10 Years

ELECTRONICS PRACTITIONERS of Riyadh

Vol 3 Issue No. 2
DECEMBER 2020

Theme:
"A Decade of Global Excellence in Electronics Engineering."

10th Annual General Membership Meeting

- Governor's Report
- Advance Level Engineering Program
- SPLE Program
- ETEEAP and eMBA
- Featured Electronic Articles
- IECEP Cares
- FPEX ACPPI
- More features inside.

What's inside

7-TIME MOST OUTSTANDING FOREIGN CHAPTER
Institute of Electronics Engineers of the Philippines
Kingdom of Saudi Arabia - Central Region Chapter
Accreditation №. 25, Chartered 2010
www.iecep-ksa-crc.org

IECEP-KSA-CRC The 2020 MOFC

In This Issue:

MYC Steering Committee

Chairman/Programme- Engr Junsil Calomarde

Promotions/Tech Support – Engr Leo Argoso

Banner Design – Engr. Leo Vincent Lao

Webinar – Engr. Fred Roxas

Logistics – Engr. Ronnie Escobal

Secretariat – Engr. Jonathan Aquino

Executive Reports – Engr. Teruyuki Ito

Finance – Engr. Rodel Pauya

Moderators - Ms. Angel Panitan & Jimmy Nemeno

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Member: Michael A. Bantian

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Chairman: Engr. Arnold C. Salcedo
Member: Raldon John B. Burbano

Advance Level Eng'g Upgrades:
Chairman: Engr. Jonathan Deo M. Aquino
Member: Engr. Meynard M. Pesig

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Chairman: Engr. Dodjie B. Vibar II
Member: Engr. Ricardo Garcia

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Electronics Practitioner of Riyadh

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2020 IECEP-KSA-CRC
ANNUAL GENERAL MEMBERSHIP MEETING

DECEMBER 04&05, 2020

A DECADE OF GLOBAL EXCELLENCE IN ELECTRONICS ENGINEERING

CISCO Webex Meetings

7th Time Most Outstanding Foreign Chapter

2020 IECEP-KSA-CRC ANNUAL GENERAL MEMBERSHIP MEETING

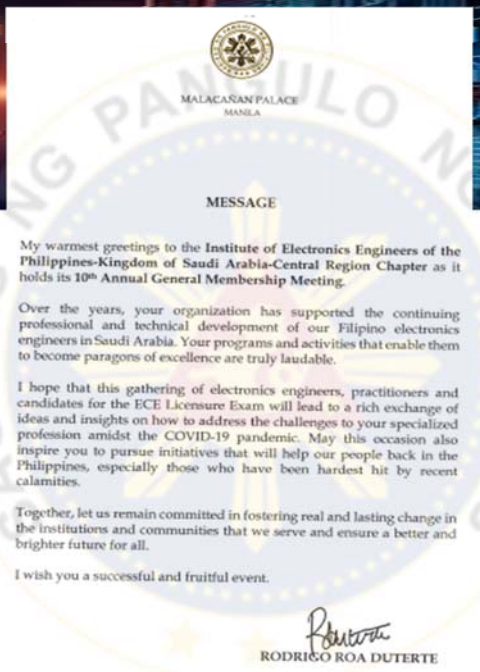
Program

Day 1 – December 4

8:00 am	Virtual Registration	Secretariat
9:00 am	OPENING CEREMONIES Messages	Engr. Christian Lear F. Miquiabas, President - IECEP Hon. Dr. Alnar L. Detalla, Chairman – BECE Hon. Atty. Adnan V. Alonto, Ambassador - KSA
	Proclamation & Oath taking of 2021 IECP-KSA-CRC Officers & Directors	
	Executive Reports	2020 IECEP-KSA-CRC Execom
11:00 am	PRC BECE Hour	Hon. Dr. Alnar L. Detalla Hon. Engr. Herminio J. Orbe Hon. Engr. Enrico Claro R. Delmoro
1:00 pm	FPEX-ACPPI Update	Chief Engr. Teruyuki P. Ito Jr.
2:00 pm	Building Management System (Part 1)	Engr. Anthony A. Villafuerte
6:30 pm	End of Day 1	

Day 2 – December 5

8:00 am	Virtual Registration	Secretariat
8:30 am	Messages	Engr. Leo Vincent G. Lao, Governor-IECEP-KSA-CRC Hon. Nasser S. Mustafa, Labor Attache - DOLE
9:00 am	Control Systems Engineering Design for Chiller Plant	Engr. Anthony M. Laid
12:30 pm	Emotional Intelligence and Leadership of Engineers in the time of Pandemic	Engr. May Rose C. Imperial
2:00 pm	RA9292	Engr. Jandee R. Bonifacio
3:00 pm	Financial Literacy	Ma. Renet Victoria S. Novisteros
4:00 pm	Building Management System (Part 2)	Engr. Anthony A. Villafuerte
6:30 pm	CLOSING CEREMONIES	



MALACAÑAN PALACE
MANILA

MESSAGE

My warmest greetings to the **Institute of Electronics Engineers of the Philippines-Kingdom of Saudi Arabia-Central Region Chapter** as it holds its **10th Annual General Membership Meeting.**

Over the years, your organization has supported the continuing professional and technical development of our Filipino electronics engineers in Saudi Arabia. Your programs and activities that enable them to become paragons of excellence are truly laudable.

I hope that this gathering of electronics engineers, practitioners and candidates for the ECE Licensure Exam will lead to a rich exchange of ideas and insights on how to address the challenges to your specialized profession amidst the COVID-19 pandemic. May this occasion also inspire you to pursue initiatives that will help our people back in the Philippines, especially those who have been hardest hit by recent calamities.

Together, let us remain committed in fostering real and lasting change in the institutions and communities that we serve and ensure a better and brighter future for all.

I wish you a successful and fruitful event.

RODRIGO ROA DUTERTE

MESSAGE

MANILA
4 December 2020

THE PRESIDENT OF THE PHILIPPINES

My warmest greetings to the Institute of Electronics Engineers of the Philippines- Kingdom of Saudi Arabia- Central Region Chapter as it holds its 10th Annual General Membership Meeting.

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Together, let us remain committed and fostering real change in the institutions and communities that we serve and ensure a better and brighter future for all.

I wish you a successful and fruitful event.

Signed

MANILA

4 December 2020

THE PRESIDENT OF THE PHILIPPINES

MESSAGE

It is with great pleasure that I greet the Institute of Electronics Engineers of the Philippines – Kingdom of Saudi Arabia – Central Region Chapter (IECEP-KSA-CRC) on the occasion of your Annual General Membership Meeting.

My most sincere congratulations go to the leaders of this great organization who labored hard to bring your gathering into fruition despite all the challenges that we are facing right now.

This is a testament to your resilience, dedication, and sincere commitment to advance the cause of your fellow engineers in this part of the globe.

The Philippine Overseas Labor Office in Riyadh shares in the jubilation of many who are witnesses to your successes and achievements.

We hope that you continue to work together in sustaining efforts towards contributing to the betterment and improvement not only of your fellow professionals, but of our society, and be a shining example to your fellow organizations.

Congratulations and I join all of you in wishing for the fullest blessings of the Almighty for your continued success.

NASSER S. MUSTAFA

MESSAGE

It is with great pleasure that I greet the Institute of Electronics Engineers of the Philippines – Kingdom of Saudi Arabia – Central Region Chapter (IECEP-KSA-CRC) on the occasion of the Annual General Membership Meeting.

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signed

It's my greatest pleaure to celebrate the 10th Anniversary of our prestigious organization IECEP-KSA-CRC. This year's theme: "A DECADE OF GLOBAL EXCELLENCE IN ELECTRONICS ENGINEERING". It is timely and relevant for each of one us. It signifies on our organization. To which the past 10 years have brought huge development. On this extraordinary occasion, let me enlighten everyone that your trust and support has always been the greatest element of our continued growth! Let's join together to celebrate the success and continue the journey as a united organization. Being your Chapter President/ Governor of IECEP-KSA-CRC, I would like to take this opportunity to congratulate and thanks to the men and women of our prestigious organization. To our very hardworking 2020 board of directors, past governors, past officers and to our very supportive working committee for their dedicated service.

This Annual General Membership Meeting is an opportunity to strengthen and enhance our professionals, not only for the renewal or upgrading of our licenses. We have a social accountability to uphold our level of competency. In here comes our notion, our moral responsibility to the society. Despite the current global pandemic, we made necessary steps to come up with innovation programs in this current situation, so we are still able to continue to serve all of our members. Excellence is always our aim and Competence is our driving force in this endeavor. It has been a roller coaster ride, but with the full support of the current officers, active members, Immediate past governor and past governors, And with the teamwork, faith and determination we reached the pinnacle of what we aimed for, to be always a world-class organization of professionals, competent, virtuous and globally-competitive electronics professionals.

This 2020 AGM have reminded me that 12 months have passed since I was elected as your Chapter President/ Governor of IECE-KSA-CRC. It has been an uphill climb but the honor and privilege to serve our fellow professionals remain the singular motivating reason for me to work harder. It is a challenging role in my life , as we hurdle down the journey to continually attain the success of our organization. We have all proven that our organization remains the epitome of integrity, inclusiveness, and true service to our fellow ECE's. All things are possible if we just seek His mighty guidance, to give us the understanding, knowledge & wisdom to accomplished greater heights in what we are aiming for.

Finally, my word of gratitude to our IECEP family, for which I highly appreciate the efforts they have done and extended me. It is an honor as well as a privilege to belong and be an officer/ member of IECEP-KSA-CRC and that I take particular pride to be a part of an organization to be adjudged as the best foreign IECEP chapter for the seventh Time!

Thank you for the trust and the opportunity to represent our organization and to be your servant leader.

Today marks the last chapter of my journey as your Chapter President/ Governor of IECE-KSA-CRC.

Happy 10th Anniversary IECEP-KSA-CRC!

God bless IECEP-KSA-CRC

Mabuhay ang Electronics Engineers.

Leo Vincent G. Lao, PECE, ACPE, ASEAN Eng., PMEC, LSSWB, ACP
2020 Chapter Governor
IECEP-KSA-CRC

The AGM 2020 Chairman

(2020 Vice Governor– Internal Affairs)

We DID IT AGAIN !!!

Back to Back -- Best Foreign Based Chapter for 2020 !!! and now 7th times Most Outstanding Foreign Chapter Awardee !!! This is indeed a banner year for the chapter.

My congratulations to the 2020 Outstanding Electronics Engineers (3 out of the 10, from KSA CRC) – Engr. Kenneth Vallespin, Engr. Emmanuel Flores and Engr. Artemio Dy – our past governors who deserve this award – We are very proud of your achievement.

As we end the year 2020, let us celebrate the successes and achievements of this beloved chapter. The year was very challenging due to the pandemic and we have all been resilient in fighting the spread of this disease. Let us continue to be safe.

This year's AGM theme – "A Decade of Excellence in Electronics Engineering" defines the chapters commitment to global excellence of the electronics engineering profession. We should be proud of this achievement and congratulations to everyone.

The Board of Director and the working committee have planned this 2-day convention to be informative and relevant to our professional development.

We have invited distinguished guests from the Philippines – the National President of IECEP Engr. Christian Lear Miquibas and the members of the Professional Regulatory Commission Board of Electronics Engineers led by Dr. Alnar Detalla, Engr. Herminio Orbe and Engr. Enrico Claro Delmoro. And of course, a keynote messages from our government official here in Saudi Arabia, the Ambassador Hon. Atty. Adnan V. Alonto and Labor Attache' Hon. Nasser S. Mustafa.

This year's AGM is jam packed with 11 hours of CPD approved technical webinars, on Building Management System and Control Systems Engineering Design from expert practitioners.

Another round of PRC Updates concerning our profession and practice from the distinguished members of the Board of Electronics Engineering and discussion on RA9292 from a practicing electronics engineer.

And we will hear updates from our partner in serve - the Federation of Professionals and Expatriates – Association of Chiefs of Police of the Philippines Inc. (FPEX-ACPPI). We will also be inspired by our 2-lady resource speakers, where they will talk about the Leadership challenges of engineers in this time of crisis and a discussion on Financial Literacy.

Gentlemen, fellow engineers, It is my honor as your AGM chairman, to Welcome to you to the 10th Annual General Membership Meeting! Thank very much!

Jun Silvestre G. Calomarde, PECE
2020 Vice Governor – Internal Affairs
10th AGM Chairman
IECEP-KSA-CRC

IECEP KSA-CRC 10th Annual AGM WEBINAR Series

With CPD Points

Congratulations!

IECEP-KSA-CRC 10th 2020 ANNIVERSARY

IECEP KSA-CRC
INSTITUTE OF ELECTRONICS ENGINEERS OF THE PHILIPPINES
KSA CENTRAL REGION CHAPTER
I-APO NO. 05 ACCREDITATION NO. 25 2010
10 Years

Invites you to our

2020 ANNUAL GENERAL MEMBERSHIP MEETING

THEME:

"A DECADE OF GLOBAL EXCELLENCE IN ELECTRONICS ENGINEERING"

with Webinars on

Virtual

APPROVED CPD

PRC BECE HOUR 2.0
Resource Speakers:
Dr. Alnar Detalla
Engr. Herminio Orbe
Engr. Enrico Claro Delmoro

Building Management System
Resource Speaker: Engr. Anthony Villafuerte

RA 9292
Resource Speakers:
Engr. Jandee Bonifacio

FPEX Update
Resource Speakers:
Engr. Teruyuki Ito

Emotional Intelligence and Leadership of Engineers in the time of Pandemic
Resource Speaker:
Dr. May Rose Imperial

Control System Engineering Design Bases for Chiller Plant
Resource Speakers:
Engr. Anthony Laid

Financial Literacy
Resource Speakers:
Innovators/ Angels Realty

http://iecep-ksa-crc.org

When : December 4 & 5, 2020 - Fri. & Sat.
Time : 10:30 AM - 7:00 PM
KSA Time

Guests of Honors:

H.E Hon Adnan V. Alonto
Philippine Ambassador Extraordinary and Plenipotentiary
Philippine Embassy to the
Kingdom of Saudi Arabia Riyadh, Saudi Arabia

Hon. Nasser S. Mustafa
Labor Attaché II – Philippine Overseas Labor Office, Riyadh

Dr. Alnar L. Detalla, D.Sci., PECE, ACPE, ASEAN-APEC Engr.
Chairman, Professional Regulatory Board of Electronics
Professional Regulation Commission
Philippines

Herminio J. Orbe., PECE, ACPE, ASEAN-APEC Engr.
Member Professional Regulatory Board of Electronics
Professional Regulation Commission
Philippines

Enrico Claro R. Delmoro., PECE, ACPE, ASEAN-APEC Engr.
Member Professional Regulatory Board of Electronics
Professional Regulation Commission
Philippines

Dr. May Rose C. Imperial, Ph.D, PECE, ACPE, ASEAN Eng.
Past President
Institute of Electronics Engineers of the Philippines (IECEP)

Christian Lear F. Miquiabas, PECE
President 2020
Institute of Electronics Engineers of the Philippines (IECEP)

IECEP-KSA-CRC's warmest **congratulations** to the success of it's 70th Anniversary celebration, e-AGM 2020 and to the new Board of Directors 2021 - IECEP National

#OneIECEP

The IECEP, Inc. 2021 new set of BOD's during the "Oath Of Office" recitation last November 28, 2020 with the PRC BECE.

Cheers dear IECEP-KSA-CRC members! Be Proud! We are once again the Most Outstanding Foreign Chapter 2020!!! And bagged 3 out of 10 Most Outstanding ECE 2020. **Alf Mabrook!** -The BOD 2020-

Engr. Artemio Dy, PECE

Engr. Emmanuel Flores, PECE

Engr. Kenneth Vallespin, PECE

Amidst the COVID19 pandemic, we thrive and move forward!

IECEP-KSA-CRC marked its **10th Year Founding Anniversary** and celebrated its Mid-year Convention via virtual platform.

The v-MYC was full packed with webinars and received its overflowing greetings for the success of the convention from Hon. Ambassador Adnan Alonto, BECE Chairman Alnar Detalla, IECEP National President Christian Miquiabas, PTC Country Registrar Romulo Agatep and RETT Chairman Ornan Vicente.

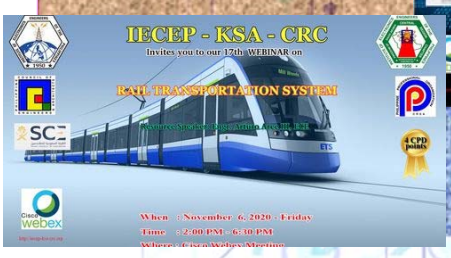
The 10th year Founding Anniversary tribute was documented on the newsletter and a video uploaded in facebook with a brief history of the chapter, a collection of photos of events for the past 10-years and inspirational messages from all the 8-past governors. Two technical articles were written about Combatting Cyber Security in Telecommunications and Audio-Visual Technology trends. Completion reports of the chapter's achievements were discussed including the Technical Seminars and the Webinars implemented virtually to provide continuous technical and non-technical knowledge to the members even in this trying times. Also, the Rektang Bayanihan/Adopt a Family (COVID19 Fund drive) accomplishments were presented.

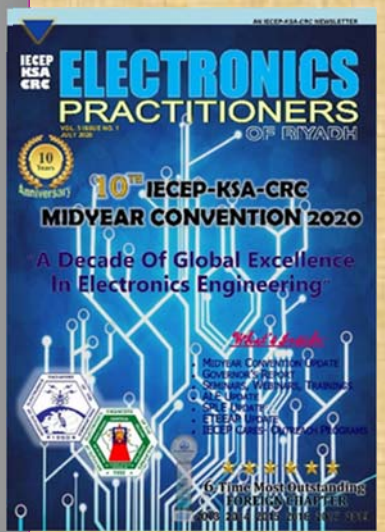
The chapter's 10-years pride and accomplishments include the success of the ETEEAP Graduates, the SPLE Review Passers and achievers, and the numbers of members in various categories for the Advance Level Engineering upgrades throughout the years.

You can backtrack the video of IKC's special event at IECEP-KSA-CRC official website and on IECEP-KSA-CRC facebook account.

www.facebook.com/iecepeagm2020/videos/338228237218816

And the IECEP-KSA-CRC service continues...more webinars and cluster courses!

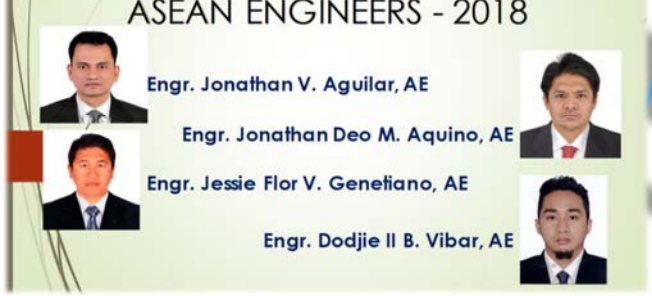


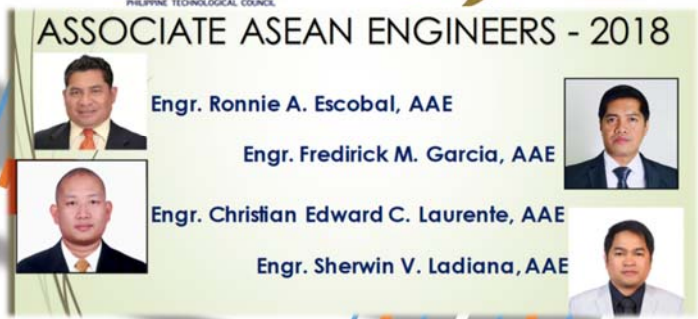


IECEP-KSA-CRC OFFICIAL NEWSLETTER
(Issue –Jan - Jun2020)

ADVANCED LEVEL ENGINEERING UPGRADES

YEAR	PECE	AT	AAE	AE	ACPE	APEC
2010						
2011	15					
2012						
2013						
2014	1					
2015			1	21		
2016	27					
2017	1		20	10	12	
2018	6		14	1	2	6
2019	17					
2020		2	32	11		
TOTAL	**67**	**2**	**67**	**43**	**14**	**6**





IECEP-KSA-CRC 10th Annual General Membership Meeting

10 Years

2010-2020

ASSOCIATE ASEAN ENGINEERS - 2018


Wilson Bernard F. Añonuevo, AAE


Michael A. Bantilan, AAE


Anever M. Binaoro, AAE


Joselito L. Gerolaga, AAE

ASSOCIATE ASEAN ENGINEERS - 2018


Sherwin G. Romano, AAE


Alphasad I. Sadjarani, AAE


Joey V. Versoza, AAE

ASEAN ENGINEERS - 2019


Engr. Jun Silvestre G. Calomarde, AE


Engr. Arnajel C. Pakkam, AE


Engr. Meynard M. Pesig, AE


Engr. Jose Agni C. Red, AE

ASSOCIATE ASEAN ENGINEERS - 2018


Noiwen A. Getigan, AAE


Marthe P. Lagas, AAE


Francisco L. Ponce, AAE


Ryan B. Ricafort, AAE

ASSOCIATE ASEAN ENGINEERS - 2019


Engr. Leo R. Argoso Jr., AAE


Engr. Roger T. Bolanio, AAE


Engr. Jerome G. Mercado, AAE


Engr. Lester Mark A. Majadas, AAE

ASSOCIATE ASEAN ENGINEERS - 2019

Julito P. Rojas Jr., AAE


Jomar S. Traqueña, AAE

ASEAN ENGINEERS - 2019


Engr. Frederick G. Roxas, AE

Engr. Reymar C. Tabing, AE


Engr. Anthony A. Villafuerte, AE

ASSOCIATE ASEAN ENGINEERS - 2019


Engr. Ryan P. Rosario, AAE


Ralldon John B. Burbano, AAE


Henry John D. Cansino II, AAE


Arthur T. Caraveo, AAE

ASEAN TECHNICIAN - 2019

Nhec NJ A. Inao, AT


Pablo G. Pinuela Jr., AT

ASSOCIATE ASEAN ENGINEERS - 2019


Felix Zander O. Castillon, AAE


Romell B. Diona, AAE


Benjamin M. Licudan Jr., AAE

IECEP KSA CRC ETEEAP 2020

The Expanded Tertiary Education Equivalency and Accreditation Program (ETEEAP) is a comprehensive program of identifying, accessing, validating and assigning equivalent college-level learning for prior learning from formal, non -formal and informal training and relevant work experiences toward the final granting of appropriate academic degree.

University of San Jose – Recoletos (USJ-R) is the host University.
ETEEAP was promulgated through Executive Order 330, issued by President Fidel V. Ramos on May 13, 1996. Since its inception, deputized higher educational institutions are given authorization by the Commission on Higher Education (CHED) to conduct competency-based evaluation and award appropriate degrees to deserving individuals.

ETEEAP ACTIVITY	NUMBERS
APPLICANTS SY 2019-2020	24
STUDENTS SY 2019-2020 ACCEPTED	21
SY 2019-2020 STUDENTS COMPLETED ACADEMIC REQ	20
APPLICANTS SY 2020-2021	0

ETEEAP	2015	2016	2017	2018	2019	2020	Total
Enrollees	5	5	5	7	21	0	43
Graduates	0	4	2	3	5	20	34

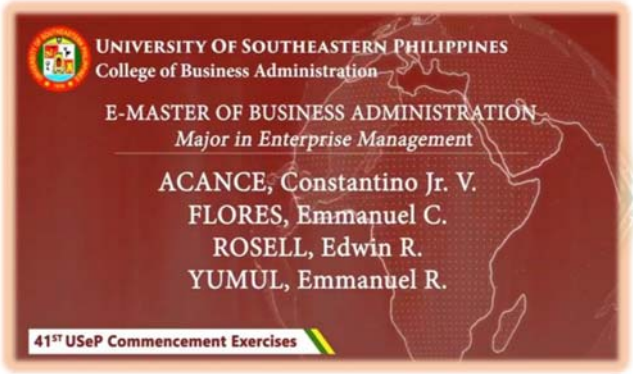
We have twenty (20) BSECE students under the supervision of the University of San Jose – Recoletos (USJ-R) have completed their Extended Tertiary Education Equivalency Accreditation Program (ETEEAP) curriculum. They are candidates for graduation with a degree of Bachelor of Science in Electronics Engineering.
Students who completed their academic requirements under the ETEEAP curriculum.

1.	Jomar S. Calo	11.	Anesty N. Ligutan
2.	Jerry M. Ceniza	12.	Jimmy E. Nemeno
3.	Judy B. Cernetches	13.	Jeffrey P. Orgen
4.	Dante A. Coloma	14.	Gonzalo V. Palado Jr.
5.	Richard Kenneth C. Cristino	15.	Ernesto G. Pareja
6.	Ramonito G. Daling	16.	Pablo G. Pinuela Jr.
7.	Godard E. Ferolino	17.	Michael M. Pitogo
8.	Gilbert G. Fuentes	18.	Gilbert Rapirap
9.	Nhec NJ A. Inao	19.	Ron Ryan P. Remillo
10.	Melvin A. Lantano	20.	Conrado R. Time Jr.

The panelist for the oral defense on the Project Study of Batch 2019-2020 ETEEAP Class were composed of DR. DENNIS ANTHONY A. KILONGKILONG; Dean College of Engineering, DR. VICTORIA D. GABISON; External Consultant, and DR. ADELA C. CATIPAY; ETEEAP Director.
The class advisers for batch 2019-2020 were ENGR. ALEX APARICIO, ENGR. REYNALDO RUEDAS, ENGR. ANTHONY JAGURES - PECE, and ENGR. CRISTINA SEBIAL.

CONTINOUS FORMAL EDUCATION – AN IECEP-KSA-CRC VOW

IECEP-KSA-CRC promotes the continuous formal learning through partnership with College of Business Administration of University of Southeastern Philippines to offer an E-Learning Program for the degree of Master of Business Administration Course. This course is tailored to individuals seeking higher educational certification on a distant learning experience.



Four members of IECEP-KSA-CRC have successfully completed the course and graduated last September 2020. Two of the graduates are former IKC Chapter Governors, Engr. Emmanuel R. Yumul and Engr. Emmanuel C. Flores.

Engr. Emmanuel R. Yumul

Engr. Emmanuel C. Flores

As inspired by this success story, new batch of eMBA aspirants from IECEP-KSA-CRC are now on their journey for the 1st semester of the e-MBA class.

IECEP-KSA-CRC 2020 Souvenirs

- Jacket
- Polo Shirt
- Mug
- Mask

How it fits

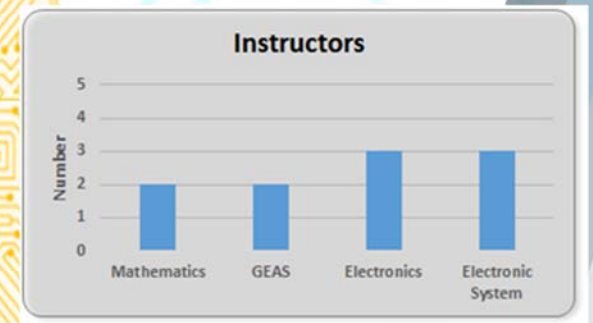
For enquiries, Please contact any of the IECEP-KSA-CRC officers.

Mail us: officers@iecep-ksa-crc.org

SPLE

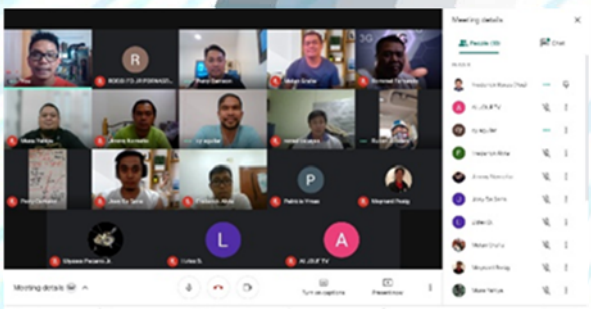
(Special Professional Licensure Examination)

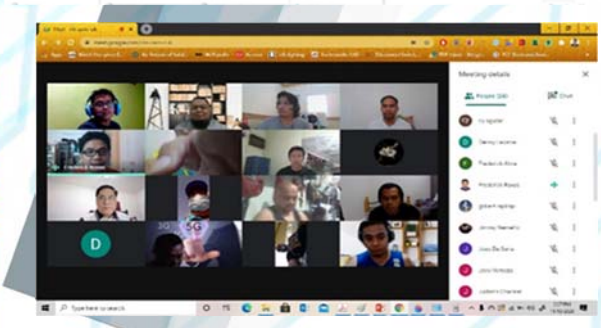
The SPLE year 2020-2021 was inaugurated with Class Orientation last October 16, 2020, attended by 30 participants. Reviewee was required to register using IECEP-KSA-CRC eServices for them to be included at the start of the review class that will commence the following week. It is so unfortunate that we have generated only **26 reviewees**, a decline of **43%** as compared with **46 reviewees** in the year 2019-2020. We could see two possible reasons for the decline in the registration. Firstly, this could be possibly due to the Covid-19 Pandemic where many of our fellow OFW lost their jobs or some of them have a salary cut. Secondly, due to the same Pandemic, the SPLE for 2020 was canceled were our reviewees already taken some of the subjects that are currently being discussed now. We are optimistic that in the following subjects, namely: GEAS, Electronics and Electronic System Technologies the number of reviewees will be increased.



Instructors	Subject	Class Duration
Engr. Brian Lacaba Engr. Perry Camson	Mathematics	13 weeks
Engr. Brian Lacaba Engr. Leo Arogoso	General Engineering and Applied Sciences (GEAS)	8 weeks
Engr. Agni Red Engr. Rommel Monsanto Engr. Leo Arogoso	Electronics Subjects	6 weeks
Engr. Brian Lacaba Engr. Marc Anthony Montales Engr. Sherwin Ladiana	Electronic System and Technologies	9 weeks
*Refresher and continuous practice and coaching for the remaining weeks prior to the examination		

In this new normal, the safety of all reviewees is the utmost priority. Thus, conducting the classes via blended learning approach such as online class and modules for the assignments. We are using the state of the art online platforms such as Cisco Webex, Google Meet and Google Class. This approach is advantageous to the participants who cannot attend face-to-face classes due job commitments and no access to transportation.

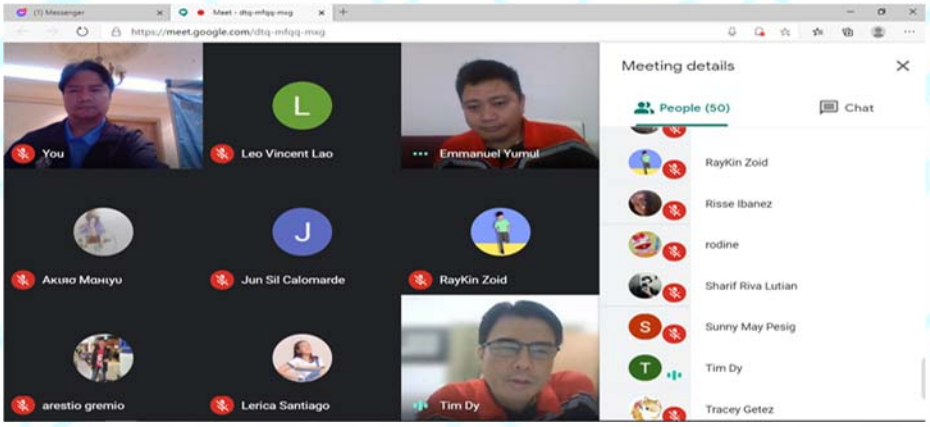


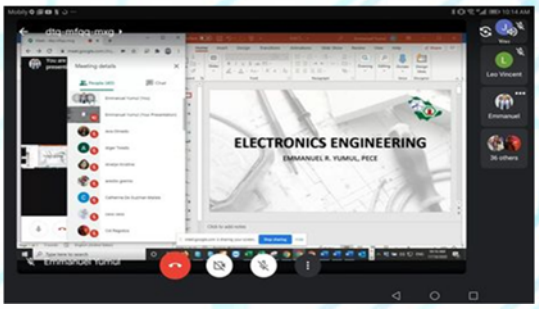


Here are some highlights of the online class where all our participants are actively participating in the class.

Career Orientation for Grade 10 Students and Graduating students under STEM strand in Philippine International Schools in Riyadh.

Second Philippine International School





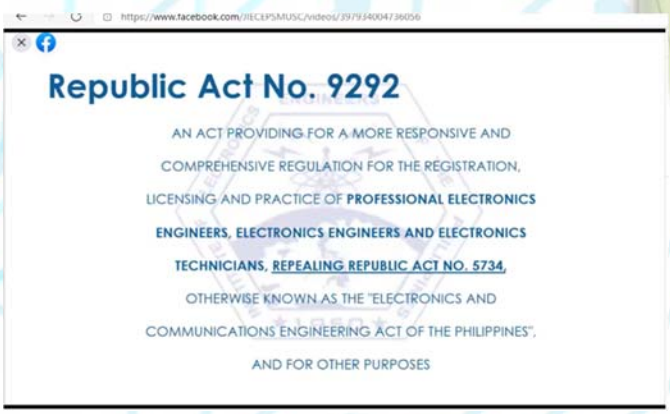
The Career Orientation for Students is one of the important programs in the IECEP-KSA-CRC's list of priority activities. Since this program started in 2013, it soon became the obligation within oneself of the Board of Directors to provide the Electronics Engineering Career Orientation to the Filipino Schools in Riyadh for their senior high school students.

The orientation main objective is to enlighten the students to pursue their college studies and be aware of the promising career of being an Electronics Engineer. The resource speaker, Engr. Noel Yumul cited the value and vital role of an Electronics Engineer in the society and to the country's advancement especially now that we are in the digital age.

IECEP-KSA-CRC carried out the Electronics Engineering Career Orientation to Second Philippine International School

Even In the Philippines…

Our very own Chapter Secretary General Engr. Jonathan Deo M. Aquino conducted a webinar on Electronics Engineering Law of 2004 or RA9292 to the ECE students of Saint Mary's University and Nueva Vizcaya State University during the ECE Day & SEAIT Week 2020.



Engagements
with Other Organizations

Federation of Professionals & Expatriates (FPEX)
Association of Chiefs of Police of the Philippines, Inc.

G/F PNP Legal Service Bldg., Camp Crame, Quezon City. Tel. No. 531-9338

The Federation of Professionals and Expatriates (FPEX) is an Affiliated NGO of the Association of Chiefs of Police of the Philippines Inc., (ACPPI), bound to promote the advancement of Filipino professionals and community, encouraging respect for laws, maintenance of peace and orderliness, community outreach, stimulating professional excellence & education, promoting the Philippines as a good place for business and tourism, and safety of the environment.

The organization was founded and established by IECEP-KSA-CRC's members last June 10, 2019 in response to the growing need to unite all professional groups in the Middle East and in the Philippines to become affiliated with the Association of Chiefs of Police of the Philippines, Inc. in PNP Headquarters, Camp Crame, Quezon City. The objective of the group is to support the endeavors of ACPPI and the Global Police Community Relations to raise awareness among Filipinos overseas that they can coordinate directly and partner with the Philippine National Police (PNP) in all law enforcement, security, and safety-related concerns, involving their families and relatives back in the Philippines.

FPEX-ACPPI moreover, encourages member groups and individuals to engage in wide range of activities from continuous professional developments and sharing of technical expertise to benefit the society. Imposing discipline and respect to build peace, creating a positive impact in our communities.

"To Serve & Protect"

The Webinar Series

The **Programmable Logic Controller (PLC)** webinar was conducted via CISCO WebEx meeting platform, which topics were well distributed to made it clear in every stage of the discussion. Programmable logic controller is an industrial grade computer that is capable of being programmed to control functions. PLC was used to replace relay logic, but its ever increasing range of function means that is found in many and more complex applications because the structure of PLC is based on the same principles as those employed in computer architecture.

Engr. Bolanio discuss the overview of Programmable logic controllers, how PLC can offer several advantages over a conventional relay type of control. He pointed out that it is capable not only of performing relay switching task but also of performing other applications such as timing, counting, calculating, comparing, and the processing of analog signals. It was noted that programmable controller has eliminated much of the hardwiring associated with conventional relay control circuits. It is small and inexpensive compared to equivalent relay-based process control systems.
Modern control system still include relays, but these are rarely used for logic. The participants understood the advantages such as increased reliability, more flexibility, lower cost, communications capability, faster response time and easier to troubleshoot.

The PLC complexity functions depends on how we manage the inputs and outputs which interacts with the timers, counters and move functions that will determine the actual results we would like to achieve. Initially, the certainty of the functions can be seen and tested through a simulation during the programming stage.

The visual aids and actual live programming samples by Engr. Bolanio during the webinar made the topic more exciting and clearer to the participants. Polling questions were prepared as part of the program which must be answered at the given time showing both the questionnaires and the countdown at the participants screen. This made the attendees more attentive in the entire webinar.

The Audio-Visual System (AVS) is one of the long existing technology yet continuously developing due to its necessity to the broadcasting world, corporate conferencing, mass gatherings, concerts, theaters, and public assemblies. While it is timely to refresh and gain knowledge in this field of AVS in the current situation of pandemic especially in our education system. The engineering set-up for audio-visual system depends on the scale of listeners and viewers yet the area/ location and occasion or purpose are to be considered. The technical webinar was made easy for the participants to understand as the resource speaker sliced the topics from basic going to complex system set-up and engineered design.
The professionals and practitioners of this field learnt the basics and characteristics of the audio-visual components to ensure proper system set-up. To become an AVS expert, knowledge with combined skills and experienced are highly required.
The speaker also discussed the proper audio set-up along with the lightings and visual displays. As we knew that having quality speaker and surrounds and visual comfort, it convinced ourselves our connection to the motion picture scenes in the properly engineered theaters. Although budget is tough to beat in any engineered projects, there is always a way for competitive solution.

Engr. Pakkam have prepared polling questions related to the topics discussed which must be answered in a certain period that would test the participants attentiveness. This made the

participants more active in the second part of the program and get involved in the Q&A portion.
We may conclude that the participants even not in this field may do the complete AVS set-up due to clear delivery of the subject from components and its characteristics, technical parameters, and design concept.

The Cluster Course

LIVE WEBINAR

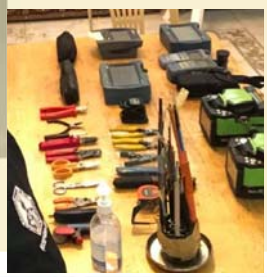
Due to the success of the Fiber Optics Class of 2019, a second batch was offered to the members and interested practitioners. The cluster class had 15 students and was held at the new classroom in Exit 14 in Rawdah District. A demonstration laboratory for the workshop was set-up for the extensive and in-depth learning of the students and actual hands-on experience in the installation, testing & commission, trouble-shooting & maintenance of the fiber optics and equipment devices.

Part 1: Basic Fiber Optic Cable

The course will enable to interpret and correctly apply the requirements found within Fiber Optics Association,Fiber Optic Association Code in Designing , Installation and Maintenance of Fiber Optic Cables.In this training , participants will learn on how to locate, interpret, and correctly apply the requirements found within IEEE, ANSI, EIA, BICSI, & ITU , in the design, installation , operation and maintenance of Fiber optic Systems.

Part 2: Advance Fiber Optics Cable (Technical)

This program is designed to provide technicians, engineers, designers, consultants and life safety system practitioners the required technical training on system concept, design application and engineering of fiber Optics Cable, systems and peripheral equipment.



Let's go for the **Green Energy**!

It is obvious that we are experiencing global warming due to man-made inventions and developments that cause pollution everywhere! It is our social responsibility and obligation to be part on how we can save and preserve the nature for the future generations of mankind.

For the first time, IECEP-KSA-CRC has delivered a CLUSTER COURSE conducted via CISCO WebEx meeting platform. This subject is compressed that would help the fellow electronics practitioners to gain knowledge in SOLAR power technology and industry which is trending in the market of the renewable energy sector.

The sun, as important it is to the human being was considered a source of the green energy which is constantly replenished for renewable energy source. A photovoltaic system, also known solar power system, is designed to supply usable solar power by means of photovoltaic as main component to harness the light from the sun. Throughout the course, the PV system electronic schematics, symbols and concepts and various methods set-up were discussed so that participants can design and build the PV system on their own after the short course. Also highlighted were the international standards as required in the Kingdom of Saudi Arabia and the applicable standards in the Philippines as guide and reference wherein certain steps and safety precautions were to be considered for designing, implementing, and commissioning the PV system in any projects, all the times.

Discussions for the PV system set-up to groom it as a business made the participants more interested. They were aware of the solar power system high initial cost but then realized its fast return of investment scheme and its benefits to the environment. The discussion includes different design and system approach, advancements from the basic components going to complex and highly advanced features of today's PV system infrastructures and the market share and tips. Small scale design and sample projects were explained into bits that would help and can be used as reference for the participants who wish to set-up PV system for personal or business interest. The instructor repeatedly advised to do extra care and safety first rule during system set-up, installation and testing.

CORPORATE SOCIAL RESPONSIBILITY
CSR RELEVANT TO THE PROFESSION

Balik - Eskwela Program
(School Supplies Donation)

IECEP-KSA-CRC continues its Balik-Eskwela Progam as schools are now opening and government restrictions are lifted. In partnership with FPEX-ACPPI, both organizations initiated the distribution of almost a hundred boxes of bond papers and other school supplies to elementary students for their modular learning materials. Beneficiary schools were the Benoni Elementary School and Catohugan Elementary School in the Municipality of Mahinog, Camiguin Island; and the Cateel Central Elementary School in Cateel, Davao Oriental. The much needed supplies were very much welcomed from the teachers as this greatly contributed to the learnings of their students in this difficult time of the pandemic.

PNP Food Bank
IECEP-KSA-CRC supports PNP's Rektang Bayanihan Food bank Drive

IECEP-KSA-CRC in its commitment to keep on serving the communities, supported the Rektang Bayanihan Food bank Drive, an initiative of PRO3 of Philippine National Police. The program aims to provide food assistance to the families, including the indigents who were severely affected by the implementation of the Community Quarantine.

IECEP-KSA-CRC is always eager to reach our communities, to help provide for the less fortunate or most vulnerable sectors in the society, provided financial assistance to Police Regional Office 3 through the Association of Chiefs of Police of the Philippines Inc., of worth Php 15,000 last September 11, 2020. The efforts to alleviate the food supply especially of the less fortunates was recognized by the PNP National Headquarters during the culmination of the 25th Police Community Relations Month.

IECEP-KSA-CRC, ACPPI & PRO3 joined hand in hand for this project and believes that kindness pays forward and goodness is contagious.

Stand-alone System Sizing
1.5KWp Hybrid Off Grid System

1.5KW HYBRID OFF GRID SYSTEM

SETUP SYSTEM RECOMMENDATION

- System can produced a maximum of 3.5KWh of energy per day.
- Below are the recommended loads:
  1. LED Lights
  2. Electric Fan
  3. Internet Modem
  4. 40" LED TV
  5. Mobile Charger
  6. Washing Machine (500watts) can be used during daytime (sufficient sunlight).

Solar Power Smart Hybrid-Ready System Setup:

- This system has the daytime power-saving, and off-grid function after the sun has set. This system has a built-in charger that takes priority in charging up the battery bank via the solar panels. And can be set to charge via AC if sunlight is insufficient (configurable via LCD Settings), therefore keeping the batteries in optimum health.
- Battery bank is designed with 19.2KWh capacity. This system is fully automatic when it switches from Battery to grid as a bypass function.

OFF-GRID SOLAR ELECTRIC SYSTEM: LOAD ANALYSIS

Recommended Loads List

Appliance	Quantity	AC watts	AC Surge	Standby	Hours use	AC Wh/day
LED Lights	5	7	0	0	12	420
Electric Fan	3	65	390	0	12	2340
Internet Modem	1	5	0	0	19	95
40" LED TV	1	85	0	1	6	534
Mobile Charger	4	3	0	0	5	60
Total	14	165	390	1	54	3449

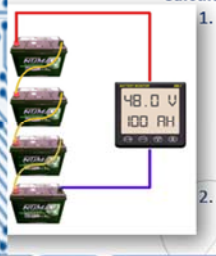
https://generatorist.com/power-consumption-of-household-appliances
https://www.daftlogic.com/information-appliance-power-consumption.htm

OFF-GRID SOLAR ELECTRIC SYSTEM: BATTERY BANK SIZING

Loads List

Appliance	Quantity	AC watts	AC Surge	Standby	Hours use	Total Watts	AC Wh/day
LED Lights	5	7	0	0	12	35	420
Electric Fan	3	65	390	0	12	195	2340
Internet Modem	1	5	0	0	19	5	95
40" LED TV	1	85	0	1	6	86	534
Mobile Charger	4	3	0	0	5	12	60
Total	14	165	390	1	54	333	3449

3449Wh a day, with up to 333 watts AC on at once, an AC surge of up to 390W.



Calculation:

1. Determine average daily Watt-hours
   - Nominal Voltage Type 48 Vdc
   - Total Load (Wh) = 3449 Wh
   - Days of Autonomy = 2 days
   - DoD = 50%
   - Inverter Efficiency = 95%
     - ✓ 3449Wh / 0.95 = 3630.52Wh
2. Determine battery bank capacity (Wh)
   - ✓ 3630.52Wh x 2 days Autonomy / 0.5 DoD
   - ✓ =14,522Wh

Calculation:

1. Determine Battery Bank Capacity (Ah)
   - 14,522Wh/ 48 V (System Voltage) = 302.54 AH

But consider Losses from your Battery internal resistance, wires and No load loss and load loss of your Inverter. (say 20% loss estimate might be higher depending on your inverter and battery and size of wire).

Thus, 302.54 AH/0.8 = 378.18 AH

2. Determine number of Parallel strings
   - ✓ 378.18 AH / 2 (Parallel String)
   - ✓ 189.09 Ah @ 48V (2 Parallel String)

Calculation:

Determine number of batteries in each series strings

- Assuming a 200Ah @ 12V battery
  (Available in Market for 12V system)
- 48V / 12V = 4 batteries in series
- 378.18 Ah / 200 Ah = 1.9 or 2 parallel string of batteries

Therefore:

- ✓ 2 in parallel x 4 in series = 8 batteries (200Ah 12V)
- ➢ Battery Bank = 400Ah @ 48V

OFF-GRID SOLAR ELECTRIC SYSTEM:

System Inefficiencies:

1. More Inefficiencies exist in off grid systems tha
2. Dust, Shading, mismatched array, voltage drop controller inefficiencies, battery losses..
3. System efficiency factor of 70% for PV system

Minimum Watts needed:

1. Start with daily watt-hours
2. Divided by 5 sun hour
3. Divided by system efficiency of 0.7 (system eff for PV system)

3449 Wh/ 5 Sun Hour / 0.7 = 985.43 Watts

Selecting Solar Panel:

985.43 Watts needed:

1. Start with watts needed
2. Divided by size of solar panel to use
3. Tells you how many panels needed
4. Make sure strings are long enough to c battery bank voltage.

985.43 W / 260 W (PV) = 3.79 use 6 Panels since requires 3 PV in single string

✓ Total PV wattage 1560 Watts

OFF-GRID SOLAR ELECTRIC SYSTEM: CHARGE CONTROLLER

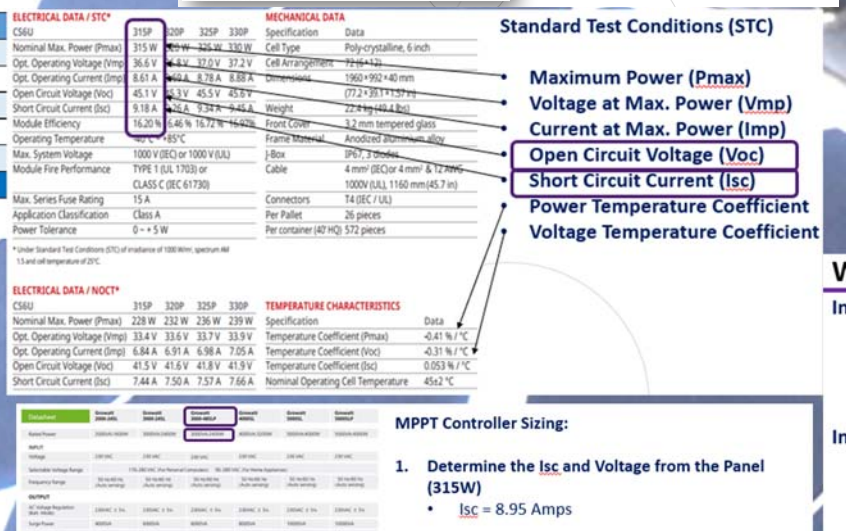
Standard Test Conditions (STC)

Output Characteristics

Maximum Power (Pmax)	260W*
Open Circuit Voltage (Voc)	37.6V
Short Circuit Current (Isc)	8.95A
Maximum Power Voltage (Vmpp)	30.5V
Maximum Power Current (Impp)	8.53A
Module Efficiency	16.0%
Voltage Temperature Coefficient	-0.30%/°C
Current Temperature Coefficient	+0.04%/°C
Power Temperature Coefficient	-0.40%/°C

The electrical data relates to Standard Test Conditions [STC]: 1,000 W/m²; AM 1.5; 25°C
Certified in accordance with IEC61215/IEC61730.
*Power Tolerance: 0%/+3%

- Maximum Power (Pmax)
- Open Circuit Voltage (Voc)
- Short Circuit Current (Isc)
- Voltage at Max. Power (Vmp)
- Current at Max. Power (Imp)
- Voltage Temperature Coefficient
- Power Temperature Coefficient



ELECTRICAL DATA / STC*

CS6U	315P	320P	325P	330P
Nominal Max. Power (Pmax)	315 W	320 W	325 W	330 W
Opt. Operating Voltage (Vmp)	36.6 V	36.8 V	37.0 V	37.2 V
Opt. Operating Current (Imp)	8.61 A	8.69 A	8.78 A	8.88 A
Open Circuit Voltage (Voc)	45.1 V	45.3 V	45.5 V	45.6 V
Short Circuit Current (Isc)	9.18 A	9.26 A	9.34 A	9.45 A
Module Efficiency	16.20 %	16.46 %	16.72 %	16.97%
Operating Temperature	-40°C ~ +85°C			
Max. System Voltage	1000 V (IEC) or 1000 V (UL)			
Module Fire Performance	TYPE 1 (UL 1703) or CLASS C (IEC 61730)			
Max. Series Fuse Rating	15 A			
Application Classification	Class A			
Power Tolerance	0 ~ + 5 W			

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

MECHANICAL DATA

Specification	Data
Cell Type	Poly-crystalline, 6 inch
Cell Arrangement	72 (6×12)
Dimensions	1960×992×40 mm (77.2×39.1×1.57 in)
Weight	22.4 kg (49.4 lbs)
Front Cover	3.2 mm tempered glass
Frame Material	Anodized aluminium alloy
J-Box	IP67, 3 diodes
Cable	4 mm² (IEC)or 4 mm² & 12 AWG 1000V (UL), 1160 mm (45.7 in)
Connectors	T4 (IEC / UL)
Per Pallet	26 pieces
Per container (40' HQ)	572 pieces

ELECTRICAL DATA / NOCT*

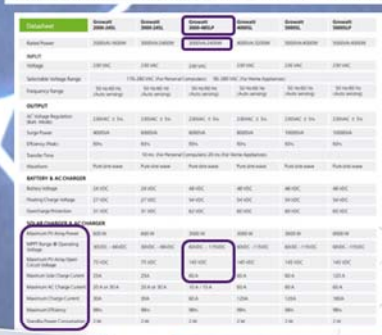
CS6U	315P	320P	325P	330P
Nominal Max. Power (Pmax)	228 W	232 W	236 W	239 W
Opt. Operating Voltage (Vmp)	33.4 V	33.6 V	33.7 V	33.9 V
Opt. Operating Current (Imp)	6.84 A	6.91 A	6.98 A	7.05 A
Open Circuit Voltage (Voc)	41.5 V	41.6 V	41.8 V	41.9 V
Short Circuit Current (Isc)	7.44 A	7.50 A	7.57 A	7.66 A

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.41 % / °C
Temperature Coefficient (Voc)	-0.31 % / °C
Temperature Coefficient (Isc)	0.053 % / °C
Nominal Operating Cell Temperature	45±2 °C

Standard Test Conditions (STC)

- Maximum Power (Pmax)
- Voltage at Max. Power (Vmp)
- Current at Max. Power (Imp)
- Open Circuit Voltage (Voc)
- Short Circuit Current (Isc)
- Power Temperature Coefficient
- Voltage Temperature Coefficient



MPPT Controller Sizing:

1. Determine the Isc and Voltage from the Panel (315W)
   - Isc = 8.95 Amps
2. Multiply module short circuit current by number of strings in parallel
3. Multiply by 1.25 safety factor
   - 8.95 Amps x 2 Parallel string x 1.25 = 22.38 Amps
   - ✓ = at least 30Amps @ 48V of MPPT controller .

MPPT Controller Sizing:

Minimum MPPT Inverter Voltage:

- When the temperature is at a maximum then the Maximum Power Point (MPP) voltage (Vmp) of the array should never fall below the minimum operating voltage of the inverter.
- It is recommended that maximum effective cell temperature of 65°C is used.
- The module selected has a rated Vmp voltage of 36.6V and a voltage (Vmp) co-efficient of ~0.40%/°C (Pmax TC).
- An effective cell temperature of 65°C is 40° above the STC temperature of 25°C.
- Use the formula Vmp x [100% + (Effective Cell Temperature – STC Temperature) x PmaxTC]
- Therefore the Vmp@ 65°C would be 30.5 x [100% + (40 x -0.40%)] = 25.62V

WIRE

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OFF-GRID SOLAR ELECTRIC SYSTEM: INVERTER

Loads List

Appliance	Quantity	AC watts	AC Surge	Standby	Hours use	Total Watts	AC Wh/day
LED Lights	5	7	0	0	12	35	420
Electric Fan	3	65	390	0	12	195	2340
Internet Modem	1	5	0	0	19	5	95
40" LED TV	1	85	0	1	6	86	534
Mobile Charger	4	3	0	0	5	12	60
Total	14	165	390	1	54	333	3449

3449Wh a day, with up to 333 watts AC on at once, an AC surge of up to 390W.

OFF-GRID SOLAR ELECTRIC SYSTEM: OCP

Between Panels and Inverter/charge controllers

- Combined String: 8.95A x 2 x 1.25 x 1.25 (Over irradiance) = 27.97 **(Use 32A min. 150Vdc) – (MPPT)**

Between Inverter/controllers and battery:

- Use the inverter rating 2400W/48Vdc=
- 50A x 1.25 = 62.5.21A **(Use 63A min 80Vdc)**

Between AC Input and Inverter:

- Allowable Charging Current 20A:
- 20A x 1.25 = 25A **(Use 25A min 250Vac)**

Between Inverter and AC Load:

- Rated wattage of inverter / AC Voltage:
- (2400W / 240Vac) x 1.25 = 12.5 A **(Use 16A min 250Vac)**

OFF-GRID SOLAR ELECTRIC SYSTEM: MPPT CONTROLLER/INVERTER

Calculated data sample:

- Load List (3,449Wh)
- Select system voltage (48Vdc)
- Calculate battery bank capacity (400Ah @48V)
- Calculate approximate array size (1,560W)
- Specify charge controller (48V, atleast 30A)
- Inverter @ 48V:
- = 333Watts + 390watts
- = 723 watts used min 1000W with 2xSurge
- ✓ Used 2400Watts with 6000VA surge of inverter.

SIZING: PV/INVERTER WIRE (HYBRID OFF-GRID)

to DC Load Box

t Circuit Current

- 8.95A Isc x 1.25 (Over-Irradiance) x 1.25 (3hrs Continuous use) = 13.98A
- [Use Minimum of 2.5mm² (20A max) - **AWG#14** @ 5m length]
- ✓ Recommended to use same wire as built-in wire from PV [4mm² (30A max) – **AWG#12**]

ed PV Strings to DC Load Center

nbined Current

3.95A Isc x 2 Parallel x 1.25 (Over-Irradiance) x 1.25 (3hrs Continuous use) = 27.96 A
Use Minimum of 6mm2 (40A max) - AWG#10 @15m length].

to Inverter/Controller Cable

culate the highest current possible

50A x 1.25 = 62.5A
Use Minimum of 33mm2 (95A max) – AWG#2 @3m length]

HYBRID OFF-GRID WIRE SUMMARY

PV Source Wire (PV to Combiner)

- Use Minimum of AWG#14 (PV Cable)
- ✓ Recommended to use same wire as built-in wire from PV [4mm² (30A max) – AWG#12]

PV Combined Wire (Combiner to DC Load)

- ✓ Use Minimum of AWG#10 (PV Cable or equivalent)

Battery to Inverter/Controller

- ✓ Use Minimum of AWG#2 (Automotive wire)
- Using electrical tape to mark Negative cable White
- Red cable for positive

Inverter Input Wires

- ✓ Use Minimum of AWG#8 (THW wire)
- Black for L1, White for Neutral, Green to Ground

Inverter Output Wires

- Use Minimum of AWG#14 (THW wire)
- ✓ [Recommended to use of 4.0mm2 (30A max) - AWG#12 @3m length]
- Black for L1, White for Neutral, Green to Ground

HYBRID OFF-GRID BOM

1.5KWp Hybrid Off-Grid System
HOG/GRID Fully Automatic - Gel Battery

Materials	Description/Specs	Quantity	Price	Supplier
260 Watts PV	Japan Solar Poly Crystalline Solar Panel	6pcs	54,750	Gentromech
200AH 12V Battery	AGM NPP Batteries 200AH/20Hr	8pcs	108,000	Green Power System
3KVA Inverter - 48V	2.4KW Growatt 2000-48SLP, Off-Grid Inverter	1pc	38,598	Gentromech
MC4 Branch Connector	Multi-Contact MC4 Branch Cable Coupler	2sets	782	Gentromech
MC4 Connector	Multi-Contact MC4Connector	12sets	966	Gentromech
Breaker Box	12 Way Breaker Box	1pc	812	Gentromech
DC Breaker	63A DC MCB Breaker	1pc	495	Gentromech
DC Breaker	32A DC MCB Breaker	1pc	500	Gentromech
SPD DC Device	600V Surge Protection Device SPD DC	1pc	1,100	Gentromech
SPD AC Device	275V Surge Protection Device SPD AC	1pc	700	Gentromech
AC Breaker	25A 400V AC Breaker	1pc	400	Gentromech
AC Breaker	16A 400V AC Breaker	1pc	400	Gentromech
PV Railings	1KW PV Railing Set	2sets	6,000	Gentromech
PV Cable	6mm2 PV Cable Duplex	40m	4,800	Gentromech
Grounding Cable	6mm2 Grounding Cable (Green Yellow)	10m	400	Hardware
AC Wire AWG#12	4mm2 THW Wire	10m	400	Hardware
AC Wire AWG#8	10mm2 THW Wire	10m	400	Hardware
Battery Lugs	Battery Connection Lugs	25pcs	225	Sun Magnet
Battery Cable	Battery Cable	6m	1,242	Sun Magnet
		Total Materials	220,970	
		Mobilization	4,500	
		Carting with Insurance	6,000	
		Installation	26,516	
		Total	**257,986**	

MPPT Controller Sizing:

Maximum Voltage of Inverter:

- Lets assume the minimum effective cell temperature is 30°C, with the open circuit voltage (Voc) of 37.4 V and Open voltage (Voc) co-efficient of -0.30%/°C.
- An effective cell temperature of 30°C is 5° above the STC temperature of 25°C.
- Therefore the Voc voltage would be 37.6 x [100% + ((30-25) x -0.30%)] =
- The Voc @ 30°C would be 37.6 x 0.985 = 37.036V ~ 37.04V
- Assume the maximum voltage allowed by the inverter is 145V.
- The maximum number of modules in the string, is = 145 / 37.04 = 3.91 rounded down to 3 modules in series.
- ✓ Therefore: 3 x 37.04V = 111.12V (Inverter Operating Voltage 64V-115V)

IECEP Code of Professional Ethics and Conduct

The keystone of professional conduct is integrity. Hence, it behooves the engineer to discharge his duties with fidelity and competence to the public, his employers and clients, and with fairness and impartiality to all. It is his duty to interest himself in public welfare, and to be ready to apply his special knowledge for the benefit of mankind. He should uphold the honor and dignity of his profession and avoid association with any enterprise of questionable character. In his dealings with fellow engineers he should be fair and tolerant.

SECTION 1.
RELATIONS WITH THE STATE.

Each and every engineer shall recognize and respect the supreme authority of the State as expressed through its laws and implemented by its agencies, whenever and wherever such laws do not infringe upon the rights and privileges of citizens as guaranteed by the Constitution.

He shall recognize that the well-being of the public and the interests of the State are above the well being and interest of any individual.

In the interest of justice, he shall aid the State, if and when the technology is needed for the prevention and/ or prosecution of unjust, criminal, or unlawful acts.

In the interest of good government, he shall in every way possible extend cooperation to the State in the accomplishment of its goals and objectives.

In the interest of social efficiency, he shall extend assistance, guidance, and training to all subordinates under his jurisdiction in order to increase their skill and ability, knowledge and experience for the purposes of eventually increasing their responsibilities.

In the interest of the national economy and well-being, he shall always strive in the execution of his work for optimum efficiency, economy and safety.

In the interest of national security, the State shall be given primary consideration in all his inventions and/ or devices on electronics and communications useful for national security and defense.

In the event of any national emergency, he shall offer his technology, skill, ability and experience to the services of the State, even if it will involve personal sacrifices.

SECTION 2.
RELATIONS WITH THE PUBLIC.

He shall interest himself in public welfare and be ready to apply his special knowledge for the benefit of mankind.

He shall guard against conditions that are dangerous or threatening to life, limb or property on work for which he is responsible, or if he is not responsible, he shall promptly call such conditions to the attention of those responsible so that the conditions can immediately and effectively be corrected.

He shall have due regard for the safety of life and health of the public who may be affected by the work for which he is responsible.

He shall endeavor to extend public knowledge of electronics and communications engineering and he shall strive to win or maintain the public confidence by discouraging the spread of untrue, unfair and exaggerated statements regarding this engineering.

As a witness before a court, commission and/or other tribunal, he shall express an opinion only when it is founded on adequate knowledge and honest conviction.

He shall not issue on matters connected with public policy, any ex parte statements, criticisms, or arguments which are inspired or paid for by private interests, unless he identifies on whose behalf he is making the statements.

He shall refrain from expressing any public opinion on an engineering subject unless he is fully familiar and knowledgeable with all the facts relating to the subject.

His integrity shall be unquestionable and he shall discharge his duties and responsibilities with fidelity to the public, his employers and clients, and with fairness and impartiality to all.

SECTION 3.
RELATIONS WITH CLIENTS, EMPLOYER AND LABOR.

He shall act in professional matters as a faithful agent or trustee, and treat as confidential all matters and information concerning the business affairs, technical processes, etc. of his clients and/or employers.

He shall inform his client or employer of any financial interest on inventions, devices, equipment or any other thing, before undertaking any engagement in which he may be called upon to decide on the use thereof.

He shall not accept any other compensation, financial or otherwise, except from one interested party for a particular service or other services related therewith without the consent of all parties concerned.

He shall exercise fairness and justice when dealing with contracts between his clients or employers and the contractors.

He shall not accept any commissions or allowances, directly or indirectly, from contractors, suppliers and all other parties dealing with his clients and/or employers in connection with the work for which he is responsible.

He shall not be financially interested in the bid or bids of contractors, suppliers and other interested parties participating in a competitive work or job on which he has been employed as engineer without full knowledge and consent of his clients or employers.

He shall promptly inform his client or employers of any business in which he has any interest, business connection or affiliation which may compete with or affect the business of his clients or employers.

He shall not allow any decision in connection with his work for which he has been employed or on which he may be called upon to perform, to be affected by interests in any business.

He will present clearly the consequences to be expected from deviations proposed if his engineering judgment is overruled by non-technical authority in cases where he is responsible for the technical adequacy or engineering work.

He shall undertake only those engineering assignments for which he is qualified. He shall engage or advise his employer or client to engage specialists and shall cooperate with them whenever his employer's or client's interest are served best by such an arrangement.

SECTION 4.
RELATIONS WITH ENGINEERS.

He shall individually or collectively with others in the profession protect the profession from misunderstandings and/or misrepresentations.

He shall not directly or indirectly injure the professional reputation, prospects, advancement and/or practice of other engineers. However, if he has proof or personal knowledge that an engineer has been unethical and/or illegal in his practice, he shall inform in writing the proper authorities for appropriate action.

He shall uphold the principle of appropriate and adequate compensation for those engaged in the engineering profession, including those in the subordinate capacities, in the interest of public service and maintenance of the standards of the profession.

He shall not try to supplant another engineer in a particular employment after becoming aware that definite steps have been taken toward the other's employment.

He shall not compete, by underbidding, through reduction in his normal fees on the basis of charges for work, after having been informed of the charges submitted by another engineer.

He shall be fair and tolerant in his dealings with fellow engineers and give credit to those to whom credit is properly due.

He shall uphold the honor and dignity of his profession and avoid association in responsibility for work with engineers who do not conform to ethical practices.

He will exercise due restrain in criticizing another engineer's work in public, recognizing the fact, that the engineering societies and the engineering press provide the proper forum for technical discussions and criticism.

SECTION 5.
RELATIONS TO THE PROFESSION.

He shall cooperate in extending the effectiveness of the engineering profession and endeavor to be well informed of the latest developments in the profession by sharing or exchanging information and experience with others engineers, other professionals and students; and by contributing to engineering publications and schools and by participating in the activities of engineering societies.

He shall cooperate in upholding the integrity, dignity and honor of the profession by avoiding all conduct and practices that will be discrediting and injurious to the profession.

He shall be dignified and modest in explaining or discussing his work and/or merit and shall refrain from self-laudatory advertising or propaganda.

I AM _____(PECE, ECE, ECT, Associate Member). In my profession, I take deep pride, but without vainglory; to it, I owe solemn obligations that I am eager to fulfill. As an Electronics Engineer I will participate in one but honest and legal enterprises. To him who has engaged my services, as employer or client, I will give the utmost of performance and fidelity. I dedicate myself to the analysis, synthesis and dissemination of engineering knowledge and practice. Zealous of the high repute of my calling, I will strive to protect the interests and the good name of any engineer that I know to be deserving; but I will not shirk, should duty dictate, from disclosing the truth regarding anyone who has shown himself unworthy of the profession. To my colleagues, I pledge in the same full measure I ask of them, integrity and fair dealing, tolerance and respect and devotion to the standards and the dignity of the engineering profession that carries with it the obligation to serve humanity with complete dedication.

I DECLARE TO OBEY AND BE BOUND BY THE ABOVE CODE OF ETHICS

_____

SIGNATURE ABOVE PRINTED NAME/ Date