



KEMENTERIAN PENGAJIAN TINGGI
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI

POLITEKNIK
MALAYSIA
SULTAN SALAHUDDIN ABDUL AZIZ SHAH

e-PROCEEDING CIE-TVET VIRTUAL CONFERENCE 2022

12th NATIONAL CONFERENCE
IN TECHNICAL EDUCATION & VOCATIONAL TRAINING 2022

5-6 SEPTEMBER 2022
POLITEKNIK SULTAN SALAHUDDIN ABDUL AZIZ SHAH



e-Proceeding of 12th National
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(CiE-TVET 2022)

TVET EDUCATION: LEVERAGING THE FUTURE

**5-6 SEPTEMBER 2022
POLITEKNIK SULTAN SALAHUDDIN ABDUL AZIZ SHAH**

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Development of Portable Muscle Therapy for Skeletal Muscle Injury by Using Electrical Muscle Stimulation (Ems) and Near Infrared

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ABSTRACT

Muscle injuries can broadly be classified as traumatic (acute) or overuse (chronic) injuries. Acute injuries are usually the result from a single traumatic event and caused a macro-trauma to the muscle. Whereby, chronic injuries are a chronic or exercise-induced injury which are subtler and usually occurs over a long period of time. Hence, muscle injury can be healed rapidly if the patient went for a muscle therapy that provided by a medical practitioner by using a muscle therapy device. The two common muscle therapy is Electrical Muscle Simulation Therapy and Near-Infrared Heat Treatment But the problem faced by the patients that lives in the rural areas are they have hard time to go for a muscle therapy due to the distance between their home and hospitals. Therefore, this project focused on designing a muscle device that is portable and easily carry for the use of treatment for patients that lives in the rural areas that will be provided by the medical practitioner. This project is to help people that lives in the rural areas to get treatment as other people that lives near to the hospital.

Keywords: electrical muscle stimulation (EMS), near infrared heat, portable, rechargeable battery

1. INTRODUCTION

Muscle is a soft tissue found in most animals. Muscle cells contain protein filaments of actin and myosin that slide past one another, producing a contraction that changes both the length and the shape of the cell. Muscles function to produce force and motion. They are primarily responsible for maintaining and changing posture, locomotion, as well as movement of internal organs, such as the contraction of the heart and the movement of food through the digestive system via peristalsis.

Muscle tissues is a tissue that derived from the mesodermal layer of embryonic germ cells in a process known as myogenesis. There are three types of muscle, which is skeletal , cardiac, and smooth. Muscle action can be classified as being either voluntary or involuntary. Cardiac and smooth muscles contract without conscious thought and are termed involuntary, whereas the skeletal muscles contract upon command (Best, 1997). Skeletal muscles in turn can be divided into fast and slow twitch fibers. Muscle injuries can be broadly classified as either traumatic (acute) or overuse (chronic) injuries (Beiner & Jokl, 2001). Acute injuries are usually the result of a single traumatic event and cause a macro-trauma to the muscle. There is an obvious link between the cause and noticeable symptoms. They mostly occur in contact sports such as rugby, soccer and basketball because of their dynamic and high collision impact (Best, 1997). Other than that, overuse injuries are a chronic or exercise-induced injury are subtler and usually it occurs over a long period of time. The injury usually happened after several repetitive of micro-trauma to the muscle. Diagnosing the injury is more challenging as there is a less obvious that link between the cause of the injury and the symptoms of the injury.

Electrical Muscle Stimulator (EMS) is a device that use electrical current to activate skeletal muscle and facilitate contraction. It is commonly used in clinical settings to mimic voluntary contractions and enhance the rehabilitation of human skeletal muscles. Although EMS is a commonly used in the management of conditions that include skeletal muscle dysfunction, the mechanisms associated with its effects are not widely agreed upon and, in many cases, are misunderstood. Thus, the purpose of this proposal is to present an evidence-based perspective that muscle fiber recruitment during EMS is in a nonselective, spatially fixed, and temporally synchronous pattern rather than in a reversal of the

The Proteus Design Suite is a proprietary software tool suite used primarily for electronic design automation. The software is used mainly by electronic design engineers and technicians to create schematics and electronic prints for manufacturing printed circuit boards. In this project, proteus is used to draw a schematic circuit to simulate the Electrical Muscle Stimulation

4.2 Arduino Programming

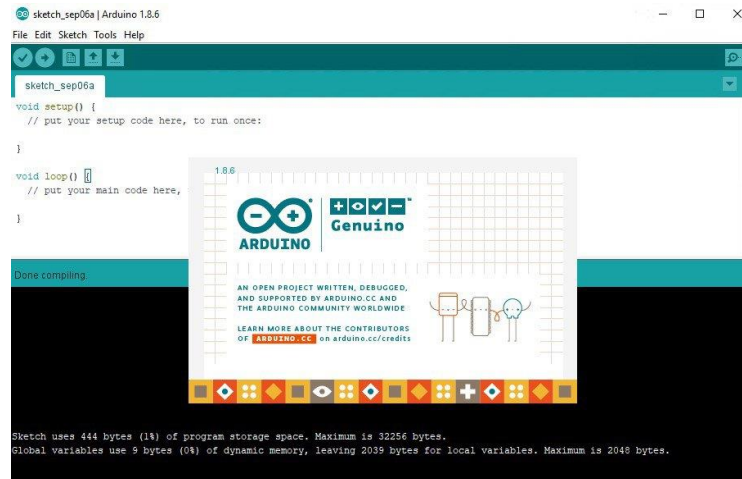


Figure 2: Figure of Arduino Software IDE

Arduino is an open-source electronics platform based on easy-to-use hardware and software. There are two types of program systems available, there is Arduino programming language (based on Wiring), and the Arduino Software (IDE), based on Processing. In this project, Arduino Software (IDE) is used to program the device.

4.3 Microsoft Excel

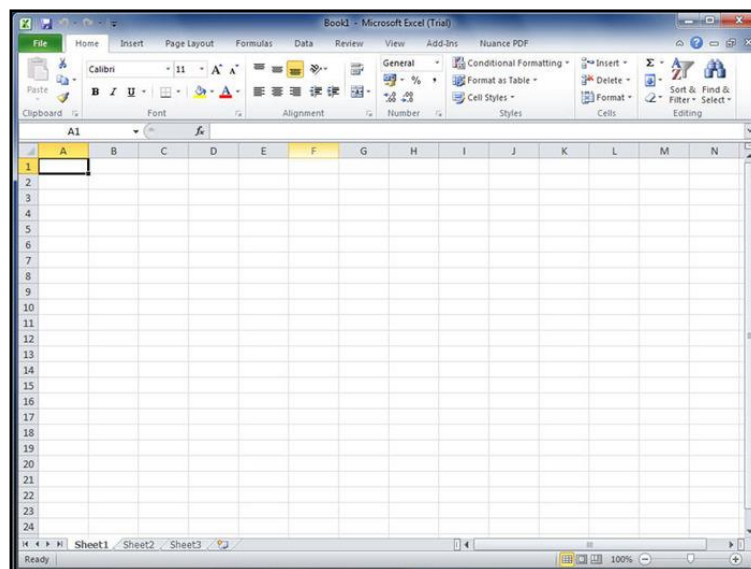


Figure 3: Figure of Microsoft excel

Microsoft excel software. It is used in this project to key in the data and convert into graphs. This software helps a lot in analysing data and survey that is recorded throughout this project. It creates graph automatically by using the data that has been inserted into the software.

4.4 Block Diagram

Based on Figure 4, as stated in the Block Diagram, a rechargeable battery is used as a supply to power up the muscle therapy device. After that, the user or physiotherapist must choose either they want to proceed with Electrical Muscle Stimulator (EMS) treatment or a Near-Infrared Heat treatment as needed by the user or patient. If they want to proceed with electrical muscle stimulator, the EMS will produced an electrical impulses to the patient’s or user’s applied muscle area through the Electrode Pads. If the user or physiotherapist choose Near-Infrared Heat treatment, then, the heat will be transfer to the patient’s or user’s applied muscle area through the Near-Infrared LED.

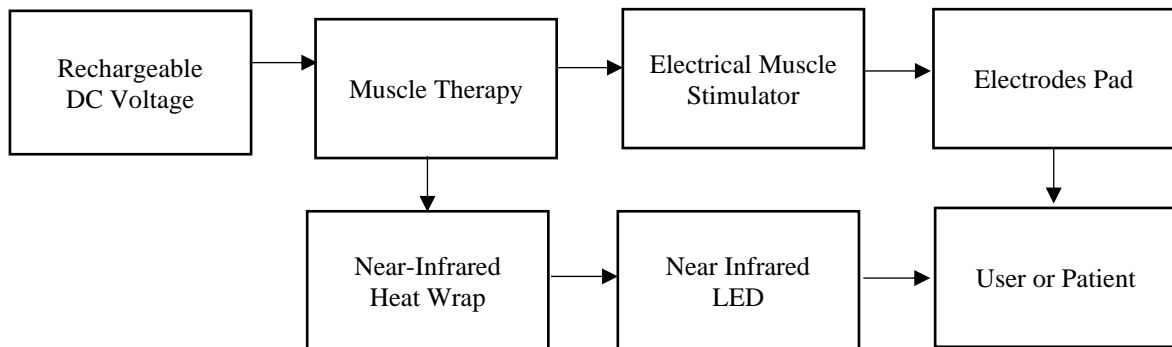


Figure 4: Block Diagram Electrical Muscle Stimulator and Infra Led

5. RESULTS

Testing and analysis was done after design and development are completed. This section includes analysis of each component in the circuit and their effect to the output result. Other than that, data collection from the survey has been done from the public and medical practitioner. In this chapter it discusses about the results and findings of the analysis conducted on this project. Every component value in the circuit were change one by one to witness and analyze if there is change and effect on the output either in voltages, frequencies, time and amplitudes. All of the components in the circuit were selected to be analyze and all the data has been collected and tabulated.

5.1 Analysis on the effect of Capacitor Value on the Output Voltage

From Table 1 and Figure 5, analysis has been made and the data shows that whenever the capacitor value 0 F and the output voltage is 4.7 V, and the output voltage is remained constant when the capacitor value above than 0 F.

Table 1: Table of recorded Capacitor Value and Output Voltage

No.	Capacitor Value	Output Voltage
1	0 F	4.7 V
2	0.1 uF	7.45 V
3	1 uF	7.45 V
4	10 uF	7.45 V
5	100 uF	7.45 V
6	200 uF	7.45 V

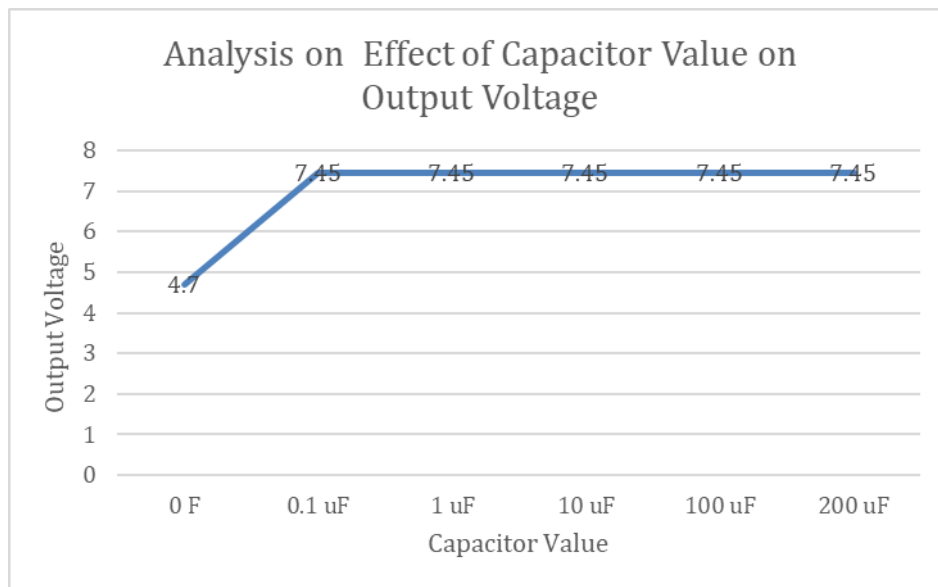


Figure 5: Data Between Capacitor Value and Output Voltage

5.2 Analysis on Boost Converter effect to the Output Voltage

From Table 2 and Figure 6, analysis has been made and the data shows that when the percentage of booster is 0% and the output voltage is 5 V, and the output voltage is remained increasing when the percentage of the booster is increasing.

Table 2: Percentage of Booster and Output Voltage

No.	Percentage of Booster	Output Voltage
1	0%	5 V
2	25%	12.5 V
3	50%	23 V
4	75%	37.45 V
5	100%	48 V

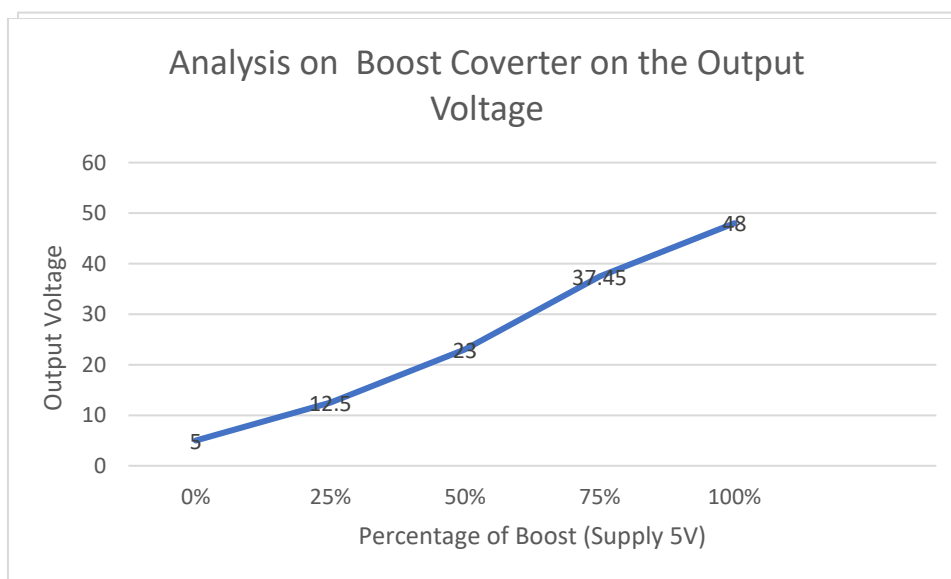


Figure 6: Plotted Data Between Boost Converter and Output Voltage

5.3 Analysis on the Effect of Variable Resistor Value on the Output Voltage

From the Table 3 and plotted graph in Figure 7, analysis has been made and 4.7K ohm resistor is used as a variable resistor. This is because from the analysis, it shows that the output voltage is constantly produce the same value of ouput voltage until 20K ohm, where the output voltage value started to decrease.

Table 3: Percentage of Booster and Output Voltage Records

No.	Variable Resistor Value (ohm)	Output Voltage (V)
1	1K	0.2
2	2K	5.6
3	3K	7.44
4	4K	7.45
5	5K	7.45
6	6K	7.45
7	7K	7.45
8	8K	7.45
9	9K	7.45
10	10K	7.45
11	20K	7.43
12	30K	7.43
13	40K	7.43
14	50	7.42

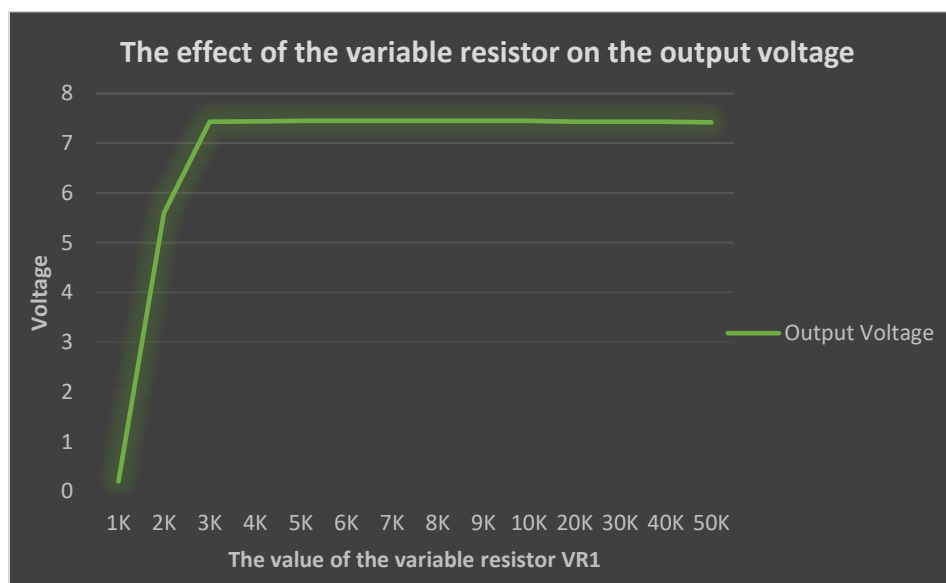


FIGURE 7: PLOTTED VARIABLE RESISTOR ON THE OUTPUT VOLTAGE

6. CONCLUSION

This project implements to do some innovation to muscle therapy device. The project is success to improve current muscle therapy device by adding some technology various features in order to improve the muscle injuries especially for lives in rural areas. Other than that, the muscle device has successfully made into a portable device and there is also two important muscle treatment in the single portable muscle therapy device. Next, this project also has analyzed the output of the muscle therapy devices in more detail reading. This project also a designed of muscle therapy device that the output can be customized as needed by the patients or users.

For a conclusion, as shown in the result of analysis, we can conclude that this project objective is successfully archived. This device is more practical than conventional method. It was succeeded on the improvement of the portable muscle therapy device compared to conventional method as the result are much faster and portable to archive. We also have successfully to analyse the development of the output of the therapy with a positive result. Overall, the objective of the study is succeeded to archive

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POLITEKNIK
MALAYSIA
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BUKU PROGRAM

CIE-TVET

VIRTUAL CONFERENCE

2022

12th NATIONAL CONFERENCE
IN TECHNICAL EDUCATION & VOCATIONAL TRAINING 2022

5-6 SEPTEMBER 2022
POLITEKNIK SULTAN SALAHUDDIN ABDUL AZIZ SHAH



ISI KANDUNGAN

Kata Alu-Aluan

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Kata Alu-Aluan Dr. Riam a/p Chau Mai Pengarah Pusat Penyelidikan dan Inovasi, Jabatan Pendidikan Politeknik dan Kolej Komuniti	2
Kata Alu-Aluan Dr. Hj. Mohd Zahari bin Ismail Pengarah Politeknik Sultan Salahuddin Abdul Aziz Shah	3
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KATA ALU-ALUAN

TIMBALAN KETUA PENGARAH (PERANCANGAN)

Assalamualaikum Warahmatullahi Wabarakatuh, Salam Sejahtera dan Salam Keluarga Malaysia.

Setinggi-tinggi kesyukuran kepada Allah S.W.T kerana dengan limpah *kurniaNya* *12th National Conference in Technical Education and Vocational Training (CiE-TVET) 2022* dapat dilaksanakan dengan jayanya.

Sekalung tahniah diucapkan kepada seluruh warga Politeknik Sultan Salahuddin Abdul Aziz Shah serta jawatankuasa yang bertungkus lumus bagi menjayakan CiE-TVET 2022 sehinggalah mencapai kemuncaknya pada hari ini. Syabas dan tahniah juga diucapkan kepada para peserta seminar CiE-TVET 2022. Perkongsian ilmu dalam kalangan para penyelidik amat diperlukan agar bidang pendidikan dan penyelidikan Negara sentiasa ke hadapan.

Sejajar dengan kemajuan teknologi IR4.0, tenaga pengajar bertanggungjawab mengembangkan minat, bakat dan kebolehan pelajar. Mereka harus bersikap peka dan responsif kepada sebarang bentuk perubahan teknologi dalam industri agar tidak ketinggalan zaman apabila berhadapan dengan para pelajar.

Justeru, CiE-TVET 2022 kali ini dilihat sebagai salah satu platform bagi para penyelidik untuk bertemu dan saling berkongsi hasil penyelidikan di antara satu sama lain. Perkongsian sebegini juga dapat meningkatkan kualiti keilmuan dalam kalangan ahli akademik seraya menyemai pembudayaan aktiviti penyelidikan di intitusi pengajian tinggi terutamanya di Politeknik dan Kolej Komuniti Malaysia. Ini seterusnya meletakkan Politeknik dan Kolej Komuniti ke persada kecemerlangan dan menjadi peneraju TVET negara yang unggul dan disegani.

Sekian, terima kasih.



YBrs. Dr ZUBAIDAH BINTI AMAN
TIMBALAN KETUA PENGARAH (PERANCANGAN)
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI

KATA ALU-ALUAN PENGARAH PUSAT PENYELIDIKAN DAN INOVASI

Salam Sejahtera dan Salam Keluarga Malaysia.

Terlebih dahulu syabas saya ucapkan kepada warga Politeknik Sultan Salahuddin Abdul Aziz Shah (PSA) serta seluruh jawatankuasa yang terlibat atas komitmen dalam menjayakan penganjuran *12th National Conference In Education-Technical and Vocational Education and Training (Cie-TVET 2022)*.

Syabas dan tahniah saya ucapkan kepada pembentang dan peserta seminar Cie-TVET 2022 kali ke -12. Saya percaya dengan adanya seminar seperti ini, kita dapat terus menyemarakkan semangat penyelidikan dalam kalangan warga JPPKK untuk lebih produktif di samping menggilap bakat penulis baharu. Tidak lupa juga saya ingin merakamkan penghargaan dan ucapan tahniah kepada semua ahli jawatankuasa seminar kali ini.

Agenda pemeraksanaan Pendidikan Teknikal dan Latihan Vokasional (TVET) yang didukung Jabatan Pendidikan Politeknik dan Kolej Komuniti (JPPKK) adalah selaras dengan hasrat negara dalam membangunkan aktiviti ekonomi berasaskan pengetahuan dan inovasi dengan melahirkan graduan TVET berkualiti. Oleh itu, perkongsian ilmu perlu diberi penekanan bagi memastikan ia sentiasa relevan, kini dan pada masa hadapan. Dapat saya simpulkan bahawa penganjuran seminar ini berjaya bertindak sebagai medium ilmu yang dipertanggungjawabkan untuk menyebarkan hasil kajian penyelidik.

Akhir kata, setinggi-tinggi ucapan tahniah dan terima kasih atas komitmen dan kerjasama yang diberikan kepada warga Politeknik Sultan Salahuddin Abdul Aziz Shah untuk penganjuran pada seminar Cie-TVET 2022 pada tahun ini. Diharap hasil penganjuran seminar kali ini dapat meningkatkan pengetahuan dan menjadi pemangkin ke arah kecemerlangan pendidikan TVET serta bakal mencorak aliran pendidikan yang lebih berkualiti di masa akan datang. Sekian, terima kasih.

YBrs. DR. RIAM A/P CHAU MAI
PENGARAH,
PUSAT PENYELIDIKAN DAN INOVASI,
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI



KATA ALU-ALUAN PENGARAH POLITEKNIK SULTAN SALAHUDDIN ABDUL AZIZ SHAH

Assalamualaikum Warahmatullahi Wabarakatuh, Salam Sejahtera dan Salam Keluarga Malaysia.

Alhamdulillah terlebih dahulu syukur ke hadrat Allah S.W.T. atas kurnia-Nya dan keizinan-Nya CiE-TVET 2022 berjaya dilaksanakan. Terima kasih kerana memberi kepercayaan kepada Politeknik Sultan Salahuddin Abdul Aziz Shah bagi menganjurkan seminar kali ini.

Tema “TVET Education: Leveraging the Future” yang bermaksud pendidikan TVET adalah satu pelaburan untuk masa hadapan yang dipilih sangat signifikan dan bertepatan dengan usaha kerajaan untuk memperkasakan TVET. Kelayakan pendidikan yang tinggi bagi menyokong pembangunan pengetahuan dan inovasi, tahap kemahiran yang tinggi dalam bidang teknikal dan profesional, serta paras produktiviti yang tinggi adalah ciri utama modal insan dan tenaga kerja negara berpendapatan tinggi.

Seminar ini turut memberi penghargaan kepada semua pembentang dan penyelidik yang terlibat secara langsung dan tidak langsung. Syabas dan tahniah kepada semua peserta yang banyak memberi sumbangan dalam bidang penyelidikan. Saya berharap seminar ini menjadi pemacu untuk pensyarah, staf dan pelajar untuk berkongsi ilmu pengetahuan bagi meningkatkan nilai kepakaran dalam bidang dan melatih pensyarah, staf dan pelajar untuk berfikir secara kreatif dan kritis bagi mencetus transformasi berkesan.

Setinggi-tinggi penghargaan juga diucapkan kepada semua pihak terutama ahli jawatankuasa yang bertungkus-lumus menjayakan *National Conference In Education-Technical And Vocational Education And Training 2022* kali ke-12 ini. Akhir kata, semoga seminar seumpama ini diteruskan dan dijadikan platform kepada warga Politeknik dan Kolej Komuniti untuk terus bersama-sama membudayakan penyelidikan.

Sekian, terima kasih.

YBrs. Dr. HJ. MOHD ZAHARI BIN ISMAIL
PENGARAH
POLITEKNIK SULTAN SALAHUDDIN ABDUL AZIZ SHAH




ATURCARA MAJLIS PENUTUP

TEMPAT: DEWAN AL-JAZARI, PSA

6 SEPTEMBER 2022 (SELASA)

MASA	PERKARA
2.00 petang	Ketibaan Jemputan
2.15 petang	Ketibaan YBrs. Dr. Zubaidah binti Aman Timbalan Pengarah (Perancangan) Jabatan Pendidikan Politeknik dan Kolej Komuniti
2.30 petang	Nyanyian Lagu Negaraku Tayangan Video Keselamatan Ucapan Alu-Aluan oleh YBrs. Dr. Haji Mohd Zahari bin Ismail Pengarah Politeknik Sultan Salahuddin Abdul Aziz Shah Ucapan Penutupan oleh YBrs. Dr. Zubaidah binti Aman Timbalan Pengarah (Perancangan) Jabatan Pendidikan Politeknik dan Kolej Komuniti
3.00 petang	<i>Keynote Speaker</i> : Prof. Ts. Dr. Uda Hashim Pengarah Institute of Nano Electric Engineering (INEE) Universiti Malaysia Perlis (UniMAP)
3.40 petang	Ulasan Ketua Reviewer: Dr Hj. Zunuwanas bin Mohamad Pensyarah Utama Politeknik Sultan Salahuddin Abdul Aziz Shah
3.50 petang	Penyampaian Anugerah Pembentang/ Penyelidikan Terbaik
4.00 petang	Penyampaian Cenderahati
4.15 petang	Sesi Bergambar
4.25 petang	Nyanyian Lagu Politeknik & Kolej Komuniti
4.30 petang	Minum Petang Bersurai
3.40 petang	Ulasan Ketua Reviewer: Dr Hj. Zunuwanas bin Mohamad Pensyarah Utama Politeknik Sultan Salahuddin Abdul Aziz Shah

JADUAL PEMBENTANGAN CIE-TVET 2022

MODERATOR : NURUL AKMAR BINTI KAMARUDDIN				 BILIK 1
JURI 1 : DR. AHMAD AZLAN BIN AB AZIZ				
JURI 2 : DR. SABARIAH BINTI BOHANUDIN				
PIC BILIK : SARIMAH BINTI CHE HASSAN				
SESI 1 TARIKH: 5/9/2022 (ISNIN) MASA: 9.00 PAGI – 12.00 TENGAHARI				
NO	PAPER ID	TAJUK	NAMA PEMBENTANG	INSTITUSI
1	CIE-TVET 2022-0001	PENGUMPULAN TERMA TENAGA SOLAR BAGI KITARAN RANKINE ORGANIK (ORK)	MUHAMAD ASRUL AFFENDI MAT NOR FARAH WAHEDA BINTI OTHMAN ZULKURNAIN BIN HASSAN	KK PASIR SALAK KK PASIR SALAK POLITEKNIK PORT DICKSON
2	CIE-TVET 2022-0017	MENINGKATKAN KEMAHIRAN MENGUASAI KURSUS APLIKASI KOMPUTER MENGGUNAKAN PENDEKATAN SAMPUL MISTERI	EMARIA AHMAD ABDUL RAHMAN BIN MORNI	KK KUCHING KK SARIKEI
3	CIE-TVET 2022-0020	GROWTH PERFORMANCE OF THREE PURPLE SWEET POTATO VARIETIES	SITI NURJIAH ABDULLAH	POLITEKNIK JELI
4	CIE-TVET 2022-0048	IOT BASED HOME AUTOMATION AND APPLIANCES CONTROL	MOHAMAD FAIZ BIN JAMALUDIN	PSIS

MODERATOR : SALIZAHANIM BINTI LEMAN				 BILIK 2
JURI 1 : DR. AZIAM BINTI MUSTAFA				
JURI 2 : DR. MOHAMAD SIRI BIN MUSLIMIN				
PIC BILIK : HARYANTI BT ABDULLAH				
SESI 1 TARIKH: 5/9/2022 (ISNIN) MASA: 9.00 PAGI – 12.00 TENGAHARI				
NO	PAPER ID	TAJUK	NAMA PEMBENTANG	INSTITUSI
1	CIE-TVET 2022-0002	THE IMPACT OF PERCEIVED USEFULNESS, PERCEIVED EASE OF USE, PERCEIVED VALUE AND PERCEIVED RISK ON PURCHASE INTENTION VIA HYPERMARKET DRIVE-THRU AMONG KLANG VALLEY CONSUMERS	PUSHPALATHA APPANAIDU	PSA
2	CIE-TVET 2022-0004	MALAYSIAN SHOPPERS' BEHAVIOR IN E-TAILING	DR. NOORDINI ABDULLAH ROSAMIZA BINTI MEOR RAZAK DR. PARAMESWARI SHUNMUGAM	PSA
3	CIE-TVET 2022-0043	THE IMPACT OF ATTITUDE, AWARENESS, RELIGIOSITY AND KNOWLEDGE ON HIBAH PURCHASE INTENTION AMONG MUSLIM COMMUNITY IN HIGHER LEARNING INSTITUTIONS	DR AZIAM MUSTAFA SITI RAWAIDAH BINTI MOHD RAZIKIN ZAKIAH OTHMAN NOR LAILA HASSAN	PSA
4	CIE-TVET 2022-0057	IDENTIFICATION OF READING IMPAIRMENTS AMONG TVET STUDENTS	DR. PARAMESWARI SHUNMUGAM VIJAYAKUMAR VENGADASALAM	PSA MULTIMEDIA UNIVERSITY
5	CIE-TVET 2022-0059	DEVELOPMENT OF PORTABLE MUSCLE THERAPY FOR SKELETAL MUSCLE INJURY	TS ASMIRA BIN ASHARI YAAKUB BIN OMAR	PSA

JADUAL PEMBENTANGAN CIE-TVET 2022

BILIK 3

MODERATOR : NORANIZAH BINTI SARBANI

JURI 1 : DR. MARLINA BINTI RAMLI

JURI 2 : TS. DR. KANNAN RASSIAH

PIC BILIK : INTAN SYAFIQAH BINTI MOHD SHAH

SESI 1

TARIKH: 5/9/2022 (ISNIN)

MASA: 9.00 – 12.00 TENGAHARI

NO	PAPER ID	TAJUK	NAMA PEMBENTANG	INSTITUSI
1	CIE-TVET 2022-0003	KAJIAN KOMPOSISI DAN PENGASINGAN SISA PEPEJAL DI INDERA MAHKOTA 16, KUANTAN	TEE LIAN YONG NORRIZAH BINTI ABD WAHAB MUHAMAD FIRDAUS BIN CHE AMAT.	POLISAS
2	CIE-TVET 2022-0007	FLEXIBLE SHORING	AIDALIA ENDUT HALIZA BINTI AB KARIM NUR HANANI BINTI DAUD	POLISAS
3	CIE-TVET 2022-0039	PENILAIAN TAHAP KESELESAAN TERMAL DI HOSPITAL KERAJAAN	MUHAMAD ZAKWAN BIN ZAKARIAH NORSYAHIDA BINTI ZAKARIA NURHIDAYU BINTI AZHARI	PKS
4	CIE-TVET 2022-0055	ECO BATHROOM FLOOR DRYER	TS. ZURENA BINTI LEMEN ISMA AFIZA BINTI ISMAIL	PSA
5	CIE-TVET 2022-0008	ECO RUBBER PAVER	AIDALIA BINTI ENDUT NURUL IZZA BINTI ABD GHANI	POLISAS

JADUAL PEMBENTANGAN CIE-TVET 2022

BILIK 4

MODERATOR : DIANA BINTI NASARUDDIN

JURI 1 : DR. ZAINATULIZA BINTI ZAINAL ABIDIN

JURI 2 : DR. YUSRIZAL SUFARDI BIN MOHD YUNAN

PIC BILIK : SITI AISHAH BINTI AB JALIL

SESI 1

TARIKH: 5/9/2022 (ISNIN)

MASA: 9.00 – 12.00 TENGAHARI

NO	PAPER ID	TAJUK	NAMA PEMBENTANG	INSTITUSI
1	CIE-TVET 2022-0014	POLITEKNIK MERSING STUDENT'S SCORES IN THE TOEIC® LISTENING AND READING TEST	NORHASLINDA BINTI MUHAMADIN ADLEENA ADHA BINTI ABDUL MUA'AIN BAIZURA HASNI	POLITEKNIK MERSING POLITEKNIK TUN SYED NASIR SYED ISMAIL POLITEKNIK MERSING
2	CIE-TVET 2022-0023	TAHAP KEPUASAN DAN PERSEPSI PELAJAR POLITEKNIK SULTAN AZLAN SHAH TERHADAP PEMBELAJARAN DALAM TALIAN	HAFIZA IBRAHIM SITI NOOR OTHMAN AZIA IDAYU AWANG	POLITEKNIK SULTAN AZLAN SHAH
3	CIE-TVET 2022-0016	KAJIAN KEPUASAN PELAJAR KOLEJ KOMUNITI KUCHING TERHADAP MUZIUM BUDAYA BORNEO SEBAGAI TEMPAT PEMBELAJARAN DIGITAL	EMARIA BINTI AHMAD ABDUL RAHMAN BIN MORNİ	KOLEJ KOMUNITI KUCHING, SARAWAK. KOLEJ KOMUNITI SARIKEI, SARAWAK.
4	CIE-TVET 2022-0022	KECENDERUNGAN PELAJAR KHAS BERMASALAH PENDENGARAN DALAM MEMILIH PENGAJIAN BIDANG TVET DI INSTITUSI PENGAJIAN TINGGI MALAYSIA	THENMOLY RAMACHANTHIRAN SITI KHALIJAH JAMAL NURUS SADIQIN ABDUL RAZAK KHAN NURUL AINI MOHD AHYAN	UTM PSA PSA UTM
5	CIE-TVET 2022-0024	HUBUNGAN ANTARA TAHAP KEPUASAN DAN PERSEPSI PELAJAR POLITEKNIK SULTAN AZLAN SHAH TERHADAP NORMA PEMBELAJARAN DALAM TALIAN	AZIA IDAYU AWANG SITI NOOR OTHMAN HAFIZA IBRAHIM	PSAS

JADUAL PEMBENTANGAN CIE-TVET 2022

BILIK 5

MODERATOR : NOOR HAYATI BINTI MAT TAIB

JURI 1 : DR. SITI ANIZAH BINTI MUHAMED

JURI 2 : DR. FAZIDA BINTI ADLAN

PIC BILIK : SITI RAWAIDAH BINTI MOHD RAZIKIN

**SESI 1
TARIKH: 5/9/2022 (ISNIN)
MASA: 2.00 – 5.00 TENGAHARI**

NO	PAPER ID	TAJUK	NAMA PEMBENTANG	INSTITUSI
1	CIE-TVET 2022-0037	REKABENTUK ALAT PEMOTONG MUDAH ALIH SERBAGUNA	DR. MOHD ELIAS DAUD	PSA
2	CIE-TVET 2022-0030	PERKEMBANGAN PERKHIDMATAN DIGITAL PERPUSTAKAAN: ISU DAN CABARAN DI PERPUSTAKAAN IBNU KHALDUN	SITI ZUBAIDAH AHMAD NORHAYATI MAJID DR. AINUL HAEZAH NORUZMAN	PSA
3	CIE-TVET 2022-0044	KEBOLEHGUNAAN DAN KESAN APLIKASI MUDAH ALIH (MOBILE APPS) DALAM MENGESAN KEDUDUKAN MOTOSIKAL	NORMILA BINTI MOKHTAR SHAHIDA BINTI YUSOF YOGADEVI SUPRAMANIAM	PSAS
4	CIE-TVET 2022-0046	PERSEPSI PERMAINAN CROWD PAIR CARD DALAM PENGAJARAN DAN PEMBELAJARAN	NONI LELA HAYATI BINTI AYOB DEK AFIFA BINTI NORDAN NUR SYAMSINA BINTI AB AZIZ	PMM

BILIK 6

MODERATOR : NAAGAJOOHI A/P ADIN NARAINA

JURI 1 : DR. NORZIANIS BINTI REZALI@ABDUL SUKOR

JURI 2 : DR. NORAZWA BINTI AHMAD ZOLKIFLI

PIC BILIK : SURIA BINTI MD YUSOF

**SESI II
TARIKH: 5/9/2022 (ISNIN)
MASA: 2.00 – 5.00 PETANG**

NO	PAPER ID	TAJUK	NAMA PEMBENTANG	INSTITUSI
1	CIE-TVET 2022-0033	KEBERKESANAN PENGGUNAAN APPVIDS 1.0 SEBAGAI ALAT BANTU MENGAJAR BAGI KURSUS DYA 30083: BASIC ROBOTIC & AUTOMATION IN AGRICULTURE DI POLITEKNIK SANDAKAN SABAH	SAMSUR BIN NONGKANG ARMANJAYA BIN AMIRULLAH NORSHAHADAH BINTI ABD RAHMAN	POLITEKNIK SANDAKAN
2	CIE-TVET 2022-0041	INDUSTRIAL VISITING LECTURERS PROGRAMME IN UNDERGRADUATE STUDIES: REFLECTION ON STUDENTS' LEARNING	DR NORHASLIN ABU HASSAN MOHAMAD HANIF MOHAMAD SALLEH	POLITEKNIK TAWAU SABAH
3	CIE-TVET 2022-0042	KAJIAN DAN ANALISIS PASARAN KE ARAH TVET UNTUK PROGRAM SIJIL REKABENTUK DALAMAN 2013-2020	AMIRUDDIN MAT MUHAPIS A HAKIM MD ALIMI YASINAN RAMLI MOHAMED HARYATY SUA LIYA SUKIMIN	KOLEJ KOMUNITI SHAH ALAM
4	CIE-TVET 2022-0052	THE RELATIONSHIP BETWEEN STAFF TEAMWORK WITH THEIR JOB PERFORMANCE AT POLITEKNIK MERLIMAU	NUR SYAMSINA AB AZIZ	POLITEKNIK MERLIMAU

JADUAL PEMBENTANGAN CiE-TVET 2022

BILIK 7

MODERATOR : IDA MARIA BINTI MOHD YUSOFF

JURI 1 : DR. ZANATUL SHIMA BINTI AMINUDDIN

JURI 2 : DR. NOR RAHIMY BINTI KHALID

PIC BILIK : SITI MAHANUM BINTI SHAIK ISMAIL

**SESI II
TARIKH: 5/9/2022 (ISNIN)
MASA: 2.00 – 5.00 PETANG**

NO	PAPER ID	TAJUK	NAMA PEMBENTANG	INSTITUSI
1	CiE-TVET 2022-0054	PENGUNAAN PLATFORM MICROSOFT TEAMS DALAM PENGAJARAN DAN PEMBELAJARAN KURSUS PROGRAMMING FUNDAMENTALS BAGI PELAJAR SEMESTER 2 POLITEKNIK SULTAN HAJI AHMAD SHAH: PENERIMAAN PELAJAR DAN KEMUDAHAN PENGGUNAAN PLATFORM	NOR HAMIZA BINTI GHAZALI	POLISAS
2	CiE-TVET 2022-0056	STAR/DELTA 3 PHASE SYSTEM: EDUCATIONAL TRAINER	SHARMIZA KAMARUDDIN BAKISS HIYANA ABU BAKAR RINA RAHA ABDUL HAMID	POLISAS POLISAS KK PASIR SALAK
3	CiE-TVET 2022-0049	KAJIAN GAYA PEMBELAJARAN TERHADAP PELAJAR KEJURUTERAAN MEKANIKAL, POLITEKNIK MERLIMAU MELAKA	SHARNOL BIN MUSTAFA	POLITEKNIK MERLIMAU
4	CiE-TVET 2022-0011	KAJIAN KEBERKESANAN PEMBANGUNAN E-PROJEK PELAJAR DALAM PENGURUSAN DAN PEMBELAJARAN PROJEK PELAJAR DI POLITEKNIK MELAKA	HUSSEIN MD ZAN SINATU SADIAH SHAPIE SAIFFUL BAHARI OMAR	POLITEKNIK MELAKA
5	CiE-TVET 2022-0035	KEBOLEHPASARAN GRADUAN PSA: SATU KAJIAN PERBANDINGAN ANTARA GRADUAN JABATAN PERDAGANGAN DENGAN JABATAN KEJURUTERAAN	NORLELA BINTI ZAMAN ROSAMIZA MEOR RAZAK NOR LAILA BINTI HASSAN	PSA

JADUAL PEMBENTANGAN CIE-TVET 2022

BILIK 8

MODERATOR : WAN NORHIDAYAH BINTI WAN MOHAMED NOOR

JURI 1 : DR. BAHARUDDIN BIN MUSTAPHA

JURI 2 : TS. DR. ZUNUWANAS BIN MOHAMAD

PIC BILIK : NOR LAILA BINTI HASSAN

**SESI II
TARIKH: 5/9/2022 (ISNIN)
MASA: 2.00 – 5.00 PETANG**

NO	PAPER ID	TAJUK	NAMA PEMBENTANG	INSTITUSI
1	CIE-TVET 2022-0010	THE DEVELOPMENT OF A CHILD ALERT AND NOTIFICATION SYSTEM FOR FORGOTTEN BABY SYNDROME	NUR SURIYA BINTI MOHAMAD RAVENRAJ A/L MOGAN	PSA
2	CIE-TVET 2022-0019	AUTOMATED ARM REHABILITATION MONITORING SYSTEM	NUR RABIATUL ADAWIYAH	PSA
3	CIE-TVET 2022-0029	DEVELOPMENT OF FOOT PRESSURE MONITORING SYSTEM USING FORCE SENSOR	NOR KHARUL AINA MAT DIN NIK NOR AFIFAH NIK MOHAMMAD JAFRI	PSA
4	CIE-TVET 2022-0031	THE DEVELOPMENT OF SKIN RESISTANCE ARDUINO-BASED MODULE FOR STRESS MONITORING	ILYA ISMAIL NURIN BATRISYIA ABD RAHMAN NADIAH DIN NURHIDAYA MUSA	PSA

BILIK 9

MODERATOR : Ts. NUR HAZLIN BINTI MD GHARIP

JURI 1 : DR. MOHD SHAHROM BIN ISMAIL

JURI 2 : DR. MOHD ELIAS BIN DAUD

PIC BILIK : ZAKIAH BINTI OTHMAN

**SESI II
TARIKH: 5/9/2022 (ISNIN)
MASA: 2.00 – 5.00 PETANG**

NO	PAPER ID	TAJUK	NAMA PEMBENTANG	INSTITUSI
1	CIE-TVET 2022-0006	PEMBANGUNAN ALAT BERSISTEMATIK DALAM PEMOTONGAN FABRIK DENGAN KAEDAH TEKNOLOGI PINTAR (STM) UNTUK PEMBUAT PAKAIAN	ZAINI MADARSHAH	POLITEKNIK IBRAHIM SULTAN
2	CIE-TVET 2022-0009	E-POCKET FLUID MECHANICS	WAN MAJDAH TON MAMAT ZETTY ROHAIZA BINTI MOHD SAHAK@ISHAK NAZRATULHUDA BINTI HASHIM	PSA
3	CIE-TVET 2022-0021	KAJIAN KEBERKESANAN PEMULIHAN HABA DARI PETI SEJUK BAGI KEGUNAAN PENGERINGAN PAKAIAN	SHARUL NIZAM BIN YAAKOP MUHAMAD ASRUL AFFENDI BIN MAT NOR MUHAMAD SYAMER BIN MOHD NASIR	KOLEJ KOMUNITI KOTA MARUDU KOLEJ KOMUNITI PASIR SALAK
4	CIE-TVET 2022-0025	KAJIAN PERBANDINGAN PENGAGIHAN UDARA MENGGUNAKAN FABRIC DUCT VS G.I DUCT DI KOLEJ KOMUNITI KOTA MARUDU	TS. KHAIRUL IZWAN BIN ABDUL WAHAB SHARUL NIZAM BIN YAAKOP MUHAMAD SYAMER BIN MOHD NASIR	KOLEJ KOMUNITI KOTA MARUDU
5	CIE-TVET 2022-0034	SMART WHEEL CHAIR	TS. NOORAZLAN MOHD SAMSUDDIN MUHAMMAD FAIZ ABDULLAH	PSA

JADUAL PEMBENTANGAN CIE-TVET 2022

BILIK 10

MODERATOR : AKMARYA SYUKHAIRILNISAH BINTI MOHD AKHIR

JURI 1 : DR. PARAMESWARI A/P SHUNMUGAM

JURI 2 : DR. NOORDINI BINTI ABDULLAH

PIC BILIK : AHMAD YUSRI BIN ABD NASIR

**SESI II
TARIKH: 5/9/2022 (ISNIN)
MASA: 2.00 – 5.00 PETANG**

NO	PAPER ID	TAJUK	NAMA PEMBENTANG	INSTITUSI
1	CIE-TVET 2022-0026	KAJIAN TINDAKAN: BENGKEL 'SMART' DALAM MENINGKATKAN PENGETAHUAN DAN KEMAHIRAN PENGHASILAN LAPORAN CASE STUDY	SITI JANARIAH JANTAN SITI NOOR OTHMAN NORHASLIZA ABDULLAH	POLITEKNIK SULTAN AZLAN SHAH
2	CIE-TVET 2022-0027	MEDICAL ELECTRONIC DEVICE PARAMOUNT SAFETY A HYBRID ELECTRONIC BOOK: EFFECTIVENESS FOR STUDENTS	MARIANA ROSDI KU LEE CHIN RUSNANI YAHYA	PSA
3	CIE-TVET 2022-0028	CABARAN PELAJAR DIPLOMA KEJURUTERAAN AWAM SEMESTER DUA DI POLITEKNIK SULTAN HJ AHMAD SHAH MELALUI KAEDAH PEMBELAJARAN ATAS TALIAN	LIANA ABDUL SAMAT	POLISAS
4	CIE-TVET 2022-0032	PANDEMIK COVID-19: KESAN PEMBELAJARAN ATAS TALIAN TERHADAP KEMAHIRAN PSIKOMOTOR DALAM MAKMAL KEJURUTERAAN MEKANIKAL	NOOR HAZNIDA BAKAR NURAZLINDA YAHYA@MUHAMMED	PSA
5	CIE-TVET 2022-0040	IOT-BASED FLOOD DETECTION AND EARLIER WARNING SYSTEM	PRAVIIN BASKER NUR ATHIRAH ZAKIRAH AZIZAN NUR FARWIZA ALIA IZZUDIN KANNAN RASSIAH	POLITEKNIK MELAKA

SENARAI JAWATANKUASA INDUK

Penaung

Ts. Zainab binti Ahmad

Penasihat Bersama

Dr. Zubaidah binti Aman

Dr. Ishak bin Mohamad

Dr. Hj Mohd Zahari bin Ismail

Pengerusi Bersama

Dr. Saifuddin Kumar bin Abdullah

Ts. Roseman bin Mat Jidin @ Jidin

En. Muhamad Hashim bin Ahmad

Timbalan Pengerusi

Dr Hjh Wan Rosemehah binti Wan Omar

SENARAI JAWATANKUASA PELAKSANA

Pengarah Program

Dr. Siti Khalijah Binti Jamal

Setiausaha

Nur Zahirah binti Mohd Ghazali
Noor Hasniza binti Mat Salleh

Bendahari

Dr. Noordini binti Abdullah (K)
Khasniza binti Abdul Karim
Rosamiza binti Meor Razak
Rahimawati binti Muhamad Yusoff

Floor Manager

Ts. Dr. Norani binti Abd. Karim (K)
Rabeah Adawiyah Binti Hashim
Md Alimi Bin Yasinan @ Jasman
Skh Muhammad Bin Skh Abd Rahim
Mariana Binti Rosdi

Jawatankuasa Grafik dan Multimedia

Mohammad Fahmy bin Ibrahim (K)
Mohd Hanif Bin Selamat

Jawatankuasa Laman Web Program, Hebahan dan Promosi

Dr. Parameswari A/P Shunmugam (K)
Halimaton Saadiah binti Sa'don
Norhayati Binti Ahmad Alwi
Nurul Fazilah Binti Samuri
Murusinida Binti Che Mood
Zaid bin Junus
Noor Zahilah binti Rapal
Nur Shahafiza binti Din
Shazrina binti Mohamed Isa

Jawatankuasa Pendaftaran Peserta dan Dokumentasi

Dr. Norasiah binti Muhammad (K)
Norsa'aidah Binti Sa'aid
Nurul Izza Binti Redzuan
Nurus Sadiqin Binti Abdul Razak Khan
Shariza Azwin binti Yahaya
Nurfaraiza Binti Idris

SENARAI JAWATANKUASA PELAKSANA

Jawatankuasa Reviewer

Dr. Murugadas A/L Ramdas (K)
Ainiza Binti Silim
Pushpalatha a/p Appanaidu
Rahida Binti Ramli
Nurfadillah Binti Ahmad Mahmud
Hasni Binti Hashim
Mazwina Hanim Binti Abu Bakar
Azma Husnaiza Binti Abdul Aziz
Lilis Seri Yana Binti Sirun
Norsyila Binti Rashid
Julianti Binti Samsudin
Khasniza Binti Abd Karim
Norlela Binti Zaman
Maziharita Binti Mohamood
Norfaizah Binti Abas
Shareh @ Shareaha Binti Din

Jawatankuasa Panel Penilai dan Anugerah

Dr. Aziam binti Mustafa
Suria Binti Md. Yusof
Siti Aishah Binti Ab Jalil
Nor Laila Binti Hassan
Siti Mahanum Binti Shaik Ismail
Siti Rawaidah Binti Mohd Razikin
Haryanti Binti Abdullah
Zakiah Binti Othman
Sarimah Binti Che Hassan

Jawatankuasa Teknikal Persediaan Platform dan Moderator

Ts. Ilya binti Ismail (K)
Hjh Salizahanim binti Leman
Nagaajothi a/p Adin Naraina
Siti Hasliana binti Thalji

SENARAI JAWATANKUASA PELAKSANA

Jawatankuasa Penerbitan dan Dokumentasi

Ts. Dr. Ainul Haezah binti Noruzman (K)
Yusnita binti Yusof
Dr. Siti Anizah binti Muhamed
Muhammad Afiq Faisal bin Muhammad Ilias
Mohd Firdaus bin Sedet

Jawatankuasa Buku Program

Atikah Fatma binti Md Daud (K)
Noraini binti Hj Naseran

Jawatankuasa Sijil dan Cenderahati

Fariza binti Zahari (K)
Nor Khairul Aina binti Mat Din
Nur Syafiqah Abdullah @ Winnie Itom @ Marc
Mariana binti Rosdi

Jawatankuasa Protokol dan Media

Herlina Ainizawati binti Zakaria (K)
Ts. Salhana binti Sahidin @ Salehudin
Siti Zaliha binti Omar @ Othman
Norbaiti binti Ridzuan

Jawatankuasa Teks Ucapan dan Kata Aluan

Noor Haznida binti Bakar (K)
Ts. Wan majdah binti Ton Mamat
Nurazlinda binti Yahya

Jawatankuasa Majlis Pelancaran dan Jamuan

Siti Nurul Huda binti Romli (K)
Sarizun binti Mohamad Sidek
Diana Malini binti Jarni
Rabiatul Adawiyah binti Rosli
Aliza binti Md Atan
Norasiah binti Ali

Jawatankuasa Pengacaraan Majlis

Aliza binti Abdul Razak (K)
Muhammad Safwan bin Abdullan
Siti Rawaidah binti Mohd Razikin

Jawatankuasa Persiapan Tempat Majlis Pelancaran

Tn. Hj. Jasni bin Mohd Noor
Mohd Hafizi bin Hashim

NOTA

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***12th National Conference in Technical
Education and Vocational Training
(CiE-TVET) 2022***