muhammad Fadhlullah Abd. Shukur Dr Hayyiratul fatimah Mohd Zaid-COINN	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
			Nanocomposite electrolyte	Dr Siti Nur Azella Zaine-COINN Muhammad Fadhlullah Abd. Shukur-COINN Ts.Dr. Beh Hoe Guan-COINN Dr Hayyiratul fatimah Mohd Zaid-COINN	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Digital Transformation	Smart Materials for Circular Economy	Storage	High density energy materials	Dr Siti Nur Azella Zaine-COINN Dr. Khe Cheng Seong-COINN Muhammad Fadhlullah Abd. Shukur-COINN	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
			Hybrid materials	Dr. Khe Cheng Seong-COINN	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
			Nanofluids	Ali Samer-COINN	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
		Oil & Gas	Self-healing material	Dr Wesam Salah Alaloul-OEC	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
			Demulsification of crude oil-water	(1) & (2) Ali Samer-COINN Dr Lee Kean Chuan-CSE	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
			Nanofluids	(1) & (2) Ali Samer-COINN Dr Lee Kean Chuan-CSE	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
			Nanocoating	Ts Dr. M Shuaib M Saheed-COINN Ali Samer-COINN Dr Lee Kean Chuan-CSE Assoc Prof Dr Bashar S. Mohammed-OEC	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
			H ₂ S Production	(1) AP Dr Suriati Sufian	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
			CO ₂ Conversion	AP Dr Suriati Sufian-COINN Dr Lee Kean Chuan-CSE	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
			Asphaltene	Assoc Prof Ts Dr Zainal Arif-COINN	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering
Wastewater treatment	(1),(2). Dr Raihan Mahirah Ramli-COINN AP Dr Suriati Sufian-COINN	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering			

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM		
Digital Transformation	Smart Materials for Circular Economy	Sensor	Biosensor	Assoc Prof Dr Nor Hisham B Hamid-CSE	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering		
			Strain Sensor	Ts Dr Mohamed Shuaib AP Ts Dr Zainal Arif	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering		
			Wireless Sensor	Ir Dr Huzein Fahmi-COINN Assoc Prof Ir Dr Idris B Ismail-CSE Ts Abdullah Sani B Abd Rahman-CERDAS	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering		
			Heavy metals sensor	Assocs Prof Ts Dr Zainal Arif -COINN Ir Dr Huzein Fahmi-COINN	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering		
			Passive Quantum Thermo Magneto Sensor	Dr Dher M Badri Albarody-COINN Assoc Dr. Fawmizu Asmadi- CSE Dr Micheal Dreiberg-CSE	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering		
	Energy of Things	IoT	Lora WAN	Ir Dr Huzein Fahmi-COINN Assoc Prof Dr Fawnizu Azmadi B Hussin-CSE Dr Micheal Drieburg-CSE	MSc/PhD in Mechanical/Electrical and Electronics/Chemical Engineering		
				Solar Energy	Floating solar farms	Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE Dr Wesam Salah Alaloul-OEC	MSc/PhD in Civil Engineering MSc/PhD in Electrical and Electronics Engineering
				Wind Energy	Floating wind turbines	Assoc Prof Ir Dr Nursyarizal B Mohd Nor-CSE Dr Montasir Osman Ahmed Ali-OEC	MSc/PhD in Civil Engineering MSc/PhD in Electrical and Electronics Engineering
		Wave & Currant Energy	Offshore & Coastal	Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE Ts Dr. Ng Cheng Yee-OEC	MSc/PhD in Civil Engineering MSc/PhD in Electrical and Electronics Engineering		

THEME	FOCUS AREA	TOPICS	SUB TOPICS	SUPERVISOR	PG PROGRAM
Digital Transformation	Energy of Things	Simulation (CFD)	Offshore solar energy	Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE	MSc/PhD in Civil Engineering MSc/PhD in Electrical and Electronics
			Water body solar energy	Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE	MSc/PhD in Civil Engineering MSc/PhD in Electrical and Electronics Engineering
			Cost & harvesting efficiency	Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE	MSc/PhD in Civil Engineering MSc/PhD in Electrical and Electronics Engineering
		Optimization	Optimization of different renewable recourses	Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE Dr Montasir Osman Ahmed Ali-OEC	
		Devices	IC Design	Assoc Prof Dr Fawnizu Azmadi B Hussin-CSE Assoc Prof Dr Nor Hisham B Hamid-CSE	MSc/PhD in Civil Engineering MSc/PhD in Electrical and Electronics Engineering
			IC Testing	Assoc Prof Dr Fawnizu Azmadi B Hussin-CSE Assoc Prof Dr Nor Hisham B Hamid-CSE	MSc/PhD in Electrical and Electronics Engineering
		Power System Analysis	Power System studies	Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE Assoc Prof Ir Dr Idris B Ismail-CSE	MSc/PhD in Electrical and Electronics Engineering
			Power Quality, Transient	Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE	MSc/PhD in Electrical and Electronics Engineering
			Machine Stability	Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE	MSc/PhD in Electrical and Electronics Engineering
		Smart Energy System	Intelligent technologies	Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE Assoc Prof Dr Fawnizu Azmadi B Hussin-CSE	MSc/PhD in Electrical and Electronics Engineering
			Communication	Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE Dr Cheab Sovuthy-CSE	MSc/PhD in Electrical and Electronics Engineering
			Power & Energy Management System	Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE Assoc Prof Ir Dr Idris B Ismail-CSE	MSc/PhD in Electrical and Electronics Engineering
		Energy Management	Optimization of energy consumption	Assoc Prof Dr Dhanapal Durai Dominic P-POSCOM Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE Assoc Prof Dr Hanita Bt Daud-MaSS Assoc Prof Ts Dr Mahmud Othman-MaSS Dr Rajalingam A/L Sokkalingam-MaSS	MSc/PhD in Electrical and Electronics Engineering
			Energy Storage	Assoc Prof Ir Dr Nursyarizal B Mohd Nor -CSE	MSc/PhD in Electrical and Electronics Engineering

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PROGRAM
Natural Gas Sustainability With Efficient Contaminant Management	Contaminant Capture	Elucidation of Mechanism on CO ₂ and CH ₄ Gases Separation through Silanated-Linde-T and 6FDA-based Polyimide Composite Hollow Fiber Membranes	AP Dr Yeong Yin Fong	MSc/PhD in Chemical Engineering
		Superhydrophobic Hollow Fiber Membrane Prototype For Co ₂ Removal in Mbc	AP Dr Oh Pei Ching	MSc/PhD in Chemical Engineering
		Dispersion Software Development	AP Dr Oh Pei Ching	MSc/PhD in Chemical Engineering
		Zeolite Membrane Prototype for Efficient CO ₂ /CH ₄ Separation (PRGS)	Dr. Chew Thiam Leng	MSc/PhD in Chemical Engineering
		Development of Mixed Matrix Membrane for High CO ₂ /CH ₄ Separation Performance (JRP)	Dr. Chew Thiam Leng	MSc/PhD in Chemical Engineering
		Trinuclear hybrid membrane for CO ₂ /CH ₄ separation	Dr Norwahyu Jusoh	MSc/PhD in Chemical Engineering
		Membrane for environmental remediation	Dr Norwahyu Jusoh	MSc/PhD in Chemical Engineering
		Optimization of Treatment using Membrane Separation in Amine CO ₂ Capture Process (JRP)	Dr Serene Lock Sow Mun	MSc/PhD in Chemical Engineering
		Elucidation of Heavy Hydrocarbon Condensation Phenomenon in Hollow Fiber Membrane Module during Natural Gas-CO ₂ Separation Using Computational Fluid Dynamics Simulation	AP Ir Dr Lau Kok Keong	MSc/PhD in Chemical Engineering
		Functionalized Metal-organic Framework-based Membrane for Highly Selective CO ₂ Capture	Dr Khairulazhar Jumbri	Master of Science PhD in Applied Science
		Selective Removal of H ₂ S from Sour Natural Gas Using Task-Specific IIs	Dr Khairiraihanna Johari	MSc/PhD in Chemical Engineering
		Scaling-out of microchannel CO ₂ absorption	Dr. Afiq Bin Mohd Laziz	MSc/PhD in Chemical Engineering
		flow distribution improvement in scaling-out microchannel co ₂ absorption system	Dr. Afiq Bin Mohd Laziz	MSc/PhD in Chemical Engineering
		CFD analysis of multiphase flow inside microchannel co ₂ absorption system	Dr. Afiq Bin Mohd Laziz	MSc/PhD in Chemical Engineering
Development Of Surfaces With Ultra-low Contact Angle Hysteresis For Gas-liquid Contacting Process	AP Dr Oh Pei Ching	MSc/PhD in Chemical Engineering		

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PROGRAM
Natural Gas Sustainability With Efficient Contaminant Management	Contaminant Capture	Techno-economic assessment of carbon capture at refinery & CO2 utilization	AP Dr Haslinda Zabiri	MSc/PhD in Chemical Engineering
		Synthesis and Performance Evaluation of Low-Cost Solvent for CO2 Utilization	AP Ir Dr Lau Kok Keong	MSc/PhD in Chemical Engineering
		Hybrid Solvents (Aqueous Amine-Phosphonium/Ammonium Ionic Liquid) for CO2 Capture Experimental Approach and Optimization study via Response Surface Methodology (RSM)	Mohd Faisal Taha	Master of Science
		Trace contaminants removal from high CO2 content natural gas using Amine Based solvent	Prof Dr Azmi Mohd Shariff	PhD in Chemical Engineering
		Raman-Based CO2-Alkanolamine Monitoring System	AP Dr Abdul Halim Shah Maulud	MSc/PhD in Chemical Engineering
		Modelling and optimization of two-stage CO2-MEA absorption process	AP Dr Abdul Halim Shah Maulud	MSc/PhD in Chemical Engineering
		CFD Study Of Corrosion Rate Influence By Gas Hydrate In High Co2 Natural Gas System	Dr Bhajan Lal	PhD in Chemical Engineering
		Selective Separation of Carbon Dioxide from Flue Gas using Gas Hydrate Technology	Dr Bhajan Lal	PhD in Chemical Engineering
		CO2 and NG Hydrate Based Produced Water Desalination : Thermodynamic Study	Dr Bhajan Lal	PhD in Chemical Engineering
		Experimental Measurement of Biodegradable Hydrate Inhibitors for Rich Co2 Natural Gas System	Dr Bhajan Lal	PhD in Chemical Engineering
		Thermodynamic Study of CO2 and H2O limit to avoid hydrate formation in LNG process	Prof Dr Azmi Mohd Shariff	PhD in Chemical Engineering
		Hydrogen adsorption and storage on porous materials ,	Dr Khairiraihanna Johari	MSc/PhD in Chemical Engineering
		Investigation of Isosteric Heat of Adsorption of Metal Organic Frameworks Toward Formation of Cyclic Carbonate Compounds from CO2	Dr Zulkifli Merican Aljunid Merican	PhD in Applied Science
Catalytic Oxidative Desulfurization of Fuel using POMOF Composites: Experimental Study and Computational Modelling	Dr Zulkifli Merican Aljunid Merican	PhD in Applied Science		

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PROGRAM
Natural Gas Sustainability With Efficient Contaminant Management	Contaminant Capture	Adsorption kinetics of carbon dioxide in plant-based biochar	Pn Mazlin	Master of Science in Petroleum Engineering
		Investigation of Ultramicroporous Metal Organic Framework for CO ₂ Adsorption- A Simulation Study	AP Dr Yeong Yin Fong	MSc/PhD in Chemical Engineering
		Tailoring Magnetic Mof For Misa Process	AP Dr Oh Pei Ching	MSc/PhD in Chemical Engineering
		Development Of Des Derived Composite For Co ₂ Reduction	AP Dr Oh Pei Ching	MSc/PhD in Chemical Engineering
		Effective tailoring and development of adsorbents for potential improvement in gas adsorption kinetics	Dr Chuah Chong Yang	MSc/PhD in Chemical Engineering
		Development and synthesis of high-performance porous materials for CO ₂ conversion	Dr Chuah Chong Yang	MSc/PhD in Chemical Engineering
		Development of 3D Mesoporous Silica Adsorbent for CO ₂ Capture from Air (YUTP-FRG)	Dr. Chew Thiam Leng	MSc/PhD in Chemical Engineering
		Development Of 3-Dimensional Adsorbent For High CO ₂ Adsorption Performance (Murata)	Dr. Chew Thiam Leng	MSc/PhD in Chemical Engineering
		Bulk CO ₂ /CH ₄ separation for offshore operating conditions by means of functionalized adsorbent	Dr Norwahyu Jusoh	MSc/PhD in Chemical Engineering
		Development and synthesis of adsorbent for effective direct air capture	Dr Chuah Chong Yang	MSc/PhD in Chemical Engineering
		Development of Zeolite Adsorbent for Methane Adsorption	Dr. Chew Thiam Leng	MSc/PhD in Chemical Engineering
		Sulfur based polymer for Boron removal	Dr Wan Zaireen Nisa Yahya	PhD in Chemical Engineering
		Sustainable aerogels beads for effective CO ₂ capture and storage	Dr Nurul Ekmi Binti Rabat	MSc in Chemical Engineering
		Development of MOF Adsorbent for CO ₂ Capture at High Pressure Gas Stream	AP Dr Mohamad Azmi Bustam	MSc/PhD in Chemical Engineering
CO ₂ /CH ₄ Adsorption Using Gallate-based Metal-organic Frameworks	AP Dr Mohamad Azmi Bustam	MSc/PhD in Chemical Engineering		

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PRORAM
Natural Gas Sustainability With Efficient Contaminant Management	Safe Transportation	Utilization of CO ₂ as natural refrigerant for cryogenic separation process: A simulation study	Dr Bhajan Lal	PhD in Chemical Engineering
		Phase behavior study during blowdown of CO ₂ content Natural Gas from cryogenic process	Prof Dr Azmi Mohd Shariff	PhD in Chemical Engineering
		Investigating The Efficiency Of Hybrid Green Inhibitors On Corrosion Behaviour Of Carbon Steel In H ₂ s & Co ₂ Gas Environment	Dr Mazli Mustapha	PhD in Mechanical Engineering
		Preferential Welding Corrosion (PWC) of Carbon Steel under flowing CO ₂ condition and mitigation by corrosion inhibitor	Dr Kee Kok Eng	MSc in Mechanical Engineering
		Mitigation by top-of-line corrosion (TLC) in wet gas stream using volatile corrosion inhibitor (VCI)	Dr Kee Kok Eng	PhD in Mechanical Engineering
		Wax Deposition Prevention Through Chemical Method	Dr Hazlina	MSc/PhD in Petroleum Engineering
		Low Temperature Demulsifier for Asphaltene Problematic Crude Oil	Dr Hazlina	MSc/PhD in Petroleum Engineering
		Development of Data Analytic Tool of Dynamically Cooled Waxy Crude using Compressibility and Thermal Shrinkage Correlations	Dr Hazlina	MSc/PhD in Petroleum Engineering
		Downhole Separation of CO ₂ using Hybrid Approach	Dr Tamiru	PhD in Petroleum Engineering
		Predictive Algorithm for Non-invasive two-phase flow regime identification	Dr William	MSc/PhD in Mechanical Engineering
		Numerical investigation of U-bends vibration due to internal two-phase flow Using dynamic pressure data to meter two-phase flow rate	Dr William	MSc/PhD in Mechanical Engineering
				In-line Centrifuge Based Hydrate Inhibition Mechanism for Deepwater Gas Pipelines

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PROGRAM
Natural Gas Sustainability With Efficient Contaminant Management	Safe Transportation	A binary mixture of ionic liquid and hydrocarbon as a solvent to enhance dissolution of wax in oil transport	Dr Mohd Hilmi Noh	MSc in Chemical Engineering
		Fundamental analysis of cost-efficient hybrid composite joint for medium and low budget applications	AP Dr Saravanan Karuppanan	MSc/PhD in Mechanical Engineering
		Impact Damage prediction in composite repaired pipes, subjected to hygrothermal ageing.	Dr Zulfiqar Hussain	MSc in Mechanical Engineering
		The mechanical performance and corrosion behaviour of glass fibre reinforced polymer (GFRP) to steel laminate structure for composite repair system in oil and gas structural engineering application	Dr Mazli Mustapha	PhD in Mechanical Engineering
		Compatibility of renewable/alternative fuel with fuel system materials (metal corrosion and polymer degradation)	Dr Davannendran Chandran	MSc/PhD in Mechanical Engineering
		2D material anticorrosion coating focusing on piping material at chemical plant.	Dr Davannendran Chandran	MSc/PhD in Mechanical Engineering
		Development Of Natural Fiber Reinforced Polymer Composite For Structural Application	Prof Faiz ahmad	PhD in Mechanical Engineering
		Noble metal decorated graphene reinforced Cu matrix composite via powder injection molding for thermal management	Prof Faiz ahmad	PhD in Mechanical Engineering
		A Study of Nano-Titanium and Hydroxyapatite on Physical and Mechanical Properties of a 3D Printed 316L Stainless Steel for Bio-medical Implant	Prof Faiz ahmad	MSc in Mechanical Engineering
		Synthesis of Thermally Resistant Thermal Barrier coating and Characterization on super-alloy for Gas Turbine Application	Prof Faiz ahmad	PhD in Mechanical Engineering
		Rust stabilisation analysis	Dr Norlin Nosbi	MSc/PhD in Mechanical Engineering
		Evaluation on fiber composites degradation	Dr Norlin Nosbi	MSc/PhD in Mechanical Engineering
Dual functionality of sustainable intumescent coating	AP Dr Puteri Sri Melor	MSc/PhD in Mechanical Engineering		
Notch sensitivity of 3D fibre reinforced thermoplastic composites under uniaxial loading	AP Dr Puteri Sri Melor	MSc/PhD in Mechanical Engineering		

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PROGRAM
Natural Gas Sustainability With Efficient Contaminant Management	Safe Transportation	Dry reforming of methane using Ni-based catalyst for Syngas production from greenhouse gases	AP Dr Bawadi Abdullah	MSc/PhD in Chemical Engineering
		Synthesis and Characterization of zeolite or zeotype adsorbents	Dr Chuah Chong Yang	MSc/PhD in Chemical Engineering
		Creation and synthesis of carbon-based materials with large accessible surface areas	Dr Chuah Chong Yang	MSc/PhD in Chemical Engineering
		Development of Dual-Layer Metal Organic Framework/Cellulose Acetate Mixed Matrix Hollow Fiber Membrane for CO ₂ Capture	AP Dr Yeong Yin Fong	MSc/PhD in Chemical Engineering
		Molecular Design of Hydrophobic Silica/Polypropylene based Mixed Matrix Membrane Contactor using Monoethanolamine for Enhanced CO ₂ /CH ₄ Separation	Dr Serene Lock Sow Mun	MSc/PhD in Chemical Engineering
		Molecular Dynamics Simulation Studies of Ionic Liquid Mixed Matrix Membrane for Enhanced CO ₂ /CH ₄ Separation	Dr Serene Lock Sow Mun	MSc/PhD in Chemical Engineering
		Smart coating with autonomous self-healing and dual functionality	AP Dr Puteri Sri Melor	MSc/PhD in Mechanical Engineering
		Effect of acidic ionic liquid on solubility of polyether ether ketone (PEEK)	Dr Mohd Hilmi Noh	MSc in Chemical Engineering
		Hydrogen Sulfide Direct Conversion to Elemental Sulfur by Using Non-Halide Magnetic-Ionic Liquid at Ambient Condition.	AP Dr Mohamad Azmi Bustam	MSc/PhD in Chemical Engineering
		Chloride-induced Stress Corrosion Cracking for Austenitic Stainless Steel under Thermal Insulation	Dr Kee Kok Eng	MSc/PhD in Mechanical Engineering

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PROGRAM	
Natural Gas Sustainability With Efficient Contaminant Management	Contaminant Utilization to Value Added Product	Video-based Diagnostics of Pipelines using Deep Learning and Intelligent Systems	Dr Tamiru	PhD in Mechanical Engineering	
		Diagnostics and prognostics of pipeline compressor system using adaptive techniques.	Dr Tamiru	PhD in Mechanical Engineering	
		Physics-based Deep Learning Models for Prediction of Acoustically Induced Vibration in Piping Systems	Dr Tamiru	PhD in Mechanical Engineering	
		Multiphase flow induced vibration diagnostics and prediction using stochastic approach	Dr Tamiru	PhD in Mechanical Engineering	
		Photocatalytic CO ₂ to Methanol Conversion Using UiO-67-Lewis Pair Functionalized Catalyst.	Dr Zulkifli Merican Aljunid Merican	PhD in Applied Science	
		Non-thermal dielectric barrier discharge plasma - catalytic reactor for direct conversion of CO ₂ -CH ₄ to syngas via dry reforming process	AP Dr Yeong Yin Fong	MSc/PhD in Chemical Engineering	
	Hazardous Materials & Process Management		Catalytic ionic liquids for one pot hydrogen sulfide conversion at ambient temperature	AP Dr Mohamad Azmi Bustam	MSc/PhD in Chemical Engineering
			Green Hydrogen Research & Production Centre	Prof Fakhruddin	MSc/PhD in Mechanical Engineering
			Sustainability index integrated with a circular economy in F&B industry	Dr Nabila Farhana	MSc/PhD in Chemical Engineering
			Development of Socio-Economic-Environmental Assessment using SROI and PTT approach in palm oil mill	Dr Nabila Farhana	MSc/PhD in Chemical Engineering
			Technoeconomic and Life Cycle Assessment of CO ₂ Utilization Using Multiscale Simulation Approach (YUTP-FRG)	Dr Serene Lock Sow Mun	MSc/PhD in Chemical Engineering
			Modified Bio-based Ionic Liquid – Carbon Paste Electrode in Water Electrolysis System for Hydrogen Production: Modelling and Experimental Approach	Ts ChM Dr Mohd Dzul Hakim bin Wirzal	MSc/PhD in Chemical Engineering

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PROGRAM
Natural Gas Sustainability With Efficient Contaminant Management	Hazardous Materials & Process Management	Design of Task Specific Solvents for Petroleum Sludge Treatment	Dr Aliyu Adebayo Sulaimon	MSc/PhD in Petroleum Engineering
		Development of Human Reliability Assessment for Abnormal Situation Management in Hazardous Process Industry (ENHANCE)	Dr Risza	MSc/PhD in Chemical Engineering
		Experimental Investigation and Data-driven Modeling of the Explosion Characteristics of Dust/Powder	Dr Azizul	MSc/PhD in Chemical Engineering
		Inherent Safety Properties Characterization for Hydrogen Production and Distribution	Dr Syaza	MSc/PhD in Chemical Engineering
		Inherent Health Properties Characterization for Hydrogen Production and Distribution	Dr Syaza	MSc/PhD in Chemical Engineering
		Simulation and techno-economic analysis of Gas Hydrate	Dr Dzulkarnain	MSc/PhD in Chemical Engineering
		Thermodynamic Inhibition Effect Of Ammonium Based Ionic Liquids On Methane Hydrates	Dr Dzulkarnain	MSc/PhD in Chemical Engineering
		Thermodynamic Modeling Application in CO ₂ Gas Hydrate Mitigation	Dr Dzulkarnain	MSc/PhD in Chemical Engineering
		Probabilistic assessment for hydrogen refueling station	Dr Risza	MSc/PhD in Chemical Engineering
		Holistic sustainability assessment for integrated biorefinery process design	Dr Risza	MSc/PhD in Chemical Engineering
		Development of probabilistic model for accurate flame and gas detection system for hydrogen system	Dr Risza	MSc/PhD in Chemical Engineering
		Development of Predictive Model for Process Safety Performance Indicators (PSPI) of Loss of Containment in Hazardous Process Industry (ENHANCE)	Dr Risza	MSc/PhD in Chemical Engineering
Development of Predictive Analytics Model for Risk Assessment in hydrogen production process using Bayesian Network	Dr Mardhati	MSc/PhD in Chemical Engineering		

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PROGRAM
Natural Gas Sustainability With Efficient Contaminant Management	Hazardous Materials & Process Management	Development of Predictive Analytics Model for Human Factor Assessment in hydrogen production process using Bayesian Network	Dr Mardhati	MSc/PhD in Chemical Engineering
		Modelling Approach For Failure Rate Prediction (A Case Study Of Heat Exchanger)	Dr Dzulkarnain	MSc/PhD in Chemical Engineering
		Advisory diagnostic tool for inferential model validation and monitoring	AP Dr Haslinda Zabiri	MSc/PhD in Chemical Engineering
		An Online Automated Control Valve Health Monitoring System For Industrial Process Loops using BSD method	AP Dr Haslinda Zabiri	MSc/PhD in Chemical Engineering
		A Diagnostic Tool For Automated Controller Tuning Status Identification In Process Control Loops	AP Dr Haslinda Zabiri	MSc/PhD in Chemical Engineering
		ValveStic™ – Web-based Valve Diagnostic Tool via deep-learning CNN-PCA	AP Dr Haslinda Zabiri	MSc/PhD in Chemical Engineering
		Predictive Monitoring of Acid Gas Removal Unit	AP Dr Haslinda Zabiri	MSc/PhD in Chemical Engineering
		Predictive Model for Monitoring CO ₂ Emission in Malaysia	Dr Aliyu Adebayo Sulaimon	MSc/PhD in Petroleum Engineering
		Multiscale Process Monitoring of Chemical Processes	AP Dr Abdul Halim Shah Maulud	MSc/PhD in Chemical Engineering
		Investigating the Performance of Hydrogen Storage Tanks under fire conditions to choose appropriate Fire Resistance Rating of the tanks	Dr Mohammad Shakir Nasif	PhD in Chemical Engineering
		Ionic Liquid-based Media for Hydrogen Storage System	Dr Aliyu Adebayo Sulaimon	MSc/PhD in Petroleum Engineering

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PROGRAM
Sustainable Subsurface Energy	Natural Resources Investigation Via Subsurface Imaging	CO2/Hydrogen Storage	Dr AKM Eahsanul Haque Dr Abdul Halim Abdul Latiff	MSc/PhD in Petroleum Geoscience
		Geothermal Analysis	Dr Khairul Arifin M Noh Ts Muhammad Noor Amin Zakariah	MSc/PhD in Petroleum Geoscience
		Ground Water Investigation	Dr Khairul Arifin M Noh Ts Muhammad Noor Amin Zakariah	MSc/PhD in Petroleum Geoscience
		Geo Hazard	Dr Abdul Halim Abdul Latiff Dr Maman Hermana	MSc/PhD in Petroleum Geoscience
		Passive Seismic	Dr Abdul Halim Abdul Latiff Dr AKM Eahsanul Haque	MSc/PhD in Petroleum Geoscience
		Quantitative & Qualitative Interpretation	Dr Maman Hermana Dr Eahsanul Haque	MSc/PhD in Petroleum Geoscience
		Processing & Imaging	Dr Abdul Halim Abdul Latiff AP Dr Hassan Soleimani	MSc/PhD in Petroleum Geoscience
		Reservoir Characterization	AP Dr Mohamed Elsaadany Dr AKM Eahsanul Haque	MSc/PhD in Petroleum Geoscience
		Aeromagnetic	AP Dr Hassan Soleimani Dr Afza Shafie	MSc/PhD in Petroleum Geoscience
		CSEM method (controlled source electromagnetic method)	AP Dr Hassan Soleimani Dr Afza Shafie Dr Khairul Arifin M Noh	MSc/PhD in Petroleum Geoscience
		FTG method (Full Tensor Gradiometry method)	AP Dr Hassan Soleimani Ts Muhammad Noor Amin Zakariah	MSc/PhD in Petroleum Geoscience
		Seismic	Dr Abdul Halim Abdul Latiff Dr Khairul Arifin M Noh	MSc in Petroleum Geoscience/MSc in Science PhD in Petroleum Geoscience
		Resistivity	Dr Khairul Arifin M Noh Ts Muhammad Noor Amin Zakariah	MSc/PhD in Petroleum Geoscience
		Gravity	Dr Khairul Arifin M Noh Ts Muhammad Noor Amin Zakariah	MSc/PhD in Petroleum Geoscience
TEM (Transmission electron microscopy)	Dr Khairul Arifin M Noh Ts Muhammad Noor Amin Zakariah	MSc/PhD in Petroleum Geoscience		
Magnetic	Dr Khairul Arifin M Noh Ts Muhammad Noor Amin Zakariah	MSc/PhD in Petroleum Geoscience		

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PROGRAM
Sustainable Subsurface Energy	Geology for Natural Resources Exploration	Mineral carbonization	Dr Haylay Tsegab Gebretsadik	MSc/PhD in Petroleum Geoscience
		Subsurface storage identification	Ts Dr Siti Nur Fathiyah Dr Haylay Tsegab Gebretsadik Dr Numair Ahmed Siddiqui	MSc/PhD in Petroleum Geoscience
		Pore spaces characterization	Dr Haylay Tsegab Gebretsadik Dr Nor Syazwani Dr Numair Ahmed Siddiqui Dr Eswaran	MSc/PhD in Petroleum Geoscience
		Reservoir capacity	Dr Numair Ahmed Siddiqui Ts Dr Siti Nur Fathiyah Dr Haylay Tsegab Gebretsadik	MSc/PhD in Petroleum Geoscience
		Rock mechanics	Dr Choong Chee Meng, Dr Shiferaw Regassa Jufar	MSc/PhD in Petroleum Geoscience
		Geo-Energy (prospect and characterization)	Dr Choong Chee Meng Dr Mohd Suhaili	MSc/PhD in Petroleum Geoscience
		Mineral exploration	Dr Choong Chee Meng, Dr Mohd Suhaili Dr Haylay Tsegab Gebretsadik AP Dr Eswaran A/L A.R Padmanabhan	MSc/PhD in Petroleum Geoscience
		Geo-Hazard	Ms. Nur Huda Dr Mohd Suhaili Dr Choong Chee Meng	MSc/PhD in Petroleum Geoscience

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PROGRAM
Sustainable Subsurface Energy	Geology for Natural Resources Exploration	Basin prospectively	Dr Nor Syazwani binti Zainal Abidin Ts Dr Siti Nur Fathiyah binti Jamaludin Dr Haylay Tsegab Gebretsadik Mr. Noor Azahar Ibrahim Mr Mohamad Shaufi bin Sokiman Ms Nur Huda binti Mohd Jamin, Dr Choong Chee Meng, AP Dr Eswaran A/L A.R Padmanabhan Dr Mohd Suhaili bin Ismail Dr Numair Ahmed Siddiqui	MSc/PhD in Petroleum Geoscience
		Outcrop analogue	Dr Choong Chee Meng, Dr Haylay Tsegab Gebretsadik Dr Mohd Suhaili bin Ismail Mr Noor Azahar Ibrahim	MSc/PhD in Petroleum Geoscience
		Underground sequestration for CO ₂ , and H ₂ depleted hydrocarbon reservoir	Dr Muhammad Aslam Bin Md Yusof Dr Iskandar Bin Dzulkarnain Dr Berihun Mamo Negash Dr Mohammed Abdalla Ayoub AP Jang Hyun Lee Dr Maqsood Ahmad	MSc/PhD in Petroleum Engineering
		Caprock integrity & leakage remediation	Dr Iskandar Dzulkarnain Dr Nur Asyraf Bt Md Akhir Dr Shiferaw Regassa Jufar AP Jang Hyun Lee Dr Dzeti Farhah binti Mohshim AP Dr Syahrir Ridha	MSc/PhD in Petroleum Engineering
		CCUS for improved recovery	AP Dr Syed Mohammad Mahmood AP Jang Hyun Lee Dr Mohammed Abdalla Ayoub AP Dr Mohd Azahar Ibrahim	MSc/PhD in Petroleum Engineering

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PROGRAM
Sustainable Subsurface Energy	Geology for Natural Resources Exploration	Multiphase injection studies	AP Jang Hyun Lee Dr Muhammad Aslam Bin Md Yusof Dr Mysara Eissa Mohyaldinn Elhaj Dr Berihun Mamo Negash	MSc/PhD in Petroleum Engineering
		Techno-economic studies	Mr. Juhairi Aris bin Muhamad Shuhili AP Dr Ismail bin Mohd Saaid	MSc/PhD in Petroleum Engineering
		Conformance control & reservoir profile modification	AP Dr Ismail bin Mohd Saaid Dr Iskandar Bin Dzulkarnain Dr Mohammed Abdalla Ayoub Ts Nabilla Afzan binti Haji Abdul Aziz Ms Mazuin Jasamai	MSc/PhD in Petroleum Engineering
		Near-wellbore IOR	Dr Mohammed Abdalla Ayoub AP Dr Khaled Abdalla Elraies AP Dr Syed Mohammad Mahmood Dr Berihun Mamo Negash Ms Mazuin Jasamai	MSc/PhD in Petroleum Engineering
		Productivity & injectivity studies	AP Jang Hyun Lee Dr Muhammad Aslam Bin Md Yusof Dr Mysara Eissa Mohyaldinn Elhaj Dr Berihun Mamo Negash Dr Mohammed Abdalla Ayoub	MSc/PhD in Petroleum Engineering
		Reservoir fluid dynamics	AP Jang Hyun Lee Mr Juhairi Aris Bin Muhamad Shuhili Dr Mohammed Abdalla Ayoub	MSc/PhD in Petroleum Engineering
		Reservoir modeling & characterization	AP Jang Hyun Lee Dr Berihun Mamo Negash Dr Mohammed Abdalla Ayoub Mr Juhairi Aris Bin Muhamad Shuhili	MSc/PhD in Petroleum Engineering

THEME	FOCUS AREA	TOPICS	SUPERVISOR	PG PROGRAM
Sustainable Subsurface Energy	Geology for Natural Resources Exploration	Sand control , fines migration and injectivity	Dr Mysara Eissa Mohyaldinn Elhaj Dr Mohd Azuwan Bin Maoinsar Dr Iskandar Bin Dzulkarnain	MSc/PhD in Petroleum Engineering
		Scaling inhibition & mitigation	AP Dr Ismail Bin Mohd Saaid Dr Nur Asyraf Bt Md Akhir Dr Dzeti Farhah Bt Mohshim Dr Sia Chee Wee AP Dr Khaled Abdalla Elraies Ms Mazuin Jasamai	MSc/PhD in Petroleum Engineering
		Subsurface precipitation & hydration	AP Dr Ismail Bin Mohd Saaid Dr Nur Asyraf Bt Md Akhir Dr Berihun Mamo Negash Dr Dzeti Farhah Bt Mohshim Dr Sia Chee Wee AP Dr Khaled Abdalla Elraies Ms Mazuin Jasamai	MSc/PhD in Petroleum Engineering
		Acidizing & fracturing	Dr Mysara Eissa Mohyaldinn Elhaj Dr Iskandar Bin Dzulkarnain	MSc/PhD in Petroleum Engineering
		Completion fluids	AP Dr Syahrir Ridha Dr Berihun Mamo Negash	MSc/PhD in Petroleum Engineering
		Drilling fluids, cementing & additives	AP Dr Syahrir Ridha Dr Muhammad Aslam Bin Md Yusof Dr Berihun Mamo Negash Dr Maqsood Ahmad	MSc/PhD in Petroleum Engineering
		Geomechanics for conventional & unconventional reservoir	Dr Shiferaw Regassa Jufar Dr Berihun Mamo Negash Dr Maqsood Ahmad	MSc/PhD in Petroleum Engineering