MEMORANDUM TO:

OIC, Assistant Schools Division Superintendent
Chief Education Supervisors, CID and SGOD
Secondary School Principals
Officers-In-Charge
Public and Private Schools

Attached is a letter from Ms. Alyarabela M. Manansala, President, IECEP, Technological Institute of the Philippines in Quezon City dated January 24, 2019 re: Invitation to Participate in T.I.P. Makerthon 2019 to be held on February 20, 2019 from 8:00 AM to 5:00 PM at the T.I.P.-Q.C. PE Center 1, content of which is self-explanatory, for your information and appropriate action.

Wide dissemination of this Memorandum is desired.

JOEL T. TORRECAMPO
Officer-In-Charge
Office of the Schools Division Superintendent

January 29, 2019

Maka-Diyos, Makatao, Makakalikasan at Makabansa
Invitation for T.I.P. Makerthon 2019
IECEP T.I.P. Q.C. <iecepqctip@gmail.com>

to me, Joevil

Dr. Joel Torrecampo
Officer-In-Charge
Marikina City Division

Dear Sir:

The Electronics Engineering department of the Technological Institute of the Philippines Quezon City will conduct the ECE Roadshow 2019 this February 20-22, 2019 with the theme “Transforming Real-World Problems into Sustainable Innovative Solutions Bridging Our Way towards the Cities of the Future.” This three-day event spearheaded by ECE students includes activities that intend to engage T.I.P.ians toward lifelong learning, problem-solving and innovating. As part of the ECE Roadshow 2019, the Institute of Electronics Engineers of the Philippines T.I.P.-Q.C. (IECEP T.I.P.-Q.C.) will be holding its first ever T.I.P. Makerthon 2019 to be held on February 20, 2019, from 8:00 am to 5:00 pm at the T.I.P.-Q.C. PE Center 1. The event aims to promote both the institution and the Electronics Engineering program to Senior High School Students under the Science, Technology, Engineering, and Mathematics (STEM) strand, and to introduce engineering as a way of life, applying their technical skills for social good.

In lieu, we are requesting your good office for a recommendation to help disseminate the event details to the schools under your division with Senior High School students under the STEM strand to become the event’s participants. Attached are the invitation letter for the schools, the mechanics of the event, and other details.

We are hoping for your positive response to this matter.

Sincerely yours,

Alyarabela M. Manansala
President, IECEP T.I.P.-Q.C.

https://mail.google.com/mail/u/0/#inbox/FMficpw8BVMkjpSMbkXxwNfRCLqJdbKGbd
January 24, 2019

Dr. JOEL TORRECAMPO
Officer-in-Charge
Office of the Schools Division Superintendent
Marikina City

Dear Mr. Torrecampo,

Greetings!

The High School Department of Immaculate Conception Academy in Greenhills, San Juan City looks forward to an opportunity to interact with the Faculty and Staff of Marikina City Science High School on the latest trends in teaching and learning approaches and the best practices in their Science laboratories. We know that we share similar advocacies as educational institutions in the country with one mission we stand firm on – the holistic development of our youth.

May we request seven of our Senior High School Science Teachers and one laboratory personnel visit the school on February 4, 2019. We would like to inquire further about the SHS science curriculum and its implementation, the laboratory procedures for both the SHS and JHS and your current implementation of the Capstone Project.

We believe that Marikina City Science High School is a premier educational institution that has etched a mark of excellence among schools in the country. We are sure that we shall benefit from this visit as we see significant sharing on ideas, principles, and vision for both our teachers and students.

We hope to meet with you soon. Should your schedule allow, we shall call for confirmation between January 28 to 30, 2019. If you have any clarifications with regards to our request, you may reach us through the following emails:

dliamzon@icagh.edu.ph - Mrs. Debra L. Liamzon
High School Principal

jdelacruz@icagh.edu.ph - Ms. Jamie De la Cruz
HSO - Senior Staff

We hope for your most considerate response.

In Mary Immaculate,

Mrs. DEBRA L. LIAMZON
High School Principal

Sr. IRENE N. FERRER, MIC
President

Immaculate Conception Academy
10 Grant Street, Greenhills, San Juan City 1502
P. O. Box 326 * Tel 7237041 * Fax 7270459 * info@icagh.edu.ph * www.icagh.edu.ph
Invitation for T.I.P. Makerthon 2019
IECEP T.I.P. Q.C. <iecepqctip@gmail.com>

to me, Joevil

Dr. Joel Torrecampo
Officer-In-Charge
Marikina City Division

Dear Sir,

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In lieu, we are requesting your good office for a recommendation to help disseminate the event details to the schools under your division with Senior High School students under the STEM strand to become the event’s participants. Attached are the invitation letter for the schools, the mechanics of the event, and other details.

We are hoping for your positive response to this matter.

Sincerely yours,

Alyarabela M. Manansala
President, IECEP T.I.P.-Q.C.

https://mail.google.com/mail/u/0/#inbox/FMfcgwxBVMkjpSMbkXwNfRCLqJdbKGbd
January 14, 2019

Mr. Joel T. Torrecampo  
Officer-In-Charge  
Marikina City Division

Dear Sir:

The Electronics Engineering department of the Technological Institute of the Philippines Quezon City will conduct the ECE Roadshow 2019 this February 20-22, 2019 with the theme "Transforming Real-World Problems into Sustainable Innovative Solutions Bridging Our Way towards the Cities of the Future." This three-day event spearheaded by ECE students includes activities that intend to engage T.I.P.ians toward lifelong learning, problem solving and innovating. As part of the ECE Roadshow 2019, the Institute of Electronics Engineers of the Philippines T.I.P.-Q.C. (IECEP T.I.P.-Q.C.) will be holding its first ever T.I.P. Makerthon 2019 to be held on February 20, 2019 from 8:00 AM to 5:00 PM at the T.I.P.-Q.C. PE Center 1. The event aims to promote both the institution and the Electronics Engineering program to Senior High School Students under the Science, Technology, Engineering, and Mathematics (STEM) strand, and to introduce engineering as a way of life, applying their technical skills for social good.

In lieu, we are requesting your good office for a recommendation to help disseminate the event details to the selected schools under your division that we would like to invite to become the event’s participants. Attached are the invitation letter for the schools, the mechanics of the event, and other details.

We are hoping for your positive response to this matter.

Respectfully yours,

Alyarabela M. Manansala  
President, IECEP T.I.P.-Q.C.

Noted by:

Engr. Jan Joel A. Razon  
Adviser, IECEP T.I.P.-Q.C.  

Engr. Sheary F. Arenas  
Program Chair, ECE
TECHNOLOGICAL INSTITUTE OF THE PHILIPPINES  
938 Aurora Boulevard, Cubao, Quezon City  

College of Engineering and Architecture  
Electronics Engineering Department

January 14, 2019

The School Principal

Dear Sir/Madam:

The Electronics Engineering department of the Technological Institute of the Philippines Quezon City will conduct the ECE Roadshow 2019 this February 20-22, 2019 with the theme “Transforming Real-World Problems into Sustainable Innovative Solutions Bridging Our Way towards the Cities of the Future.” This three-day event spearheaded by ECE students includes activities that intend to engage T.I.P.ians toward lifelong learning, problem solving and innovating. As part of the ECE Roadshow 2019, the Institute of Electronics Engineers of the Philippines T.I.P.-Q.C. (IECEP T.I.P.-Q.C.) will be holding its first ever T.I.P. Makerthon 2019 to be held on February 20, 2019 from 8:00am to 5:00pm at the T.I.P.-Q.C. PE Center 1. The event aims to promote both the Institution and the Electronics Engineering program to Senior High School Students under the Science, Technology, Engineering, and Mathematics (STEM) strand, and to introduce engineering as a way of life, applying their technical skills for social good.

In lieu with this, we are inviting your school to participate in the said activity to provide a venue where Grade 12 Senior High School (SHS) students under the STEM strand can exhibit their wits and skills in creating a “Smart City” by providing innovative solutions to simple everyday problems. We have also invited schools from the divisions of Rizal, Marikina, Pasig, and Quezon City.

We would like to request your good office to send the official list of contestants and coach for the upcoming competition. For confirmation, you may send your accomplished registration forms personally or through fax at 911-71-99. The deadline for registration will be on February 8, 2019.

Attached are the registration form and the mechanics of the competition. For inquiry, you may send an e-mail to leceogcqcip@gmail.com or aero_tjgc@yahoo.com or contact person Alyarabela M. Manansala, IECEP T.I.P.-Q.C. President at 096666971214 or call local 305, 911-09-64 or 911-71-99 and look for Mr. Arturo Sudlon.

We look forward to seeing your school bagging the championship title and being the first ever winners of the competition. God Bless!

Respectfully yours,

Alyarabela M. Manansala  
President, IECEP T.I.P.-Q.C.

Noted by:

Engr. Jan Josevil A. Razon  
Adviser, IECEP T.I.P.-Q.C.

Engr. Sheryl A. Areenas  
Program Chair, ECE
WHAT ARE SOME OF THE GENERAL CATEGORIES OF A SMART CITY?

- Energy
  In the setting of smart city, energy should be well utilized, that includes efficient usage of energy, less consumption of energy, energy harvesting and energy recycling.

- Transportation
  Area of the Smart City that includes traffic monitoring, parking, transportation of products, goods and services etc are the scope for this category.

- IoT Devices
  IoT devices in Smart City include sensors and actuators that is infused or integrated into a third party network. Transmitters, receivers and other types of connectivity are utilized in this area of Smart City.

- Green Engineering
  This is the application of technological processes and optimization in a way to reduce pollution, promote sustainability and minimizing the risk to human health.

T.I.P. MAKERTHON 2019 PRIZES

<table>
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<tr>
<th>Major Awards</th>
<th>Prizes</th>
</tr>
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<td>Champion</td>
<td>100% Tuition fee discount for one semester in the Technological Institute of the Philippines Quezon City campus - PhP 6,000.00 cash</td>
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</tr>
</tbody>
</table>

Special Awards
| Best Prototype | Plaque of Recognition |
| Best Pitch    | Plaque of Recognition |

T.I.P. MAKERTHON 2019 PROGRAM FLOW

- Registration 7:00am - 8:00am
- Opening Prayer 8:00am - 8:15am
- Singing of the National Anthem & TIP Hymn 8:15am - 8:30am
- Greeting Remarks 8:30am - 8:45am
- Reading of Mechanics and other General Announcements 8:45am - 12:30pm
- Pre-First Round (Prototype Making) 12:30pm - 1:30pm
- Lunch 1:30pm - 2:00pm
- Final Round (Pitching) 2:00pm - 4:00pm
- Intermission/Update 4:00pm - 4:15pm
- Announcement of winners 4:45pm - 4:55pm
- Closing Remarks 4:55pm - 5:00pm
- Singing of the TIP Hymn 5:00pm - 5:15pm

FEBRUARY 20, 2019
T.I.P. - O.C., PE CENTER 2
ABOUT THE EVENT
Aakerthon is a design sprint-like event wherein participants are to create a physical prototype within a specific amount of time that is in lined with the given theme.

ABOUT THE THEME:
SMART CITY - to enhance the quality and performance of urban services such as energy, transportation and utilities in order to reduce resource consumption, wastage and overall costs.

EVENT OBJECTIVES:
To promote Technological Institute of the Philippines to Senior High School Students under the Science, Technology, Engineering and Mathematics (STEM) strand
To promote Electronics Engineering as their potential career after they graduate from SHS
To expose students to engineering, applying their technical skills for social good.
To introduce engineering as a way of life.

JUDGING CRITERIA OF T.I.P. MAKERTHON 2019
The participating teams of the T.I.P. Makerthon 2019 shall be judged according to the following criteria.

PRE-FINAL ROUND:

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>NO. OF POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idea</td>
<td></td>
</tr>
<tr>
<td>- Problem Statement</td>
<td>45pts.</td>
</tr>
<tr>
<td>- Relation to the theme</td>
<td></td>
</tr>
<tr>
<td>- Originality</td>
<td></td>
</tr>
<tr>
<td>Building Process</td>
<td></td>
</tr>
<tr>
<td>- Time management</td>
<td>25pts.</td>
</tr>
<tr>
<td>- Resourcefulness</td>
<td></td>
</tr>
<tr>
<td>Prototype</td>
<td></td>
</tr>
<tr>
<td>- Is it a solution to the problem statement?</td>
<td>30pts.</td>
</tr>
<tr>
<td>- Is it self-explanatory?</td>
<td></td>
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<tr>
<td>TOTAL</td>
<td>100pts.</td>
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</table>

FINAL ROUND:

<table>
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<tr>
<td>- Originality</td>
<td></td>
</tr>
<tr>
<td>Business Model</td>
<td></td>
</tr>
<tr>
<td>- Can this product be monetized?</td>
<td>10pts.</td>
</tr>
<tr>
<td>- Product's benefit/impact</td>
<td></td>
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<td>Prototype</td>
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<td></td>
</tr>
<tr>
<td>Working Prototype</td>
<td></td>
</tr>
<tr>
<td>- Bonus points for functional prototype</td>
<td>15pts.</td>
</tr>
<tr>
<td>Pitching/ Presentation</td>
<td></td>
</tr>
<tr>
<td>- Product presentation</td>
<td>15pts.</td>
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<tr>
<td>- Clarity of problem statement and solution</td>
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<td>TOTAL</td>
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</table>

PRE-FINAL ROUND
-The participating teams will be given three (3) hours and forty-five (45) minutes to build and accomplish their prototypes.
-All prototypes must be aligned with their respective project descriptions on their registration forms.
-Judging process will be begin during the prototype building but there will be no announcement during the event proper that the judging has started.
-Participants are free to use the time to finish their respective prototypes during the lunch break.
-All teams shall stop working with their prototypes after the lunch break. Failure to comply may result to disqualification.

FINAL ROUND
-A representative from every participating team will be given ten (10) minutes to pitch their respective prototypes.
-The judges will be given five (5) minutes to ask questions to the participants after they pitch their projects.
About the T.I.P. Makerthon 2019

About the event

This event is inspired by the concept of Makerthon, an emerging trend in events to promote technological advancements. Makerthon is a design sprint-like event wherein participants are to create a physical prototype within a specific amount of time that is in lined with the given theme. Prototypes can be of any size, as long as it serves as a particular solution to different categories as stated below.

Event objectives:

- To promote Technological Institute of the Philippines to Senior High School Students under the Science, Technology, Engineering and Mathematics (STEM) strand
- To promote Electronics Engineering as their potential careers after they graduate from SHS
- To expose students to engineering, applying their technical skills for social good
- To introduce engineering as a way of life

About the theme:

What is a Smart City?

“A SMART CITY is a designation given to a city that incorporates information and communication technologies (ICT) to enhance the quality and performance of urban services such as energy, transportation and utilities in order to reduce resource consumption, wastage and overall costs.”

What are some of the General Categories of a Smart City?

- **Energy**
  In the setting of smart city, energy should be well utilized, that includes efficient usage of energy, less consumption of energy, energy harvesting and energy recycling.

- **Transportation**
  Area of the Smart City that includes traffic monitoring, parking, transportation of products, goods and services etc. are the scope for this category.

- **IoT Devices**
  IoT devices in smart city include sensors and actuators that is infused or integrated into a third party network. Transmitter, receivers and other type of connectivity is utilized in this area of smart city.
• Green Engineering
  This is the application of technological processes and optimization in a way to reduce pollution, promote sustainability and minimizing the risk to human health.


• Interested teams are required to submit a soft copy of their accomplished team registration form to iecep@ttipin.com on or before February 14, 2019. Late registration forms will be disregarded. Each team shall provide their basic information and a brief explanation of their project that shall not exceed 200 words. (i.e. objective, purpose, feature of the product and the application of the technology).
• All submissions must adhere to the compulsory requirements listed under Participant Requirements.
• Each team shall be comprised of five (5) student participants and one (1) faculty adviser.
• All student participants must be bonafide Grade 12 STEM Senior High School students of their respective schools, and are currently enrolled for the academic year 2018-2019.
• All participants are required to be present at most one (1) hour before the event. Corresponding points will be deducted to teams who fail to comply.
• Participants who will come late will still be allowed to work and participate given that there will be no time adjustment.
• Only ten (10) chosen teams will move on to participate in the final round.
• Each participating team will be provided with a prototyping kit for the pre-final round. The kit contains the following materials:
  o Microcontroller (Arduino Uno R3)
  o Digital Multimeter
  o Power Supply
  o Cardboard
  o Popsicle Sticks
  o Glue gun & glue sticks
  o Cable ties
  o Electronic Components
  o Pliers
  o Wires
  o Cutter
The participants will be granted full access to the laboratory room throughout the event. The lab is equipped with:
- Soldering stations
- Common hand tools
- Computers

The judges' decision is final and no correspondence or discussion will be entertained regarding their decision (refer to Judging Criteria).

Pre-Final Round

- The participating teams will be given three (3) hours and forty-five (45) minutes to build and accomplish their prototypes.
- All prototypes must be aligned with their respective project descriptions on their registration forms.
- Judging process will be begin during the prototype building but there will be no announcement during the event proper that the judging has started.
- Participants are free to use the time to finish their respective prototypes during the lunch break.
- All teams shall stop working with their prototypes after the lunch break. Failure to comply may result to disqualification.
Final Round

- A representative from every participating team will be given ten (10) minutes to pitch their respective prototypes.
- The judges will be given five (5) minutes to ask questions to the participants right after they pitch their projects.

Prepared by:

Alyarabela M. Manansala  
President, IECEP T.I.P.-Q.C.

Approved by:

Engr. Jan Jovell A. Razon  
Adviser, IECEP T.I.P.-Q.C.

Noted by:

Engr. Gerald O. Semifrania  
Head, Office of Student Affairs
Participant Requirements

Compulsory Requirements

- All participants must be a grade 12 SHS (Senior High School) student under the strand STEM (Science, Technology, Engineering, and Mathematics).
- All participants must be bonafide students of their respective schools, and are currently enrolled for the AY 2018-2019.
- Each team shall consist of exactly five (5) student participants and one (1) faculty adviser from their school.
- All participants should have knowledge of basic electrical and electronic devices.
- All participants should have basic knowledge on microcontrollers.

Preferred Requirements:

- Has an experience in innovating/making projects;
- Already participated in a makerthon or any similar competitions;
- Has good communication skills;
- Has good grasp of basic knowledge in Arduino, Raspberry Pi or any other prototyping components that could be used for their advantage.
Final Round:

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</tr>
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The decision of the judges is final and irrevocable.
Judging Criteria of T.I.P. Makerthon 2019

The participating teams of the T.I.P. Makerthon 2019 shall be judged according to the following criteria:

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<tr>
<td>Best Pitch</td>
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