6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes

Table of Contents

mail @ VJCET

Fwd: KSUM Fund Sanctioned for IEDC activities - FY 2021-22

1 message

VINOJ K <vinoj@vjcet.org>   Mon, Apr 12, 2021 at 10:28 AM
To: basilb@vjcet.org, femyj@vjcet.org, nelson@vjcet.org, nivyamary@vjcet.org, rini@vjcet.org, robink@vjcet.org,
sanoj@vjcet.org, VINOJ VINOJ <vinoj@vjcet.org>, Jomu M George <jomum@vjcet.org>, Rajan K K <kkrajan@vjcet.org>,
"Sheela V. K." <sheelavk@vjcet.org>

Vinoj K
Associate Professor
Department of Mechanical Engineering
Viswajyothi College of Engineering & Technology, Kerala
Mob: 9847411887

VISWAJYOTHI
COLLEGE OF ENGINEERING & TECHNOLOGY
Vazhakulam P.O., Muvattupuzha
Ernakulam Dist., Kerala - 686 670
Tel: 0485 2262211 / 44
Email: vjcet@vjcet.org
Approved by AICTE New Delhi & Affiliated to APJ Abdul Kalam Technological University www.vjcet.org

---------- Forwarded message ---------
From: **IEDC Kerala** <iedckerala@startupmission.in>
Date: Fri, Apr 9, 2021 at 2:54 PM
Subject: KSUM Fund Sanctioned for IEDC activities - FY 2021-22
To: <vinoj@vjcet.org>
Cc: <kkrajan@vjcet.org>, <principal@vjcet.org>

Dear Sir,

Greetings from Kerala Startup Mission!

At the outset, let me appreciate the good work you are doing through the IEDC to support student innovators. Though Covid-19 pandemic and subsequent closure of physical classes had affected IEDC physical activities in the last academic year, We are sure that IEDC activities would get much required acceleration in the upcoming academic year. To support this, we have released the following funds to **IEDC Viswajyothi College of Engineering and Technology, Vazhakulam, P'O Muvattupuzha, ernakulam** as **Annual IEDC grant** : Rs 2,00,000/- and **Technical Workshop in Future Technologies** : Rs. 20,000/-

We genuinely expect that you would be able to plan IEDC activities well in advance with the support of students as outlined in IEDC handbook. It would be beneficial to develop an annual plan for IEDC. We would strongly recommend you to go through the IEDC handbook to understand the overall framework of the IEDC programme and a copy of the handbook is attached herewith for your information as well. You can access the same on IEDC website

Let me also request you to keep activities updated on IEDC portal as and when it happens as this would be the sole source for the accreditation of IEDCs.

With a view to provide more inputs related to fund disbursement and programmes, we would like to meet you online on **19th April 2021, 03.00 pm**

VC Link -> https://meet.google.com/ebd-xsdu-cfa

Request you to participate. Together we can spearhead this novel innovation journey.

Have a good day!

Thanks & Regards,
Salini VR
Kerala Startup Mission,
Mob: +91 9633-24-5595
www.startupmission.kerala.gov.in

Innovation and Entrepreneurship Development Centre (IEDC)

Viswajyothi College of Engineering and Technology

Summary Report on Activities of Innovation And Entrepreneurship Development Centre (IEDC)

From 20.10.2016 To 27.01.2020

January 2020

Prepared by:	Checked by :	Approved by :
Dr. Sheela V K, IT Dept. Coordinator		
Mr. Jomu M George , EEE Dept. Coordinator		
Mrs. Rini Simon CSE Dept. Coordinator	Mr Robin Augustine, ANO	Dr. K K. Rajan, Nodal Officer
Mrs. Femy John, ECE Dept. Coordinator		
Mrs. Nisa Ann Mathew, CE Dept. Coordinator		
Mr. Basil Baby, ME Dept. Coordinator		

SUMMARY REPORT ON ACTIVITIES OF
INNOVATION AND ENTREPRENEURSHIP DEVELOPMENT CENTRE (IEDC)
IN VISWAJYOTHI COLLEGE OF ENGINEERING AND TECHNOLOGY

1.   Introduction

Innovation and Entrepreneurship Development   is being promoted in educational institutions to develop institutional mechanism to create entrepreneurial culture in S&T academic institutions and to foster techno-entrepreneurship for generation of wealth and employment by S&T persons.   IEDCs are established in academic institutions   having requisite expertise and infrastructure. The Coordination   committee of Innovation and Entrepreneurship Development Centre of VJCET was constituted on 20.10.2016 and activities are   organized with the support of Kerala Start-up Mission. The coordination committee have representation for students and faculty members   form all departments. This report gives the brief summary of activities   carried out by IEDC since its inception.

2.   Support From Kerala Startup Mission (KSUM)

IEDC of Viswajyothi college of Engineering and Technology is functioning with the technical and financial support of Kerala Start Up Mission. As suggested by KSUM IEDC VJCET has opened a savings account in South Indian Bank Vazhakulam.   IEDC unit is recognized by Kerala Start up mission on 8.12.2016 and a financial grant of Rs. 2 lakhs was received and the amount was   transferred to IEDC account.   This amount is being   used for   conducting technical talks, interaction with innovators, Industrial visits and prototype product development activities.

3.   Orientation Programmes Organized

3.1   A one day orientation programme on Entrepreneurship for the benefit of second year students on 12th November 2016 in association with   Ourea Training Hub, Kochi. 60 students participated in the progamme.

3.2   Organised an orientation program on IEDC for first year students of 2018 batch on 26.04.2019

3.3   Varthapathi , IEDC orientation programme for S2 Students on 30.04.2019

3.4   IEDC orientation programme for first years of   IT Branch on 01.08.2019

3.5   Address by Dr K C Chandrasekharan Nair to Management   EC members andfaculty members 12.10.2018

3.6   Organised a talk on 'Entrepreneurship for Engineers' by Dr. K C Chandrasekharan Nair on 9.11.2018

3.7   IEDC orientation programme for first years of EEE Branch on 01.08.2019

3.8 IEDC orientation programme for first years of ECE Branch on 01.08.2019

3.9   IEDC orientation programme for first years of   ME Branch on 01.08.2019

3.10 IEDC orientation programme for first years of   CE Branch on 02.08.2019

3.11 IEDC orientation programme for first years of   CSE Branch on 01.08.2019

3.12 Idea Discussion meet with students of all department   chaired   by Shri K C Chandrasekharan Nair on 30.08.2019

3.13 Discussion meet with   faculty members   by Shri K C Chandrasekharan Nair on 31.08.2019

3.13 Orientation programme for   IEDC members of VJCET   by Dr K K Rajan   on 11.10.2019

4.   Workshops Conducted

IEDC of VJCET has conducted following workshops in the last three years.

4.1 One day workshop on digital manufacturing was organized on March 30 th 2017 in association with M/s Forier Incubation Technologies pvt Ltd. Cochin. The work shop was attended by   60 students   from different disciplines.   A 3D printer was available for display and demonstration to the students.

4.2 Disha 2018, a Women's Entrepreneurship Development Programme was organized in Association with Prayaana Labs, Kochi on 28.02.2018
.

4.3 Conducted workshop - Haptic Interface Robot   in association with   Robotic Club,VJCET 03.05.2019

4.4 Robone Workshop Series " Basics of blue tooth controlled robot 26.04.2019Talk and interactive session handled by expert team from eYogi, Zappyhire and Pytenlab , Info park Cochin.

5.   Workshops Attended

5.1 Faculty members and students attended 2 day workshop at St Joseph College Palai

5.2 A Faculty member attended workshop - "Mentoring campus startups" at Trinity College Thiruvanathapuram 07.12.2018

5.3 Four students form VJCET Attended Huddle Kerala at Kovalam Trivandrun 28.10.2019

5.4 Seven students attended Mobile application workshop conducted by KSUM at MBITS, Nellimattam, Kothamangalam on on 16th and 17th of October, 2019

6. Talks By Entrepreneurs/Experts

6.1 Technical Talk on the Topic "Challenges in the evolution of an Industry", by Shri. A Dineshkumar, MD, CT control technology, Bangalore.

6.2 Technical talk "Technology Development : Process & Protocols", By A Nandakumar, BARC, Mysore.

6.3 Technical Talk on "Solar PV: A sunrise of opportunity for Engineers" , By Shri. G Krishnakumar, Senior Faculty, Evergreen technologies Pvt Ltd, Kochi.

7. TRAINING PROGRAMMES ATTENDED

Two faculty members of VJCET are undergone Department of Science and Technology sponsored faculty development programme on Entrepreneurship sponsored NSTEDB.

8. Participation In Iedc Summits

8.1 IEDC Summit 2017

IEDC summit 2017 held at Adlux International convention center, Angamali on August 19, 2017.Two faculty members and 15 students from VJCET participated in the IEDC Summit 2017 which was held at Adlux International Convention Center, Angamali on August 19, 2017. The Summit started at 9.30 AM. There were two sets of panel discussions to learn from two levels of entrepreneurs, one who have succeeded from Kerala and established their business across the globe and the other a group of young generation aspiring entrepreneurs with innovative enterprises. Main speakers were Varun Chandran of Corporate 360, DentCare Dental Labs founder John Kuriakose, James Joseph of Jackfruit 365 and Chaipaani founder Shruti Chaturvedi. They shared their stories and insights of the industry at a panel discussion on 'Identify the problem, Explore the opportunity, build your Enterprise/Startup'. The event had over 2000 participants from 200 Innovation Entrepreneurship Development Centers across Kerala.

IEDC Summit 2017

Students discussed with various young entrepreneurs and were able to understand the methods of gaining funds or startups and the challenges involved in new startups.

8.2   IEDC Summit 2018

IEDC SUMMIT 2018   was India's Largest Summit for Aspiring Entrepreneurs. Kerala Startup Mission Conduct 3rd "IEDC Summit 2018" hosted by Amal Jyothi College of Engineering, Kanjirappalli. Over 214 IEDC Branches from 214 Colleges Across 14 Districts of Kerala Fetching 3000+ Students Participated in the event. One of the faculty IEDC coordinator Shri Basil baby attended Nodal officers meet at Amaljyothi College of Engg., Kanjirappilly on 02.11.2019. Twenty three   Students,   four faculty members, nodal officer and two management representatives   attended the summit. Students and faculty members attended various events in the summit such as workshops, talks and exhibitions. The summit was very much motivating to students to become young entrepreneurs.

8.3   IEDC   Summit 2019

IEDC   Summit 2019 Conducted on Saturday 19.10.2019 at Shardaya college of Engineering and technology Kodakara. Kerala Start-up Mission, the Nodal agency of Government of Kerala organized   IEDC Summit 2019, Asia's largest student Entrepreneurship Summit where the students got an opportunity to experience the technological diversities and advancements through a series of technology track events, brainstorming sessions, interactive community meet ups and product exhibitions. IEDC Summit 2019 was conducted in Sahrdaya College of Engineering and Technology, Kodakara, Thrissur. Sixteen students, one faculty member, Nodal officer   IEDC and the Management coordinator of VJCET, V-BIC   attended this Asia's largest summit for aspiring entrepreneurs. This report gives the details of IEDC summit 2019 and highlights

benefits gained by the participants. 19 delegates attended the summit from VJCET. This summit was very useful to the students because students got an opportunity to experience the technological diversities and advancements through a series of technology track events, brainstorming sessions, interactive community meet ups and product exhibitions. The summit was a real inspiration to all the participants. EDC summit 2019 was well organised by Kerala Start Up Mission. It was an opportunity for students and aspiring entrepreneurs to listen to eminent personalities and established entrepreneurs. VJCET had very good participation and involvement in the summit. The knowledge and experience gained by VJCET delegates should be effectively utilised to develop a start-up friendly eco system in the college.

IEDC Summit 2019

9.   Participation In Other KSUM Programmes

Six students and four faculty members participated in the Yes 3D summit held at Hotel Le Meridian, Kochi. A faculty member form VJCET Participated Mini Fablab and the Way forward work shop held at Makers village Kalamassery. A One day seminar on Millennium Alliance held at Cochin was attended by the nodal officer IEDC. VJCET studentsteam won the price of "Hero of Bootcamp" in Ernakulam district a s a part of Startup India Kerala Yatra on 12.11.2018.

10.   VJCET Idea Fest

IEDC of VJCET is organising idea fest every year.

10.1   VJCET Idea Fest 2018

IEDC of VJCET organized Idea fest during the first week of October 2018. This event will focus exclusively on innovative ideas from students of Viswajyoythi College and enable students to effectively participate in the state level idea fest competitions held by Kerala Startup Mission. Students can participate in a team maximum four numbers or as individual. Each selected idea will get an initial fund of Rs 5000/- for prototype development. Students should prepare a one page write up of the proposed idea and submit to the IEDC department coordinators. The last date for submission of idea is Friday 28th September 2018. Forty teams participated in the Idea fest 2018. One idea was selected from each department for financial support of Rs, 5000 for prototype development. The Ideafest 2018 was a real motivation to students.

10.2 VJCET Idea Fest 2019

Based on the excellent response from students in 2018 idea fest 2019 was organized in the period, August-October 2019. Seventy one teams participated in Idea fest-2019. Prior to the final round of VJCET Idea Fest-2019, a discussion meet is organised on Friday, 30.08.2019 for refining the innovative business ideas of students and faculty members. Faculty members and students of each department of VJCET is required submit their innovative technology based idea for developing into a prototype or product before 26.08.2019. The idea should have marketing feasibility and the potential to develop to a profit making business in the long run. Dr. K. C. Chandrasekharan Nair, co-founder of Technopark Trivandrum, former CFO,Techno park and Secretary & Registrar, Technopark TBI will chair the discussion meet and look into the feasibility to convert an Idea into a start-up venture. In the discussion meet separate sessions are arranged for different departments as follows. Venue of the meeting will be VJCET conference room.

Discussion meet with Dr. K C Chandrasekharan Nair (Former CFO Technopark)

Idea evaluation was done in Each of the six departments. An expert committee headed by Head of the department has carryout the evaluation. IEDC department coordinator and technical experts domain expert were members of the evaluation team. One idea from each department was selected and provided with financial support of Rs.5000/- for proto type development. List of winners are given below.

Viswajyothi College of Engineering and Technology
Innovation and Entrepreneurship Development Centre
VJCET Idea Fest-2019

Ref: VJCET/IEDC/KKR/2019 / 31   Dt. 13.11.2019

Innovation and Entrepreneurship Development Centre (IEDC) in association with Viswajyothi Business Incubation Centre (V-BIC) of Viswajyothi College of Engineering and Technology had organized Idea Fest-2019 during the last week of October 2019. This event had focused exclusively on innovative technology based idea of students for developing a prototype or product. Following teams are selected as winners of Idea Fest-2019. IEDC will provide them financial support upto Rs.5000/- for prototype development.

Sl. No.	Title of Idea	Team Members	Class
1.	Beyond Connect & Learn (A learning platform to link Academic Community)	Rahul Vinod Amal Shyjo	S5 IT
2.	Automated Attendance Registering System (AARIS)	Kevin Mathew George, Philip Thomas Anandh H Paul Stanly	S5 EEE B
3.	Amphibious Cage (Flood Shelter For Live Stock)	Abhinand S, Ajwin Jose Francis, Charles George, Rahul Raj	S7 CEB
4.	Agrobuy App (IT based marketing of agricultural products)	Thomas James	S7CSA
5.	Stroke Rehab & Exercising Glove	Jephin Baby Vishnu M Amal Chandran	S7 ECB
6.	Portable Nutmeg Separator	Jipil P Chettoor Eldhose Raju Albin Paul Harikrishnan A S	S7 ME B

Dr. K.K.Rajan,
Nodal officer , IEDC ,
Viswajyothi College of Engineering and Technology,
Vazhakulam, Muavattupuzha,

11.   KSUM Idea Fest

11.1   KSUM Idea fest 2018

Kerala Start-up mission had organized the Idea Fest 2018 during the first half of 2018. This event was exclusively focused on innovative projects by students in Kerala. The application has to be submitted in two stages. IEDC cell of VJCET has organized an idea campaign and encouraged student to apply by filling the interest form online. 112 students from VJCET had applied for the Idea fest in the first stage. The Idea Grants Rs. 2 lakh/ idea   will be given   to selected students by KSUM for conversion of idea to prototype. 19 student groups were selected for final presentation. IEDC coordination committee took all efforts to train the students for presenting the idea effectively. Financial support was also given for the participants of Idea fest for their travel, stay and food expenditure. The result of the Idea Fest 2018 was declared and   two students from VJCET got financial support, one got lab support and three others are in the waiting list.

11.2 KSUM Idea fest 2019

For KSU idea fest 2019 there   were   63 applicants from VJCET and 8 teams were selected for final presentation. One VJCET Team Selected for Funding Support upto Two Lakhs. The name of the project was AGR-E (AGR- E is a CNC based Farming Machine. This was one of the 18 projects selected   out of 1600 projects from all over Kerala.

12.   Viswajyothi Incubation Centre

Realising the need of entrepreneur development among the Viswajyothi Business Incubation Centre (V-BIC) is launched in VJCET on 26.04.2019. Inauguration of V-BIC was carried out by Shri Eldho Abraham honourable MLA Muvattupuzha. Dr Saji Gopinath delivered the was the keynote address. In the business incubation centre, startup   companies of   students, faculty members,   alumnis and technically and professionally qualified youngsters are functioning for business incubation. The VJCET V-BIC is occupying an area of 3000 square feet, with all infra structure available for business development. As on now four companies started   functioning form V- BIC. In VJCET, V-BIC provides opportunity to students to become entrepreneurs and   they can be job providers rather than job seekers.

Inauguration of V-BIC

12.1 Objectives

Objectives of the venture, V-BIC is to achieve a transformation of minds of the students from being job-seekers to entrepreneurs themselves and become job providers by effectively utilizing the theoretical and practical knowledge they are acquiring from the institution. Students and faculty will be encouraged to find innovative solutions to social problems.

- Introduction of Entrepreneurial culture to the students, faculty and common people.
- Promote students and faculty to come up with commercially viable innovative products.
- Create student and faculty entrepreneurs.

- Help to create value-added jobs and services.
- Create effective networking for the development of technology based startups. Develop internationally accepted technologies.
- Promote small and medium industries.

12.2 Thrust Areas

Startup Hub at Viswajyothi College of Engineering and Technology Vazhakulam, Muvattupuzha, will concentrate on the following thrust areas.

- Agro Technology.
- Green Technology.
- Information Technology.
- Robotics and Automation.
- Artificial Intelligence.
- Value added Products & Services.

Automation of traditional systems through technology up gradation is the only way to uplift the rural people. Development of interdisciplinary technologies is essential way for overall development of the common people. To realize the enthusiasm of our student community into marketable products, it was essential to scale up the IEDC to the level of

an incubation centre.

12.3 Startup Companies at VJCET

A group of our students had started a firm by name "Elam Style" with the support of

Sl. No	Name of company	Domain	Brief details of company	Company founders Name
1.	M/s Teqnocart Innovations (OPC) Pvt. Ltd	Information technology	Website design, IT servicers maintenance of websites and creation of multimedia presentations	Shri Shan Babu,
2.	M/s One Cup Beverages Pvt. Ltd.	Health Care	Manufacture and supply of quality fruit based beverages	Shri Ricky Wilson,
3.	M/s Tinos Software and Security Solutions LLP	Information technology	IT security services	Shri. Sarath G
4.	M/s Ezoro Technologies Pvt. Ltd.	Information technology	IT based marketing promotion services	Shri. Bibin Raj
5.	M/s BIMARC Engineering Services	Engineering	Architectural drawings 3D visualization and CAD services	Shri Ameer Muhammed S
6.	M/s OOOSPRONG Technologies	Information technology	Web site design improvement , advertising, web facilitating,	Shri Vishnu Prasad

IEDC. Elam Style is an online retail shop which supplies apparels. The business had been short listed by "IDEA DAY", an entrepreneur supporting & development program of Start-up mission Kerala Government on the month of February 2018. The program was conducted at IIM Calicut. Experts analysed the business opportunity and they have suggested for scale up of the business and lined up proper agents for the same. The managing, designing, administration and marketing works are through students of Viswajyothi College of Engineering and Technology. The V-BIC is also be the beginning of a stronger industry-academia-consumer linkage where ideas can flow to and fro, through the three stake holder groups so that everyone benefits. The industry will benefit from technological developments initiated by the V-BIC as well as qualified students who have an innovative mind to join their workforce. Academia will stand to gain from its constant interaction with industry, and consumers will gain from the innovations that are rolled out through the association

13.   Innovative Student Projects

IEDC VJCET has selected six innovative student project in the year   2019 for further
development. They are
- ✓ AARIS –Automated Attendance Registering System
- ✓ Stroke Rehab and Exercising Glove
- ✓ Nut X - Portable Nutmeg Separator
- ✓ AGROBUY APP Your Own Market
- ✓ Beyond : Connect And Learn
- ✓ Amphibious Structure for Lifestocks

Detail's of the project are given in the annexure -O

14.   Students Startups

Sl.No	Name of Startup	Lead Entrepreneur	Contact Details
1.	M/S Mj Kreatives	Shri Mohid Antony Jim	9947311028 mohithantonygimmy@gmail.com Department of Electronics & Communicatio Engineering Fourth year
2.	M/S Volta Innovations	Shri Basil Eldhose	7034415204 basileldhose618@gmail.com Department of Electrical and Electronics & Engineering Second year
3.	M/S Bellagio Digital Store	Shri Bennet Joy	9895954971 bennetjoy03@gmail.com Department of Information Technology First year
4.	M/S Beyond	Shri Amal Shyjo	amalshyjo@gmail.com Department of Electronics & Communications Engineering Third year
5.	M/S LET Innovations	Shri Jins Jolly	6238843310 jincekallarackan@gmail.com Department of Electronics & Communications Engineering Fourth Year
6.	M/S Wellctron	Shri Biju Narayanan	9495337268 bijukn1970@gmail.com Department of Electronics &

			Communications Engineering Parent
7.	M/s Tromac Solutions	Tony Chacko	8138916139 hellodude235@gmail.com Department of Mechanical Engineering

15.   IEDC Activity Hub

IEDC VJCET has updated the IEDC activity hub created by KSUM. Important and basic five information about our IEDC such as   Team, Infrastructure, Finance and Partnershi is completed   and our profile score is 100% . Updated details about 470 IEDC members and created teams.   Assigned members to teams and then updated their achievements.   Updated the details 1with 2 events   already conducted   with all details.

16.   Conclusion

IEDC is actively functioning in VJCET   since its inception. Many orientation and motivational programmes were organised   and the message of entrepreneurship development has well penetrated to students.   IEDC is keen in providing support to the students,   conversion of their idea into prototype and for further scaling up.

The complete List of   activities carried out and milestones achieved by IEDC are enclosed in Annexure-1. Annexure 2- 10 gives the separate reports/write ups of major activities . The details of activities in the year 2019   is uploaded in KSUM IEDC activity hub and Accreditation Platform https://iedc.startupmission.in/#/event.

The amount received form KSUM so far is Rs.3,60,700. The amount in bank earned an interest of Rs.17,561.00. Out of this and amount Rs 3,56,100.76/- had been utilized as on 27.01.2020. The balance amount available in the account is only Rs 22,160/-.The KSUM   financial support was effectively used   for entrepreneurship development activities in VJCET. In order to continue the activities of IEDC at VJCET next instalment of financial support is requested from KSUM.

Annexure -A

Viswajyothi College of Engineering and Technology

Innovation and Entrepreneurship Development Centre
List of Activities and Achievements Till Date

Sl.No	Description of Activity/Milestone	Date
1.	Formation of IEDC Coordination Committee at VJCET	20.10.2016
2.	Workshop on Orientation to Entrepreneurship in association with Ourea Training Hub, Kochi.	12.11.2016
3.	Communication received regarding sanction of grant from KSUM	09.12.2016
4.	Two faculty members under gone training on entrepreneurship sponsored by NSTEDB	13.12.2016
5.	Application for new GEN IEDC submitted to Entrepreneurship Development Institute of India	12.01.2017
6.	One day seminar on Millennium Alliance attended by Nodal, officer	22.02.2017
7.	Workshop on Digital Manufacturing organized in association with M/s Fourier Incubation Technologies pvt Ltd. Cochin	30.04.2017
8.	IEDC Coordination Committee Reconstituted through an Office Order.	28.07.2017
9.	Participated in the IEDC Summit 2017 held at Adlux International Convention Center, Angamaly	25.08.2017
10.	Technical Talk on the Topic "Challenges in the evolution of an Industry", by Shri. A Dineshkumar, MD, CT Control Technology, Bangalore.	29.08.2017
11.	Nodal officers and members Participated in the Yes 3D summit held at Le Meridian, Kochi	12.09.2017
12.	Participated Mini Fablab and the Way forward event	18.09.2017
13.	Technical talk on "Technology Development : Process & Protocols", By A Nandakumar, BARC, Mysore.	09.10.2017
14.	Faculty members attended 2 day workshop at St Joseph College Palai	
15.	Disha 2018, Women's Entrepreneurship Development Programme in Association with Prayaana Labs, Kochi	28.02.2018
16.	Technical Talk on "Solar PV: A sunrise of opportunity for Engineers" , By Shri. G Krishnakumar, Senior Faculty, Evergreen Technologies Pvt Ltd, Kochi.	01.03.2018
17.	Kerala start up mission Idea Fest 2018 announcement in VJCET	01.03.2018
18.	One Student from VJCET started his startup Business Elamstyle	10.04.2018
19.	IEDC membership campaign conducted and office bearers were selected , coordination committee reorganized.	05.09.2018
20.	VJCET idea fest organized in October 2018	05.09.2018
21.	IEDC of VJCET is successful in winning grants and supports in the Kerala startup mission Idea fest 2018	06.09.2018
22.	Completed department level review of Ideas a s part of VJCET Idea fest	30.09.2018
23.	Address by Dr K C Chandrasekharan Nair to Management EC members and faculty members	12.10.2018
24.	Completed institutional level review of selected Ideas as part of VJCET Ideafest	02.11.2018
25.	IEDC coordinator attended Nodal officers meet at Amaljyothi College of Engg. , Kanjirappilly	02.11.2018

Sl.No	Description of Activity/Milestone	Date
26.	Faculty members and students attended KSUM IEDC Summit 2018 at Amaljyothi College of Engg. , Kanjirappilly	03.11.2018
27.	Organised a talk on 'Entrepreneurship for Engineers' by Dr. KC Chandrasekharan Nair	9.11.2018
28.	VJCET students won the price of " Hero of Bootcamp" in Ernakulam district a s a part of Startup India Kerala Yatra	12.11.2018
29.	Faculty member of VJCET attended workshop - "Mentoring campus startups" at Trinity College Thiruvanathapuram	7.12.2018
30.	Four student teams from VJCET was selected and participated in Innovation programme by APJAK KTU and KSCSTE	17.02.2019
31.	Forty three students applied as participants for KSUM Idea Fest 2019	10.03.2019
32.	Conducted an Expert Talk and interactive session. Talk and interactive session handled by expert team from eYogi, Zappyhire and Pytenlab , Info park Cochin.	08.04.2019
33.	Conducted workshop - Introduction to Robotics in association with Robotic Club,VJCET " Basics of blue tooth controlled robot" : Annexure-B	26.04.2019
34.	Inauguration of Viswajyothi Business Incubation Centre (V-BIC) by Shri Eldhose Abraham MLA and Dr Saji Gopinath CEO KSUM	26.04.2019
35.	Organized an orientation program on IEDC for first year students-Varthapathi	30.04.2019
36.	Conducted workshop - Haptic Interface Robot in association with Robotic Club,VJCET: Annexure - C	03.05.2019
37.	IEDC orientation programme for first years of EEE Branch	01.08.2019
38.	IEDC orientation programme for first years of ECE Branch	01.08.2019
39.	IEDC orientation programme for first years of CE Branch	02.08.2019
40.	IEDC orientation programme for first years of MEBranch	01.08.2019
41.	IEDC orientation programme for first years of IT Branch	01.08.2019
42.	IEDC orientation programme for first years of CSE Branch	01.08.2019
43.	Idea Discussion meet with students of all department chaired by Shri K C Chandrasekharan Nair	30.08.2019
44.	Discussion meet with faculty members by Shri K C Chandrasekharan Nair	31.08.2019
45.	Selection of IEDC office bearers and reconstitution of VJCET, IEDC coordination committee : Annexure - D	05.09.2019
46.	Attended Huddle Kerala at Kovalam Trivandrun: Annexure -E	28.09.2019
47.	Organized an Orientation programme for IEDC members : Annexure -F	11.10.2019
48.	Seven students attended Mobile application workshop conducted by KSUM at MBITS Kothamangalam : Annexure-G	16.10.2019
49.	Workshop on Data Science, Mr. Abhilash Pradeep and Mrs. Merin Abraham from M/s Spectrum Kochi were the resource persons : Annexure -H	16.10.2019
50.	Attended IEDC Summit 2019 at Sahardaya college of Engineering, Kodakara Thrissur: Annexure -I	19.10.2019
51.	A VJCET team Selected for financial assistance of Rs. 2 lakhs in the Idea fest 2019 conducted by KSUM : Annexure -J	20.10.2019
52.	Work shop on exploring the potential of entrepreneurship & introduction to M/s Teqnocart : Annexure -K	15.11.2019
53.	VJCET Idea fest 2019 process completed and winners selected : Annexure -L	30.11.2019
54.	Nodal officer Attended the the Workshop Conducted by National Cyber Safety Security Standards at ISC Kalamassery : Annexure -M	4.12.2019
55.	Two faculty members Smt Minu George and Ms. V K Vanitha Rugmoni attended India's largest design festival Kochi Design Week on Dec 12 - 14th at Bolgatty Event Centre, Kochi :Annexure -N	12.12.2019
56.	Formation of student startups	12.12.2019
57.	Selection of Innovative students projects : Annexure - O	12.12.2019

58.	Implementation of a mentoring scheme : Annexure - P	12.12.2019
59.	Updating of KSUM IEDC activity hub	12.12.2019
60.	Report on major activities of IEDC in 2019 : Annexure - Q	20.12.2019

REPORT ON "INTRODUCTION TO ROBOTICS" WORKSHOP

Conducted by Robotics club of Mechanical Engineering
in association with IEDC, VJCET on 26th April 2019

    Robotics is an interdisciplinary branch of engineering and science that includes mechanical engineering, electronic engineering, information engineering, computer science, and others. Robotics deals with the design, construction, operation, and use of robots, as well as computer systems for their control, sensory feedback, and information processing.

    These technologies are used to develop machines that can substitute for humans and replicate human actions. Robots can be used in many situations and for lots of purposes, but today many are used in dangerous environments (including bomb detection and deactivation), manufacturing processes, or where humans cannot survive (e.g. in space). Robots can take on any form but some are made to resemble humans in appearance. This is said to help in the acceptance of a robot in certain replicative behaviors usually performed by people. Such robots attempt to replicate walking, lifting,

speech, cognition, and basically anything a human can do. Many of today's robots are inspired by nature, contributing to the field of bio-inspired robotics.

Workshop on Introduction to Robotics

The concept of creating machines that can operate autonomously dates back to classical times, but research into the functionality and potential uses of robots did not grow substantially until the 20th century. Throughout history, it has been frequently assumed by various scholars, inventors, engineers, and technicians that robots will one day be able to mimic human behavior and manage tasks in a human-like fashion. Today, robotics is a rapidly growing field, as technological advances continue; researching, designing, and building new robots serve various practical purposes, whether domestically, commercially, or militarily. Many robots are built to do jobs that are hazardous to people, such as defusing bombs, finding survivors in unstable ruins, and exploring mines and shipwrecks. Robotics is also used in STEM (science, technology, engineering, and mathematics) as a teaching aid. The advent of nanorobots, microscopic robots that can be injected into the human body, could revolutionize medicine and human health.

The program stated off late by 10am in the PTC seminar Hall with a formal inauguration for flagging off the Workshop series "ROBONE". The gathering was greeted with a welcome address by Mr. Rakesh Jose (Faculty Coordinator Robotics Club). Then the Director Dr. George Thanathuparabil (Director, Viswajyothi College of engineering and technology) addressed the gathering where the importance if IEDC and the business incubation centre V-BIC was mentioned. He also appreciated 3the efforts put up by IEDC to enhan ce and promote innovation among students.

The presidential address was delivered by Dr.Josephkunju Paul C (Principal, Viswajyothi College of engineering and technology) where he addressed about entrepreneurship and the trends that was found among the alumni of the college.

Inaugural address was then delivered by the chief guest Mr. Varghese Benny (CEO and Founder, Rabbitsquare), he shared a glimpse of his experiences in the startup journey the reason he took it and the happiness he finds in it though he have been going through struggles .Leo Cherian (CEO IEDC Viswajyothi college of engineering and technology) showed the piece of gratitude by delivering the vote of thanks in the inauguration ceremony.

The inauguration ceremony was also blessed with the presence of Dr. Pramodkumar M (Dean Academics) and Mr. Vinoj K (HOD Mechanical Engineering Dept.)

The inauguration ceremony was concluded and the workshop session was preceded on then after the workshop kits had been presented by by Mr. Rakesh Jose (Faculty Coordinator Robotics Club). The Morning session had a brief talk on introduction of robotics, the different development boards, basic programming exercises and hardware interfacing sessions. By noon the participants were aware of the fundamentals of robotics, its interfacing using Arduino IDE platform and Arduino UNO development board.

In the afternoon session the participants was introduced to rover assembly and the rover controlling using the development board. Then they were provided a chance to interface with Bluetooth module to the mobile and it final touch up on the programming was administered. They then had time to interface the devices develop it and make their rover work. By the design of the rover the students had developed a sense of understanding about the analog, digital pins, basic arduino interfacing. Interfacing of hardware components to the board and getting desired outputs were all identified by the participants

Workshop on Introduction to Robotics

By 4pm the students were asked to leave a feedback form where the review was found to be well planned and organised workshop, also the rated the workshop 5/5. The participants requested for session on advanced topics like artificial intelligence to be delivered in future sessions. The session for the day was then concluded and the participants were allowed to leave by 4:15pm.

Workshop on Introduction to Robotics

Workshop on Introduction to Robotics

REPORT ON "HAPTICS INTERFACED DEVICES"

## Workshop Conducted by Robotics club of Mechanical Engineering   in association with IEDC, VJCET on 3rd MAY 2019

A haptics interface is a system that allows a human to interact with a computer through bodily sensations and movements. Haptics refers to a type of human-computer interaction technology that encompasses tactile feedback or other bodily sensations to perform actions or processes on a computing device. A haptics interface is primarily implemented and applied in virtual reality environments, where an individual can interact with virtual objects and elements.

A haptics interface relies on purpose-built sensors that send an electrical signal to the computer based on different sensory movements or interactions. Each electrical signal is interpreted by the computer to execute a process or action. In turn, the haptic interface also sends a signal to the human organ or body. For example, when playing a racing game using a haptic interface powered data glove, a user can use his or her hand to steer the car. However, when the car hits a wall or another car, the haptics interface will send a signal that will imitate the same feeling on user's hands in the form of a vibration or rapid movement.

In order to develop cost-effective haptic interfaces, it is necessary to understand the roles played by the mechanical, sensory, motor, and cognitive subsystems of the human haptic system. The mechanical structure of the human hand consists of an intricate arrangement of 19 bones, connected by almost as many frictionless joints and covered by soft tissue and skin. Altogether, the bones are attached to about 20 intrinsic and extrinsic muscles through numerous tendons, which serve to activate 22 degrees of freedom (DOF) of the hand.

The sensory system includes large numbers of various classes of receptors and nerve endings in the skin, joints, tendons, and muscles. Appropriate mechanical, thermal, and chemical stimuli activate these receptors, causing them to transmit electrical impulses via the afferent neural network to the central nervous system (of which the brain forms a part), which in turn sends commands through the efferent neurons to the muscles for desired motor action.

Workshop on Haptics Interfaced Devices
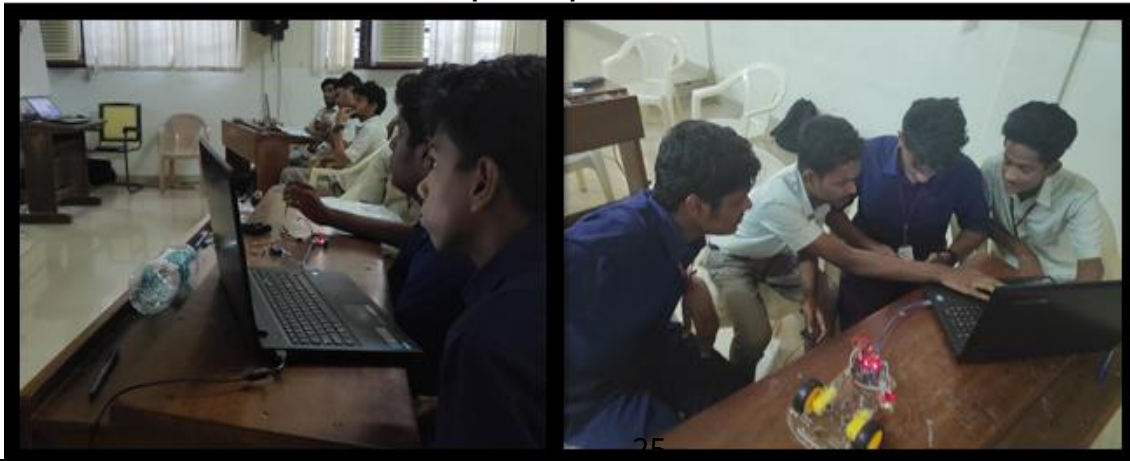
The Workshop started off with a greeting by Mr. Rakesh Jose (Faculty Coordinator Robotics Club) for the participants and the resource of the day Mr. Akhil Rajan (Software Engineer, Digital Innovation, IBS software services).The Morning session had a brief talk on recent trends in the industry, the projects the resource was working on, and about the various key terms like Machine Learning(ML), Deep Learning (DL),Natural Language Processing (NLP)., etc. used in the day to day life in industry.

This was followed by a session on developing an app on MIT App Developer to recognises Speech (HAPTICS) and enact on the rover developed in the last session. Once the app was developed in was interfaced and tested. The participants were happy on the results they had in the session.
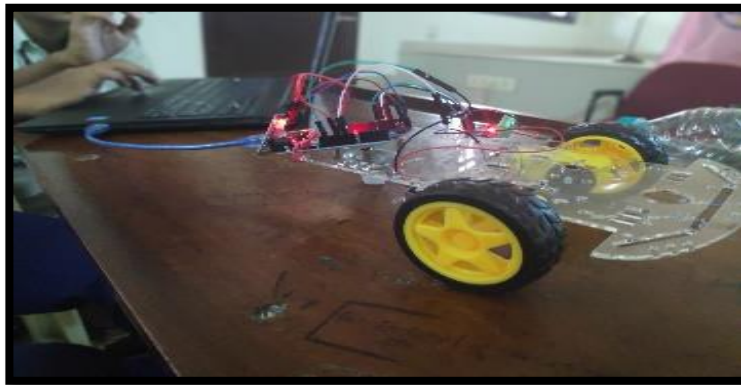
Workshop on Haptics Interfaced Devices

It was followed by a session on Dialogue flow platform and the ways to create a Chatbot. The participants was then asked to develop a chat bot for various application at that instance. The morning session was then concluded after the interfacing and chatbot were developed.

In the afternoon session the participants was introduced to some modules in arduino. Then they were provided a chance to experience peer learning or continuous learning from the internet as don in the industry. Once this session was dine, they were introduced to s idea development or brainstorming session where they discuss the topic, technical details and other related details for a product development in a simulated environment.

These ideas were then evaluated by a panel constituting Mr. Rakesh Jose (Faculty Coordinator Robotics Club), Mr. Akhil Rajan (Software Engineer, Digital Innovation, IBS software services, and Mr. Anoop (Viswajyothi college alumni). The projects were identified and the necessary assistance for its development was assured by the resource person. The resource person also dropped in an industry problem statement to develop a human following robot and urged the students to develop a team to develop it.

Workshop on Haptics Interfaced Devices

Then the participants were awarded the certificate for participation and the workshop series was concluded. The feedback was reviewed and found to be good workshop, also the rated the workshop 4/5.

Workshop on Haptics Interfaced Devices

These participants found the session fully packed up and suggested to breakup session into different modules. A Group photo of the whole team was taken and the participants then was allowed to leave with the kit for the development of projects.

Innovation and Entrepreneurship Development Centre (IEDC)

Viswajyothi College of Engineering And Technology
Vazhakulam, Muvattupuzha

Ref: VJCET/IEDC/2019/05

Dt. 05.09.2019

Innovation and Entrepreneurship Development Centre (IEDC) coordination committee of Viswajyothi College of Engineering and Technology is reconstituted with immediate effect as follows.

Sl.No	Name	Position	IEDC Designation
1.	Dr. K K Rajan,	Prof. EEE and Dean IIIC	Nodal officer, IEDC
2.	Mr. Robin Augustine	Asst. Professor , S & H	Assistant Nodal officer, IEDC
3.	Dr. Sheela V K	Asst. Professor, IT	IT Dept. Coordinator,IEDC
4.	Mr. Jomu M George	Asst. Professor, EEE	EEE Dept. Coordinator, IEDC
5.	Mrs. Rini Simon	Asst. Professor, CSE	CSE Dept. Coordinator, IEDC
6.	Mrs. Femy John	Asst. Professor, ECE	ECE Dept. Coordinator,IEDC
7.	Mrs. Nisa Ann Mathew	Asst. Professor, CE	CE Dept. Coordinator, IEDC
8.	Mr. Basil Baby	Asst. Professor, ME	ME Dept. Coordinator,IEDC
9.	Mr. Midhun Jose	Asst. Professor, MBA	MBA Dept. Coordinator, IEDC
10.	Mr. Mavin C	Placement officer	General Coordinator
11.	Mr. Basil Eldhose	Student S3 EEE	Chief Executive Officer
12.	Ms. Gayathri Suresh	Student S5 ECE B	Chief Operating Officer
13.	Ms. Megha Sukumar	Student S7 ECE A	Chief Marketing Officer
14.	Mr. Allen Peter	Student S5 IT	Chief Finance Officer
15.	Mr. Eldhose Raju	Student S7 ME B	Chief Technical Officer
16.	Ms. Riyamol Sara Jayan	Student S5 EEE A	Chief Creative Officer
17.	Ms. Kavya R	Student S3 CSE B	Chief Social Officer

Objectives of the IEDC in VJCET are

- To act as an institutional mechanism for providing various services including information on all aspects of enterprise building to budding S&T entrepreneurs.

- To create an Entrepreneurial culture in the Parent Institution and other institutions in the region and to promote the objectives of NSTEDB, including programmes related to women and weaker sections of the society.

- To inculcate a culture of innovation driven entrepreneurship through student projects.

- To catalyse and promote development of S&T knowledge-based enterprises and promote employment opportunities in the innovative areas.

- To respond effectively to the emerging challenges and opportunities both at national and international level relating to Small and Medium Enterprises (SMEs) and micro enterprises

Dr. Josephkunju Paul C
Principal, VJCET

To
Sreekutty O U,
IEDC Cordinator,
Kerala Startup Mission,
Trivandrum.

Copy to:

Members of the IEDC Coordination Committee
Head of departments of VJCET
Director, VJCET

Innovation and Entrepreneurship Development Centre

(IEDC)

Viswajyothi College of Engineering and Technology

Report on Attending

Huddle Kerala

on 27 & 28 September 2019.

at

Leela Palace Trivandrum.

Prepared by : Shrine Sabu   **Approved by : Dr.K. K. Rajan**

Basil Eldhose   **Nodal Officer , IEDC, VJCET**

CEO, IEDC, VJCET

Report on Attending Huddle Kerala on 27 & 28 September 2019.

1.   Introduction

Huddle is the focal point for tech start-ups and other relevant stakeholders of the entrepreneurial ecosystem including the government, investors, mentors, industry, etc. The conference had two days packed with activities that include several side events like Leadership Talks, Tech Talks, Fireside chat, Startup Demo, and many more technical activities. Huddle Kerala was held on 27 & 28 September, 2019 at Leela Palace, Kovalam, Trivandrum. Shrine Sabu and Basil Eldhose, two student representatives from IEDC, VJCET attended the event. This report gives the details of the event Huddle Kerala and their experience.

2.   Program Objectives

The sessions in Huddle Kerala provided opportunities for showcasing the technology to startups, industry experts, decision-makers and others connected to the ecosystem. Besides, there was scope for partnering with the Kerala government, one of the most proactive state regimes in embracing emerging technologies and creating a vibrant ecosystem for innovation.

3.   Program Description

Huddle Kerala started on 27th September at 9: 45 AM. The welcome speech was given by Shri. Jitender Minhas, CEO, IAMAI Startup Foundation. Dr. Pawan Agarwal, a motivator took sessions and covered the topic " A journey with Mumbai Dabbawala.". After this, various parallel workshops were held. Day 2 started with a talk on "Build for India" by Saurabh Jain– Head, Paytm. This was followed by Talk on "The entire Finnish nation as a forerunner in AI". The afternoon session had talks by Sajan Pillai on Leadership.

4.   Program Outcomes

The program was very helpful for us. With many participants including startups, industry leaders and tech entrepreneurs we had an opportunity to meet and interact with them. We got a chance to see the various products, services, and innovations that were originated by startups.

5.   Conclusion

The program was over by 16:00 on the 28th. Dr. Saji Gopinath, CEO Kerala Startup Mission gave the vote of thanks to the participants.

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Photo 1   :Entrance of Huddle Kerala

Photo 2; With Demetri Sampas, CEO, Mal-Id.

Innovation and Entrepreneurship Development Centre

(IEDC)

Viswajyothi College of Engineering and Technology

Report on Orientation Programme for IEDC Members

Conducted on

Friday 11.10.2019,

At

R & D Seminar Hall, VJCET

Prepared by : Basil Eldhose   **Approved by Dr.K. K. Rajan**

CEO, IEDC, VJCET   **Nodal Officer , IEDC, VJCET**

Report on Orientation Programme for IEDC Members Conducted on Friday 11.10.2019,

1. Introduction

Innovation and Entrepreneurship Development Centre is being promoted in educational institutions to develop institutional mechanism to create entrepreneurial culture in Science and Technology academic institutions**.** IEDC coordination committee in VJCET for 2019-20 academic year was formed on 28.08.2019. In the meeting of the VJCET IEDC coordination committee held on 04.10.2019 it was decided to conduct orientation progamme for all members of IEDC in VJCET. As an orientation programmae was already conducted for first year students, the focus can be on members from other classes. Accordingly the orientation programme was organized on on Friday 11.10.2019 at R & D seminar hall.

2. Program Objectives

To create awareness about IEDC, its objectives, functions, current activities and to give an indication to the coordination committee members about their duties and responsibilities.

3. Program Description

. Dr K K Rajan Prof EEE and Nodal officer made a power point presentation on the topic " An Introduction To Innovation and Entrepreneurship Development Centre" . The programme started at 1.45 PM. The power point presentation covered in detail sub topics such as Mission of IEDC, IEDCs In Kerala, KSUM Guidelines, Objectives of the IEDCs, Functions of IEDCs, IEDC Management, IEDC Documentation, IEDC Reporting to KSUM, IEDC in VJCET, Activities of IEDC, Idea Fest 2019 and 2020, Innovation Grant Guidelines and Viswajyothi Business Incubation Centre (V-BIC). Around 100 students from different classes attended the programme. The programme was interactive and students raised many questions during the talk. Dr V K Sheela , IEDC coordinator, IT department and Shri Jomu George IEDC coordinator EEE department attended the meeting. Dr K K Rajan introduced the coordination committee members to the participants.

4. Program Outcome

This orientation programme was very useful to the students and they got an idea about the activities IEDC in VJCET and also got guidance on how to proceed with their innovative ideas.

5.   Conclusion

The programme was over by 2.45 PM. Basil Eldhose, CEO, IEDC, proposed vote of thanks to the speaker and the participants.

Photo 1 :   Dr K K Rajan Delivering the talk

Photo 2 :   Audience During Awareness Programme

PROGRAMME NOTICE

CSE B
2nd Year

1) Kanya. R
2) Shahin
3) Rohit
4) Edwin
5) Vinay
6) Austin
7) Alan Ancto.

CSE A
2nd Year

1) Shine
2) Abin Joy
3) SAYIAN JUDE JACOB

2nd Year

ECE A

1) Rahul Sajeeth
2) Bindu V
3) Anju James
4) Anna Varghese
5) Rupana S
6) Sethulakshmi

ECE B

1) Jose P Thomas
2) GS Chackochen
3) Sanal Sabu
4) Jithu Bijeesh
5)

IT

1) Kevin
2) Vijay
3) Bobby
4) Thomas
5) Nithin
6) Aakash
7) ~~Joby Joidy~~ Alan J
8) Albin

3rd

__ME-A__

1) Vishnu Vinod
2) Edwin Xavier
3) Ashiq Sabu
4) Nikhil Devasia

3rd year

__IT__

1) Sradha Sojan
2) Maria Elizabeth
3) Anitta Sunny
4) Tuby
5) Jeswin
6) ~~AH~~ Thaeun
7) Tony JoJo

3rd year.

__EEE -B__

1) ~~Rijamol Sara Jayan.~~
1) Deena Johny
2) Sree-Lekshmi
3) Reshma.
4) Amrutha.
5) Aparna.
6) Rujamol Sara Jayan
7) Minnu Augustine
8) Swanthoma Treesa Jose

$S_5 - CS - A$

1) Chris Fiji
2) Avinash Avinachan.
3) Abin P Joy
4) Sumith Sunny
5) ~~Aswin C Asok~~
6) ~~Kiran Ramesh~~
7) ~~Anirudh Rajeev~~

Mech A   Mech B

E E E E   E E E B

1) Ayyappadas HS
2) Manas
3) Aakash
4) Athira
5) Krishnapriya
6) Basil

Civil A   Civil B

4th year

ECE A

1) Anju Sajeev
2) Rania Roy
3) Aiswarya M Nair
4) Aleena Santo
5) Sheetal David
6) Megha Sukumar.

EEE-B

EEE-B

1) Arun Shalu
2) Tinu George
3) Jaison Kuriakose
4) Binson Sunny
5) Romy Johnson
6) Abil Jose.

4th year

ECE B

1) Vishnu M
2) Mohid Antony Jimmy.

Innovation and Entrepreneurship Development Centre (IEDC)

Viswajyothi College of Engineering and Technology

Report on Workshop on Mobile Application Development

Conducted on 16th and 17th of October, 2019
at
Mar Baselios Institute of Technology and Science (MBITS), Nellimattam

by

Kerala Start Up Mission

Prepared by:
Participants of the Workshop from VJCET

Approved by :
Dr. K. K. Rajan
Nodal Officer, IEDC, VJCET

Report on Workshop on Mobile Application Development

1.   Introduction

Mobile application development is the process of creating an application for a mobile phone. Mobile application development has become essential for every online business, because large number of people accessing the internet via smart phones and tablets. Mobile app development has the ability to access a large number of potential consumers. These applications can be pre-installed on phones during manufacturing, or delivered as web applications using server-side. The web based platform used for developing mobile application is- Thunkable Classic. Thunkable is a drag and drop mobile app builder that enables users without programming to build apps for Android and iOS. This workshop on mobile app development was organized by Kerala Start Up Mission (KSUM) at computer Lab-2, St. Thomas block of Mar Baselios Institute of Technology and Science (MBITS), Nellimattam on 16th and 17th October 2019. The workshop on "Mobile app development" was handled by Ms. Nitha Anilkumar, Knowledge Officer of ICT academy, Thiruvanathapuram. Seven IEDC members from VJCET attended the work shop. This report gives the brief summary of the event.

2.   Program Objectives

To impart knowledge about the basics of Mobile app development, the steps involved and the applications in which it becomes useful. It was also indented to create awareness about the importance of developing mobile app, thereby inculcating an interest in students to become a developer.

3.   Program Description

The ICT Academy of Kerala in association with Kerala Start-Up Mission organized a two day workshop on" Mobile Application Development " for students. The workshop was held from 16th to 17th October, 2019. The workshop was intended for developing the mobile application development skills on android platform. About 30 students from various colleges attended the workshop. The day 1 was started with Dr P. Sojan Lal inaugurating the workshop.

The two day workshop was handled by Ms. Nitha Anilkumar, Knowledge Officer at ICT Academy of Kerala. Mobile app development requires a significant amount of critical thinking , research, and market analysis prior to development. Nowadays mobile apps put our buisness in peoples pockets, connecting you to larger audience across the modern devices people use. So having a mobile app will definitely help to grow our buisness.

The mobile app development is done in 2 different stages. The prototype was developed in day one of our workshop and was done using Invision application. There we learned the importance of layout and the difficulty that we could face in future development etc. In day 2, our second stage was started. That is, making the application and was done through Thunkable application. And thereby we came to know more about that application and its user friendly. One who have logic could make use of this application properly.

This application have further some of the stages as follows:
i. Making targets
ii. Analysis of functions and features
iii. UI/UX Design
iv. Frontend development
v. Backend development
vi. Testing
vii. Deployment
viii. Maintenance and support

Following are the 7 IEDC members from VJCET attended the work shop.

No	Name	Class	Department	Batch
1	Alphonsa Renny	S5	EC	2017-21
2	Aswathy Shaju	S5	EC	2017-21
3	Maria Theresa	S5	EC	2017-21
4	Aparna M S	S5	EEE	2017-21
5	Reshma Jolly	S5	EEE	2017-21
6	Amrutha Satheesh	S5	EEE	2017-21
7	Ciril Kurian Rison	S7	EEE	2016-20

4.   Program Outcome

The Workshop conducted was very useful for the students as they gained adequate and accurate knowledge on Mobile app development and in creating, testing and programming mobile apps. This workshop enabled the students in developing technical skills, creativity, and resolving problems involved in mobile app development and also working as a team.

5.   Conclusion

Participants of the workshop got the basic idea behind mobile application development, its importance and applications. This workshop inspired them to become successful mobile application developers. This workshop was a great success and helped students to realise the scope of mobile application development in modern world.
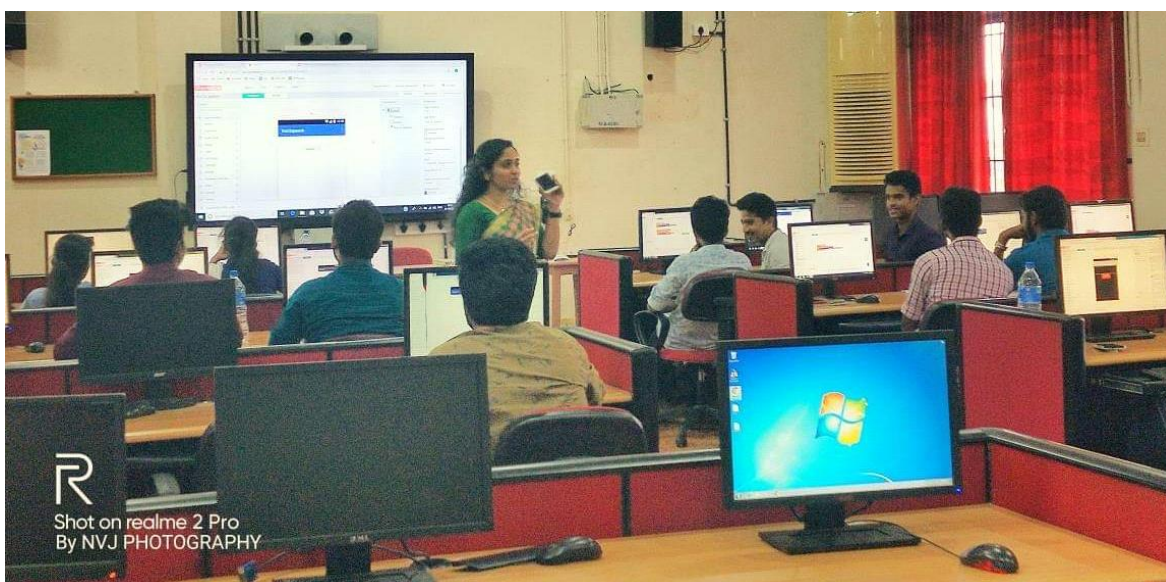
Workshop on Mobile Application Development

Photos of students and teachers who attended the summit.

Innovation and Entrepreneurship Development Centre

(IEDC)

Department of Information Technology

Viswajyothi College of Engineering and Technology

Report on Workshop on Data Science

Conducted on

Wednesday 16.10.2019,

at

R & D Computer lab, VJCET

Prepared by: Allen Peter	Checked by : Dr. Sheela V K	Approved by Dr.K. K. Rajan
CFO, IEDC, VJCET	IEDC coordinator, Dept of IT	Nodal Officer, IEDC, VJCET

Report on Data Science Workshop
Conducted on Wednesday 16.10.2019,

1.   Introduction

Data science is a concept to unify statistics, data analysis, machine learning and their related methods in order to understand and analyze actual phenomena with data. It employs techniques and theories drawn from many fields within the context of mathematics, statistics, computer science, and information science. When you have so much of data like money, feedbacks, customer's data, people working, etc., you want to keep it all simple and easy to understand so that you can make improvements. This is why data science is important. Understanding the need of Data Science in this century, the IEDC and the department of Information Technology organized a workshop on Data Science on Wednesday 16.10.2019 at R & D seminar hall. The class was taken by Mr. Abhilash Pradeep and Mrs. Merin Abraham from Spectrum Company, Kochi which is franchise of Red Hat Academy. This document gives details of the event.

2.   Program Objectives

To impart knowledge about the basics of Data Science, the steps involved and the applications in which it becomes useful and also create awareness about the importance of Data Science, thereby inculcating an interest in students to become Data Scientists.

3.   Program Description

The IEDC & Department of Information Technology had organized one day Workshop on "**Data Science**". On 16th October 2019, registration for the workshop started at 9.00 AM. We had kept registration table in front of the R&D COMPUTER LAB where the event was conducted. After registration, participants were requested assemble in the Seminar hall for the inauguration Ceremony. After inauguration at around 10.00 AM, the technical session started. The participants of the workshop were divided into group of 2 each given with a system which is pre-installed with the software 'ANCONDA PYTHON 3.7. To begin with Mrs. Merin Abraham gave details about what data science is, Introduction to Data Science**,** Data wrangling, data management, exploratory data analysis to generate hypotheses and intuition, prediction based on statistical methods such as regression and classification, communication of results through visualization, stories, and summaries. Practical demonstration was also included in the workshop. At 12.15PM, Lunch was arranged in the College canteen for all the participants & volunteers.

After lunch, at 1.00PM, the technical session continued with probability statistics, information theory, numerical optimisation, computational complexity theory, control theory, linguistics, Generative learning algorithms, Gaussian discriminant analysis, Naive Bayes, Support vector machines, LMS, Logistic regression, Perceptron. Exponential family, Supervised Learning and Discriminative Algorithms. Also a sample data model and the program code also was given to the participants for practical training on how to analyse data.

At 4:00 PM valedictory ceremony was arranged. Dr K K Rajan Nodal officer IEDC and DrSheela V K, IEDC coordinator, Dept of IT presented their views about the workshop organized. The students also gave their feedback about the classes in the workshop.

. Allen Peter, Finance Manager, IEDC proposed vote of thanks to the speaker and all the participants. The programme was over by 4.15PM

4. Program Outcome

The Workshop conducted was very useful for the students as they gained adequate and accurate knowledge on Data Science and various fields in which data science uses scientific methods, processes, algorithms and systems to extract knowledge and insights from structured and unstructured data.

5. Conclusion

Participants of the workshop got the basic idea behind Data Science, its importance and applications. This workshop inspired them to become successful Data Scientists . This work shop was a great success and helped students to realise the scope of data science in modern world.

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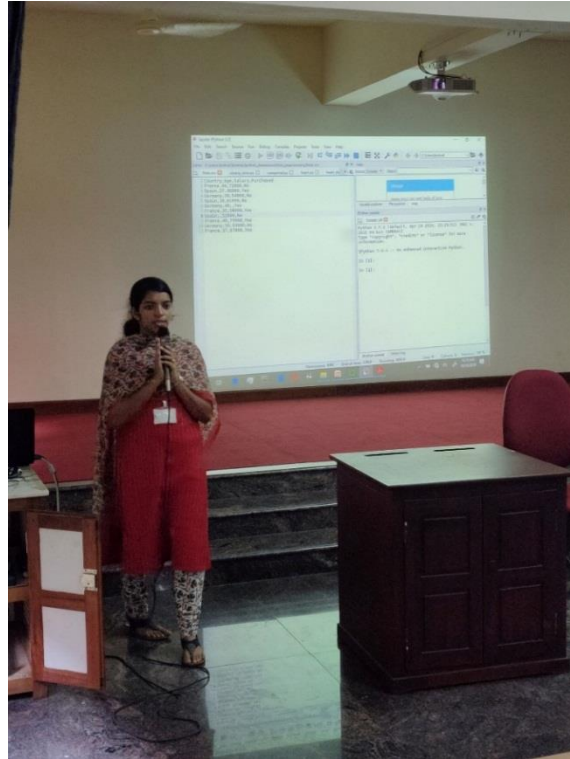Photo 1. Mrs.Merin Abraham taking class on Data Science

Photo 2:Mrs. Merin Abraham taking class on Data Science

Photo 3:   Audience during the workshop

Photo 4:   Dr. K.K. Rajan presenting his views

Photo 5:   Participants of the workshop

ANNEXURE -1

PROGRAMME NOTICE

ANNEXURE -2

List Of Participants

FIRST YEAR EC A

1. Sivaganga
2. Aparna
3. Celiya Saju
4. Emy Maria Tom
5. Minnu Thampi

FIRST YEAR EC B

1. Revathy
2. Finu James
3. Joyal Jose
4. Maria Roy

5. Meenu K.R

FIRST YEAR CS A

1. Jeffin
2. Anju Baby
3. Krishnaja
4. Parvana Prakash
5. Anandhu Krishnan
6. Anjali K.R
7. Roshan Roy

FIRST YEAR CS B

1. Adwaith P.A
2. Elizabeth George
3. Alha Mary Jacob
4. Ivin Rafi George
5. Akhil M Raji
6. Georgin Joy

FIRST YEAR IT

1. Mrudula Ann
2. Jibin Benny
3. Emma
4. Deyon
5. Roney Saji
6. Anjali Saji
7. Alen Shajan
8. Swathy Krishna
9. Alen Salu
10. Allen Benny

SECOND YEAR CS B

1. Betsy
2. Devika
3. Aleena

SECOND YEAR EC B

1. Rosemaria Varkey
2. Andrews Saji

SECOND YEAR IT

1. Anna Anil
2. Erica S
3. Maria George
4. Harsha Thomas

THIRD YEAR EEE B

1. Uthara P
2. Sreelakshmi
3. Ashwin Abraham
4. Paul Stanly
5. Noel John Paul
6. Alias Jacob
7. Anand H

Innovation and Entrepreneurship Development Centre (IEDC)

Viswajyothi College of Engineering and Technology

Report on

IEDC Summit 2019

Conducted on
Saturday, 19.10.2019,
at

Sahrdaya College of Engineering and Technology, Kodakara, Trissur

By

Kerala Start Up Mission

Prepared by:

Megha Sukumar,
CMO, IEDC, VJCET.
Basil Eldhose,
CEO, IEDC, VJCET

Checked by :

Ms. Nisa Mathew,
Asst professor,
CE Dept. Coordinator, IEDC,
VJCET,

Approved by :

Dr. K K. Rajan, Nodal Officer,
IEDC, VJCET

Report on IEDC   Summit 2019 Conducted on Saturday 19.10.2019.

1.   Introduction

Kerala Start-up Mission, the Nodal agency of Government of Kerala organized IEDC Summit 2019, Asia's largest student Entrepreneurship Summit where the students got an opportunity to experience the technological diversities and advancements through a series of technology track events, brainstorming sessions, interactive community meet ups and product exhibitions. IEDC   Summit 2019 was conducted in Sahrdaya College of Engineering and Technology, Kodakar, Thrissur. Sixteen students, one faculty member, Nodal officer   IEDC and the Management coordinator of VJCET, V-BIC attended this Asia's largest summit for aspiring entrepreneurs. This report gives the details of IEDC summit 2019 and highlights benefits gained by the participants.

2.   Participants   from Viswajyothi College of Engineering and Technology
Following are the 19 delegates attended the summit from VJCET.

No	Name	Class	Department	Batch
1.	Dr K K Rajan	Nodal officer, IEDC		
2.	Shri Johnson Parayannilam	Management Coordinator, V-BIC		
3.	Mrs. Nisa Mathew	Department Faculty Coordinator,CE		
4.	Basil Eldhose, CEO,IEDC	S3	EEE	A
5.	Shrine Sabu	S3	EEE	A
6.	Allen Peter, CFO,IEDC	S5	IT	A
7.	Eldhose Raju, CTO,IEDC	S7	MECH	B
8.	Gayathri Suresh, COO,IEDC	S5	EC	B
9.	Riyamol Sara Jayan, CCO,IEDC	S5	EEE	B
10.	Shan Babu	S5	CS	B
11.	Kiran Shaji Augustuine	S5	CS	B
12.	Kavya R, CSO,IEDC	S3	CS	B
13.	Haripriya Narayanan	S5	EEE	B
14.	Vishnu M	S7	EC	B
15.	Jephin Baby	S7	EC	B
16.	Amal Chandran	S7	EC	B
17.	Rahul Sajeeth	S3	EC	A
18.	Allen P Biju	S5	CS	B
19.	G S Chakochan	S3	EC	B

3. Program Objectives

The event accelerates the spirit of vibrant individuals to showcase their abilities linear to the technical side and also enhance their keen interest on product development and marketing. The students also got an additional benefit of experiencing the technological diversities and advancements through a series of technology track events, brainstorming sessions, interactive community meetups and product exhibitions.

4. Program Description

Summit started on 18.10.2019 afternoon and ended by 5 PM on 19.10.2019. There were different sessions, work shops and product showcasing exhibitions running in parallel. Around 4000 aspiring entrepreneurs participated in this global event from about 214 colleges all over Kerala.

4.1 IEDC Nodal Officers Meet

As part of IEDC Summit 2019 a Nodal officers meet was arranged on 18.10.2019. Dr K K Rajan, IEDC Nodal officer VJCET attended the meeting. Nodal officers of IEDC from more than 200 academic institutions were invited for the meeting. The meeting was chaired by Dr Saji Gopinath. Rev. Fr. George Paramel, Executive Director Shardaya College of Engineering delivered the welcome address. Dr Saji Gopinath delivered an introductory address and explained the present status of IEDCs in Kerala and suggested the way forward to meet the objectives. Ms. Bian Li co-founder of The Hungry Lab delivered a talk on different aspects entrepreneurship development. She is an entrepreneur, futurist and former investment banker with more than fifteen years of experience, working with hundreds of entrepreneurs of all sizes across 30 countries. She is now the co-founder of The hungry Lab, where she specializes in building startups and designing the collaborative value networks and "global" ecosystems needed to grow them.

Post dinner session of Nodal officers night was held at PACS, Kallottukara, Iringalakkuda. The meeting started at 10 PM and went upto midnight 12.00. Dr Saji Gopinath presided over the meeting. Shri Tom Thomas of KSUM has given the introductory remarks. Shri Sherine, Nodal Officer Amal Jyothi college of Engineering and Technology moderated the discussions. Nodal officers of different academic institutions expressed their experiences, difficulties and given many suggestion for improving the functioning of IEDCs.

4.2 Inaugural session

Dr. Rajasree M. Vice Chancellor A P J Abdul Kalam Technological University was the chief guest of the inaugural function. Rev.Fr.George Paramel Executive Director Sahrdaya College of Engineering welcomed the gathering. Shri Saji Gopinath CEO, KSUM talked about Fuelling

Innovation through IEDCs. Dr Rajasree lighted the lamp and inaugurated the Summit. She explained the need of active participation of students in IEDCs along with their academic activities. Dr. Elizabeth Elias, Director Sahardaya Colleg of Engineering and Technology, felicitated the gathering. Dr. Nixon Kuruvila, Principal Sahardaya Collegeof Engineering proposed vote of thanks.

4.3 Technical Sessions

There were many interesting and inspiring talks in the technical sessions. Introduction to BRINC, a multinational entrepreneur accelerating firm was given by the company's representative. The investment thesis, accelerators, services, capital, and communities of BRINC are designed to help founders to use technology as a tool to address deep challenges in the world. Mr. Siddhant Agarwal, Program Coordinator, Google Developer Relations talked about the Build for Digital India Program by Google. Healthcare, agriculture, traffic, pollution, women's safety, education, energy, environment are just *some* of the areas that require innovative solutions. Google and the Ministry of Electronics & Information Technology (MeitY) have come together to launch Build for Digital India. Anybody having a clear idea, on any India-specific problem, trying to solve with technology and want to relentlessly pursue that technical solution can apply now and join them on this journey. Mr. Siddhant Agarwal advised student to register and actively involve in the programme. Ms. Deena Jacob, Co Founder & CFO, Open Financial Technologies made an interesting presentation. She covered various financial and funding aspects of entrepreneurship development. She shared her long experience in this area. Shri Nikhil NP the CTO of Genrobotics made a presentation on their long journey from an IEDC of MES College of Engineering Kuttippuram to a 200 Crore company. Various stages of their developments and turning points were highlighted in the presentation.

4.4 Workshops

Following technical workshops were conducted as part of IEDC summit 2019.
a) Extended Reality Workshop by I Boson
b) Blockchain Workshop by KBA
c) Action on Google workshop
d) Design Thinking workshop by DISQ, a TCS Foundation Initiative

Shri Eldhose Raju from VJCET attended Blockchain Workshop conducted by KBA. Design Thinking workshop was attended by Shan Babu of VJCET.

4.5 Exhibition

A Start Up Expo was organised as part IEDC summit 2019. It was an opportunity for start ups to showcase their innovative products and students to witness achievements of start-ups . The exhibition was a real eye opener to aspiring young entrepreneurs.

5. Program Outcome

This summit was very useful to the students because students got an opportunity to experience the technological diversities and advancements through a series of technology track

events, brainstorming sessions, interactive community meet ups and product exhibitions. The summit was a real inspiration to all the participants.

6.   Conclusion

IEDC   summit 2019   was well organised by   Kerala Start Up Mission. It   was an opportunity   for students and   aspiring entrepreneurs   to listen to eminent   personalities and established entrepreneurs.   VJCET   had very good   participation   and involvement in   the summit. The   knowledge and experience gained   by VJCET delegates   should be   effectively utilised   to develop a start-up friendly   eco system in the college.

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Participants of IEDC Summit 2019

Photos of students and teachers who attended the summit

Annexure - J

Innovation and Entrepreneurship Development Centre (IEDC)

Viswajyothi College of Engineering and Technology

Report on workshop

EXPLORING THE POTENTIAL OF ENTREPRENEURSHIP AND INTRODUCTION TO TEQNOCART

on

15th November 2019

at

R & D Seminar Hall

Prepared by: Gayathri Suresh   **Approved by: Dr. K. K Rajan**

   COO, IEDC-VJCET   **Nodal Officer, IEDC-VJCET**

Report on   the Workshop Conducted on 15 November 2019

1.   Introduction

The workshop conducted by IEDC, VJCET on 15 November was about the topic '**Exploring the potential of entrepreneurship and introduction to Teqnocart'**. The workshop was conducted in an intention to providing the students an ideal opportunity to delve deep into the vast possibilities of entrepreneurship, motivational factors, resources, entrepreneurial abilities and explore the immense potential of entrepreneurship. This was an ample platform to learn and understand the key features of **entrepreneurship** along with a brief introduction to **Teqnocart**, one of the success stories of S5 Viswajyothians.

2.   Program Objective

The objective of conducting such a workshop is to develop and mould young entrepreneurs and to invite the students who have innovative ideas into the real world of entrepreneurship. Also, it is intended to make students familiar of **KSUM**, the idea grants, helps that KSUM provides the young entrepreneurs. Behind this, the workshop aims at introducing **Teqnocart**, one of the startups from S5 students of our college.

3.   Program Description

The workshop had begun by 12 pm with a warm welcome speech by Mr. Sanoj Saju. This event was divided into 3 sections. First section was handled by Ms. Gayathri Suresh, COO, IEDC and CFO, Teqnocart Innovations. This section describes what entrepreneurship is, importance of entrepreneurship and the story of Teqnocart. The next section was taken by Mr. Shan Babu, CEO, Teqnocart Innovations which enabled students to get a brief knowledge about KSUM, idea grants, steps to register a startup and different types of companies. The next section was handedover to Mr. Jetson Joseph. This last section described about **Edu-Tech**, an educational platform from Teqnocart which provides internships, project guidance, workshops and seminars.

4.   Program Outcomes

This workshop was truly a motivation for the students. It helped a lot to know about the processes of registration, funding, things that should be kept in the mind of each aspirant who have innovative ideas and keen to enter into the world of entrepreneurship

5.   Conclusion

The workshop was wound up by 1 pm with a small speech of Dr. K. K. Rajan, Nodal Officer, IEDC followed by the vote of thanks was delivered by Mr. Robin Augustine.

Workshop Partcipants with Nodal Officer And Assisatnt Nodal Officer

Shri Shan Babu, MD Teqnocart Adressing the Studnets

Vote of thanks by Shri Robin Augustine ANO

Tbale 1 : List of partcipants

Sl.No	Name	Department	Class
1.	Roshan Shaji	CS	S2CSB
2.	Allen Sajimon	CS	S2CSB
3.	Hari gokul S	ME	S3MEA
4.	Adhul johns	CS	S5CSB
5.	Judy Abraham	CS	S5CSB
6.	Radhika C A	EC	S5ECB
7.	Susan Ranju	EC	S5ECB
8.	Sharon Jos Johnson	CS	S1CSB
9.	Amal Abraham	CS	S1CSB
10.	Mathew K Shibu	CS	S1CSB
11.	Binto Sunny	EEE	S5EEEA
12.	Antony Tomy	IT	S5IT
13.	Juby Thankachan	IT	S5IT
14.	Albin John	EC	S5ECA
15.	Jerrin George	EC	S5ECA
16.	Aldo Joy	EEE	S5EEEA
17.	Sayian Judy Jacob	CSE	S3CSA
18.	Dany Tomy	IT	S1IT
19.	Deyon Sebastain	IT	S1IT
20.	Shilton Vijayan	EEE	S5EEEA
21.	Amirtha Satheesh	EEE	S5EEEB
22.	Reshma Jolly	EEE	S5EEEB
23.	Joel Sabu	ME	S3MEA
24.	Nigel Mathew	ME	S3MEA

Innovation and Entrepreneurship Development Centre

(IEDC)

Viswajyothi College of Engineering and Technology

Report on

VJCET Idea Fest-2019

Prepared by:	Checked by :	Approved by :
Dr. Sheela V K, CE Dept. Coordinator		
Mr. Jomu M George , EEE Dept. Coordinator		
Mrs. Rini Simon CSE Dept. Coordinator	**Mr Robin Augustine, ANO**	**Dr. K K. Rajan, Nodal Officer**
Mrs. Femy John, ECE Dept. Coordinator		
Mrs. Nisa Ann Mathew, CE Dept. Coordinator		
Mr. Basil Baby, ME Dept. Coordinator		

November, 2019

Report on VJCET Idea Fest 2019

1.   Introduction

Innovation and Entrepreneurship Development Centre (IEDC) in association with Viswajyothi Business Incubation Centre (V-BIC)   of Viswajyothi College of Engineering and Technology is organized   Idea Fest-2019   during the last week of   October 2019. This event had focused exclusively on innovative technology based idea of students for developing to a prototype or product. This will enable students to effectively participate in the state level Idea Fest competitions held by Kerala Start Up Mission.

Students could   participate in a team (maximum 4 members) or as individual. Selected 'Idea' would get an initial fund upto Rs.5000 each, for prototype development. The first step of idea fest was to prepare and submit a one page write up of the proposed Idea to the IEDC department coordinators**.** The deadline for submission of 'Idea' was Monday 26th August, 2019. This report gives the details of   VJCET Idea Fest 2019 and gives the selected idea of VJCET for   further development.

2.   Participants   of VJCET Idea Fest 2019

The applications were s*egregated* department wise. List below   gives the list of one page write received on Ideas.

Sl.No.	Title of Idea	Name of Team Members	Class
Department of Civil Engineering			
1.	Amphibious Cage	Abhinand S, Ajwin Jose Francis, Charles George, Rahul Raj	S7 CE-B
2.	A solution for bund breaching	Fiza Shameer, Jils Roy, Leona Sojan, Mathew J Puthiyadam	S7 CE-A
3.	Superadobe technology for Temporary Shelters	Jonath Shibu, Albin Antony, Damy Jose	S7 CE-B
4.	Mini Plastic Recycling Unit	AnjanaJayakumar, AshnaHameed,	S7 CE-B

		FathimaShirin, Jills Roy	
5.	Piezoelectric Surfaces	Abrin Samson, Angel Roy, BadushaKani, Jesna Nicholas	S7 CE-B
6.	Fibre Optic Sensors for Structural Health Monitoring	AnjanaJayakumar, AshnaHameed, Fathima Shirin, Jills Roy	S7 CE-B
7.	Opportunities of "Sponge City" as a solution for Urban Waterlogging & water scarcity	Mathews Mathew, Dona Elizabeth Dolly, Jaison James	S7 CE-B
8.	Kitchen Tank	Anto Paul, Benila Raj, Kevin Joseph, Varsha Antony	S7 CE-B

Department of Computer Science and Engineering

9.	Agrobuy App	Thomas James	S7CSA
10.	The intelligent Safety Mask	Ananthakrishnan S Nath Sudev S(S5CSB) Melwin Vincent)	S5CSB
11.	Smart Recycle App	Allen P Biju(Govind V Shenoy(S5CSB) Kiran Shaji Augustine Gayathri Suresh	S5CSB S5CSB S5EC
12.	Interactive & Effective Online Education System	Melvin Shaju	S7CSA
13.	An Online Site to Trade Waste materials	Kevin Prince	S3CSB
14.	Interactive & Effective Online Education System	Melvin Shaju	S7CSA
15.	An Online Site to Trade Waste	Kevin Prince	S3CSB

	materials		
Department of Electrical and Electronics Engineering			
16.	Automatic Temperature Controlled Household Electric Celling Fan	Nandukrishna B, Eldho Varghese	S7 B EEE
17.	College CCTV based student and teacher automatic face recognized attendance system	Kevin Mathew George, Philip Thomas Anandh H Paul Stanly	S5 B EEE
18.	Automatic Shopping Trolley	Akash Ashokan, Arun Shalu Amritha Satheesh Kumar Aparna R Nair	S7 B EEE
19.	Manual Tapping Machine	Pranav Sathyan, Archana P Raju	S7 B EEE
20.	Piezoelectric Charging Mat	Ashmin Shinob, Sreejith P S Vishnu Ajay	S5 A EEE
21.	Smart School Bag	Nikhil Joseph, Pranav Satyan Archana P Raju Jerin Jovin	S7 B EEE
Department of Electronics and Communication Engineering			
22.	Fire Breaker Drone	Roshan Biju, Philip Biju, Don Mathew Varghese, Albin Roy	S1 ECA
23.	Sun Tracking Solar Panel	Megha Biju, Riya Benny, Aleena Alocious	S1 ECA
24.	Speed control of fan according to room temperature	Maria Sabu	S1 ECA
25.	Foot board clearance	Maria Sabu	S1 ECA
26.	Electromagnet vehicle wheel	Hrishi Venkitesh M	S1 ECA
27.	CNC Machine	Hrishi Venkitesh M, Sebin Jaison, Jose Thankachan, Jayasurya Krishnakumar, Naveen B Thachampuram	S1 ECA
28.	Smart Charging with Electrical Fan	Biyanka Mani	S1 EC B

29.	Motion Based Message Conveyer for Disabled People	Pranav Pradeep	S1 EC B
30.	Accident Detection and Warning System	Tony Kurian	S3 ECA
31.	Automatic Fire Alarm	Alex Antony, Albin K Bijo	S3 ECA
32.	Body Detector	Liya Jojo, Augustina K Martin,Helno Eldho, Anu Shalet Philip	S5 ECA
33.	Realistic Touch screen	Nelson Joseph, Vyshak Anil, Alwin C Varghese, Alfred Roy	S5 ECA
34.	Intelli Helmet	Harisankar S	S5 ECB
35.	Next Gen Boimetric in Resource-Constrained Helthcare	Joan P, Chandini Binu, Anjana S	S7 ECA
36.	Brain controlled wheelchair	Megha Sukumar	S7 ECA
37.	Fire fighting Robot with position tracking and instant help	Nithin Bose Tharakan	S7 ECA
38.	Under ground water Detection	Tony George	S7ECA
39.	Electric Line Break Detector & Resolver	Midhun Murali Krishna	S7 ECA
40.	Fingerprint voting machine	Akhil Roy, Jebins Jois, Christo Jojo, Mathews Binoy	S7 ECA
41.	Semi-Autonomous Reconnaissane & Sueveillance System	Ceril Joseph, Basil Martin Tom, Akhil K Unnikrishnan	S7 ECA
42.	Portable Programmable Medication Reminder	Ruble Sara, Jewel Jimmy, Lakshmipriya	S7 ECA
43.	Development of Low power Sensor Node for Plant Monitoring System	Sneha sunny, Aleesha Sara Mathews, Liner Reji	S7 ECA
44.	Electromyography based hand gesture recognition system for upper limb amputees	Sneha sunny, Aleesha Sara Mathews, Liner Reji	S7 ECA
45.	Blue Eyes Technology	Anju Joly, Eline Liz, Parvathi Suresh	S7 ECA
46.	Smart water monitoring	Merin Thomas, Harsha Jose, Radhika Sabu	S7 ECA
47.	Automated external Defibrillator in Robotic Ambulance	Leenu S,Dhanya Joby, Sruthy Jayachandran	S7 ECA
48.	Load shedding time management	Anusree C S, Chithira	S7 ECA

	with programmable interface	Mahesh, Shilpa Lalu	
49.	Smart Car Plate Recogniion System	Jeffin Jose, Benjamin Baby Jacob, Jince Jolly	S7 ECB
50.	Underground Object Detection using mmWave	Alan Shaju	S7 ECB
51.	Radar System using Arduino	Anu Grorge, Aleena Joshy, Arya K S	S7 ECB
52.	Stroke Rehab & Excersing Glove	Jebhin Baby,Amal Chandran, Vishnu M	S7 ECB
53.	Electronic Co-pilot headlamps	Mohid Antony Jimmy, Adorn P Sebastian, Jinu Jaimon	S7 ECB
54.	Optical Music Notes Recognition for printed music score	Mohid Antony	S7 ECB
Department of Information Technology			
55.	Augmented reality glass	Aswin Krishna	S1 IT
56.	New tracking software for government investigation agencies	Aswin Krishna	S1 IT
57.	Bellagio Digital Store	Bennet Joy	S1 IT
58.	Electronic Black Board Erasor	Jeril Jose Bennet Joy Basil Biju Alan Siby	S1 IT
59.	Personalized website for news and latest technology	Deyon Sebastian	S1 IT
60.	Virtual projector	Haneesh K.D	S1 IT
61.	Automatic cocoa cutter	Arpitha P Varghese Soniya Sunny	S7 IT
62.	Automatic gas stove-efficient leak detection	Vivek .P. Varghese Eldho Sabu Basil James	S7 IT

63.	Waste management using interactive machine	Motty Thomas Gowri .J Jeseena Jaison Sangi Jose	S7 IT
64.	Automatic machine for plucking nutmeg	Abhirami.A Hisana Anita	S7 IT
65.	Cleaning solar panel	Swathy Krishna	S1 IT
66.	Weather sensing indoor light	Binto Tom Joseph	S1 IT
67.	Energy reduction technology	Vivek .P. Varghese Eldho Sabu Basil James	S7 IT
68.	Beyond connect & learn	Rahul Vinod Amal Shyjo	S5 IT
69.	Interactive real world shooting Game	Blesson Manjiakunnel Roncy Saju Amjith Kumar	S1 IT
Department of Mechanical Engineering			
70.	Portable Nutmeg Separator	JIPIL P CHETTOOR Eldhose Raju Albin Paul Harikrishnan A S	S7 ME B
71.	AGR-E, An innovation to revitalize the availibility of good food in urban areas.	Firoz S Erfan Muhammed C.K Bilal Shamsudhin Sanjay M S	S7 ME A
72.	Automated Weed Controller	Kevin G Sagar Vincent Ameer E A Aldrin Baby	S7 ME A

3.   Idea Discussion Meet

Prior to the final round of **VJCET Idea Fest-2019**, a discussion meet is organised on Friday, 30.08.2019 for refining the innovative business ideas of students and faculty members. Faculty members and students of each department of VJCET is required submit their   innovative technology based idea for developing into a prototype or product before   26.08.2019. The idea should have marketing feasibility and the potential to develop to a profit making business in the long run. Dr. K. C. Chandrasekharan Nair, co-founder of Technopark Trivandrum, former CFO,Techno park and Secretary & Registrar, Technopark TBI will chair the discussion meet and look into the feasibility to convert an Idea into a start-up venture. In the discussion meet separate sessions are arranged for different departments as follows. Venue of the meeting will be VJCET conference room.

4.   Idea Evaluation

Idea evaluation was done in each of the six departments. An expert committee headed by   Head of the department has carried out the evaluation. IEDC department coordinator, technical experts and domain expert   were   members of the evaluation committee.

5.   Ideas Selected For Financial Support

Sl. No.	Title of Idea	Team Members	Class
1.	Beyond Connect & Learn (A learning platform to link Academic Community)	Rahul Vinod Amal Shyjo	S5 IT
2.	Automated Attendance Registering System (AARIS)	Kevin Mathew George, Philip Thomas Anandh H Paul Stanly	S5 EEE B
3.	Amphibious Cage (Flood Shelter For Live Stock)	Abhinand S, Ajwin Jose Francis, Charles George, Rahul Raj	S7 CEB
4.	Agrobuy App (IT based marketing of agricultural products)	Thomas James	S7CSA
5.	Stroke Rehab & Exercising Glove	Jehhin Baby Vishnu M Amal Chandran	S7 ECB
6.	Portable Nutmeg Separator	Jipil P Chettoor Eldhose Raju Albin Paul Harikrishnan A S	S7 ME B

6.   Conclusion

Seventy   two teams participated in the idea fest, which   clearly shows the enthusiasm of students and the penetration of IEDC message to student community in VJCET. The discussion meet arranged for refining the ideas had helped the students in making suitable corrections and modifying the idea. The evaluation has carried out in department level to encourage students of all departments.   The quality of projects proposed in the idea fest 2019 were really good. Selected six projects/Ideas will be taken up for proto type development with support IEDC and VJCET. They will be presented in the upcoming KSUM idea fest 2020.

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Innovation and Entrepreneurship Development Centre

(IEDC)

Viswajyothi College of Engineering and Technology

Report on Attending the Workshop Conducted by

National Cyber Safety Security Standards

At
Integrated Startup Complex, Kalamassery, Cochin

on

4th December, 2019

Prepared by : Dr K K Rajan   Approved by : Dr.K. K. Rajan

                                                                          Nodal Officer , IEDC, VJCET

Report on Attending the Workshop Conducted by National Cyber Safety Security Standards

1. **Introduction**

The National Cyber Safety Security Standards is in the process of setting up of National Defence Resource Centres (NDRC) across the country. The National Cyber Safety and Security Standards conducted a half day workshop for IEDC nodal officers in partnership with Kerala Startup Mission as follows.

Date: 4th December, 2019
Venue: Integrated Startup Complex, Kalamassery, Cochin
Time: 10:30 am

The Resource centres will play a critical role in disseminating awareness about Cyber security and safeguard our citizens from the current threats in the cyberspace.

2. **Objectives Workshop**

The objective of this workshop by National Cyber Safety and Security Standards is to provide awareness to the stakeholders in an effort to improve the state of Cyber Security both at domestic and international level and to share how an IEDC institution can register and can be established as a National Cyber Defence Resource Centre (NCDRC).

3. **Program Description**

The Workshop started with an introductory note by Shri Riyas Mohamed Project Director, Kerala startup mission. Ms O U Sreekutty IEDC coordinator, KSUM attended the meeting. There were around 35 nodal officers from different IEDCs across Kerala. Dr. E. Khalieraaj Addl. Director – General, National Cyber Safety and Security Standards attended the meeting. He has given a brief account of activities of NCSSS, about National Cyber Safety and Security Standards and threats in the Cyberspace towards National Security. Subash Babu P K , State Head Kerala attended the meeting and explained about activities of NCSSS in Kerala and what can be done in our colleges with the involvement of IEDCs.

4. **Program Outcomes**

The program was very helpful to the nodal officers. It has initiated the thought process of setting up NCRDC in our college. Contact detail of Subash Babu P K , State Head Kerala, is given for further support. subashbabupk@ncrdc.res.in, resourcecentre@ncrdc.res.in, Mobile : 9946490900.

5. **Conclusion**

The program was over by 13:10 hrs with an vote of thank by Shri Riya Mohammed.

Photo 1 : Workshop conducted by NCSSS at KSU Kalamassery
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Annexure-N

Innovation and Entrepreneurship Development Centre

(IEDC)

Viswajyothi College of Engineering and Technology

Report on Attending

Kochi Design Week

on
12th, 13th and 14th of December, 2019
at
Bolgatti Event Centre, Ernakulam

Prepared by : Minu George
    Vanitha Rugmoni
    Assistant Professors,
    VJCET

Approved by : Dr.K. K. Rajan
    Nodal Officer, IEDC,
    CEO, IEDC, VJCET

Report on Attending Kochi Design Week

1.   Introduction

Kochi Design Week is India's largest annual International Design Festival of creative minds to meet & discuss the new facets of the design & creative fraternity. It gathered instigators from different parts of the world disrupt, imagine, ideate, innovate, and design for a better tomorrow. Kochi Design Week (KDW) strives to create a sustainable ecosystem through innovative and visionary technology enabled & design thinking. KDW consists of an array of independent events stitched together with design thread. Inquisitive individuals can learn and interact through workshops, panel discussions, keynote speeches, exhibitions, and many more events organized as a part of the design week where they can listen, and discuss with the industry experts on the future of design.

2.   Program Objectives

Pioneers and leaders of the design world will come together to discuss on the current and future of design and trends. Kochi Design Week is the ideal place for the best advanced and perfect design inspirations. Informative keynote sessions and thoughtful panel discussions by renowned designers and decision makers will captivate and ignite your design spirit.

3.   Program Description

Kochi Design Week started on 12th December at 9: 30 AM. The welcome speech was given by M Sivasankar IAS IT Secretary, Secretary to Chief Minister, Govt of Kerala, Presidential address by S D Shibulal Co-Founder, Infosys and Axilor Ventures, Inaugural Address by P Sreeramakrishnan, Speaker, Kerala Legislative Assembly, Felicitation by Saji Gopinath, CEO Kerala start up mission, Sasi P M, CEO, IT parks, Kerala and V. Sunil Kumar founder, MD, Asset Homes. After this, various keynote sessions, panel discussions and workshops were conducted at different venues. Day 2 started with a opening remark by V. Sunil Kumar, MD, Asset Homes. It is followed by Keynote session in Innovation in Architecture by Ar. Padmashree G Shankar, Founder/Chairman Habitat Technology Group. It is followed by various keynote sessions and talkathon were conducted. Day 3 started with a welcome speech by Alok Nandi, creative director, Architempo & President, IxDA. Thereafter various master classes in Universal design for an Inclusive World by Kavitha Murugkar and Urban Infrastructure, smart city Design by David Ludlow etc. were conducted. Finally there was a grand valedictory function conducted with a valedictory address by Hon. Chief Minister of Kerala, Pinarayi Vijayan and felicitation by Hibi Eden, MP, T.J Vinod MLA and Soumini Jain Mayor, Kochi Municipal Corporation

4.   Program Outcomes

The program which included various industry experts and tech entrepreneurs was very helpful for us as the participants. We had an opportunity to meet and interact with them. We got a chance to know the trends in the design world too.

5.   Conclusion

Participation in Kerala Design Week was great opportunity for us. The knowledge and know how gained will be transferred to students thorough IEDC forum.

Photo 1: The inauguration ceremony.

Photo 2: A panel discussion on Designing for experiences where Digital and Physical Worlds converge.

Photo 3: An Exhibit by Maker Village

Photo 4: Maker Fest

Photo 6: Valedictory Function

Photo 7: Minu George &Vanitha Rugmoni participants from VCET

Photo 8: Minu George &Vanitha Rugmoni participants from VCET

Photo 9: Minu George &Vanitha Rugmoni participants from VCET

Annexure – O

Innovative Students Projects
AARIS –Automated Attendance Registering System
Abstract

AARIS –Automated Attendance Registering System is software that creates attendance sheet based on CCTV camera footage from each class in an academic institution by recognizing the faces and uploading attendance sheet in time to online database and updating. AARIS focus on creating human free automated attendance registering without time consumption and delay. Current Practices in academic institution for attendance registering are manual method of teachers taking attendance via student calling, Electronic method of Biometrics and RFID tags etc. But the problems faced by these methods are time consumptions since these need a third person or the person need to wait for registering attendance, presence of human error is another factor, and malpractices in physical attendance registers. So for overcoming these problems we look forward to CCTV cameras installed in the college premises and classrooms they are working 24/7 for security purpose. The idea is to find a new purpose for cams by processing live footage, recognize persons sitting inside classrooms through face recognition and make attendance sheet from it and make an online database to store information and can be accessed from online real-time.

AARIS Prototype Development

Team Members
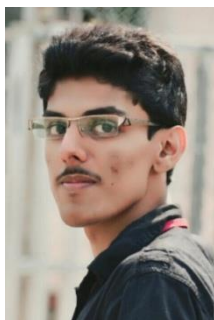
| Kevin Mathew George | H Anand | Paul Stanly | Philip Thomas |

Stroke Rehab And Exercising Glove

Abstract

In India, more than 70,000 people suffer a stroke each year and approximately two-thirds of these individuals survive and require rehabilitation. Paralysis is one of the most common disabilities resulting from stroke. The paralysis is usually on the side of the body, opposite to the side of the brain damaged by stroke, and may affect the face, an arm, a leg, or the entire side of the body. Even though rehabilitation does not reverse brain damage, rehabilitation can substantially help the affected person to achieve the best possible long-term outcome. Stroke patients may have difficulty with everyday activities such as walking or grasping objects. So we are focusing on implementing a hand glove which provides daily exercising for hand based on signals acquired from electromyography (EMG) sensors and also heating up the paralyzed hand in order to ensure the blood flow, which may otherwise lead to serious health problems.

An ischemic stroke or "brain attack" occurs when brain cells die because of inadequate blood flow. When blood flow is interrupted, brain cells are robbed of vital supplies of oxygen and nutrients. About 80 percent of strokes are caused by the blockage of an artery in the neck or brain. Paralysis is one of the most common disabilities resulting from stroke. The paralysis is usually on the side of the body opposite the side of the brain damaged by stroke. This one-sided paralysis is called hemiplegia. Stroke patients with hemiparesis or hemiplegia may have difficulty with everyday activities. Stroke patients may lose the ability to feel touch, pain, temperature, or position. Sensory deficits also may hinder the ability to recognize objects that patients are holding and can even be severe enough to cause loss of recognition of one's own limb. Some stroke patients experience pain, numbness, or odd sensations of tingling or prickling in paralyzed or weakened limbs. Patients who have a seriously weakened or paralyzed arm commonly experience moderate to severe pain that radiates outward from the shoulder. Most often, the pain results from lack of movement in a joint that has been immobilized for a prolonged period of time (such as having your arm or shoulder in a cast for weeks) and the tendons and ligaments around the joint become fixed in one position. This is commonly called a frozen joint. Our initiative will help in order to prevent this condition.

Passive movement at the joint in a paralyzed limb is essential to prevent painful freezing and to allow easy movement if and when voluntary motor strength returns. Some muscles on the affected side may become stiff (most often at the wrist, fingers and the ankle) which can limit movement at the joint and some people may develop muscle spasms or a type of stiffness. So this project aims to provide a moving action for hand, including the fingers, based on information acquired from impulses obtained using electromyography (EMG) signals and also providing a heating effect to the hand in order to prevent blood clotting. This is important, because otherwise frozen joints will leads to serious health problems.

The block diagram of the proposed system is given below. The EMG sensor acquires the EMG signals and based on the signals the servo motor will rotate to give the hand the required motion. The temperature is monitored and the electric heat pad provide the heating effect.
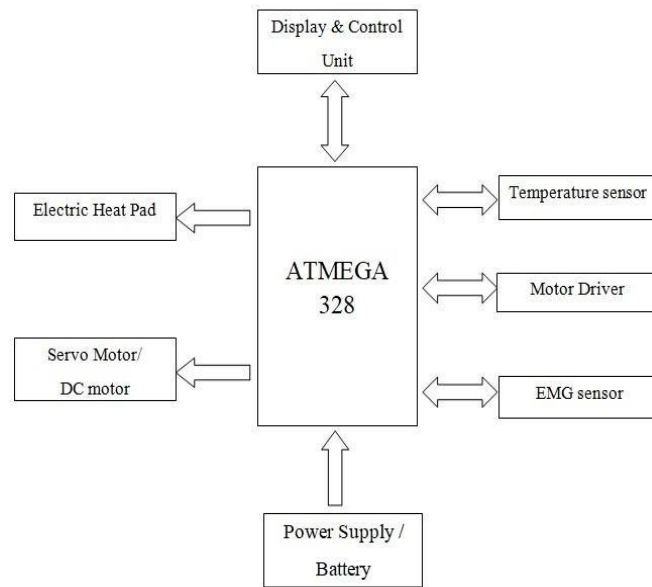
Block Diagram
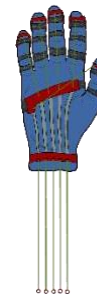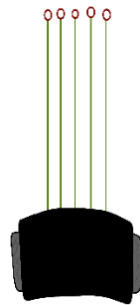
Illustrated Design

Team Members

Amal Chandran   Jephin Baby   Vishnu M

Nut X - Portable Nutmeg Separator

Abstract

Nutmeg is one of the major cash crop in South India. The oil extracted from nutmeg and the nutmeg   is a very valuable spice in the entire world, especially in the European countries. Large quantity and variety of aromatic compounds in the seed and mace of the nutmeg have led to the historic and continued use of nutmeg and mace as spices. Products of nutmeg and mace are used in cosmetic and pharmaceutical industries also.

There is a large difference in the price of nutmeg without shell and with the shell. Due to lack of effective machine and high labor intensive process, currently farmers sell the nutmeg with shell. It decreases their earning. As per our studies and discussion with the farmers and industry, we found that the intermediate people in the industry buy it from farmers at a low price and break the shell, then sell it on larger price. By introducing this simple Portable Nutmeg Separator   the farmers themselves can crack the shell and earn more income. It reduces the work load and physical stresses of the nutmeg farmers and saves their time as compared with manual cracking. It is affordable to small scale farmers and increases their profit.

Nutmeg is available in various sizes. Sorting of nutmeg must be done before cracking. In the sorting mechanism nut is put in one center section of a vibrating sieve. It is passed over to the curved path based on size. Then the nut is put into the chute. It is fed to different compartments according to the size. Rotor of the nutmeg separator is rotated by the motor. As the rotor hits the nut, it is compressed against the adjustable stationary part of the separator and driving rotor, and the impulse force cause shell to break.The separated nut and shell fall downwards, shell get separated by a sieve and nut is collected in the collection tank.

Expected Outcome of this project will be a creative, portable, economic design of a nutmeg separator which will be very useful to the farmers to carryout the nutmeg cracking on their own an earn more profit. The product ensures safety   to the operator and retains quality of the nutmeg. We are planning   to include a processing unit with the separator. The   Processing unit   is to carry out   proper drying and sorting.
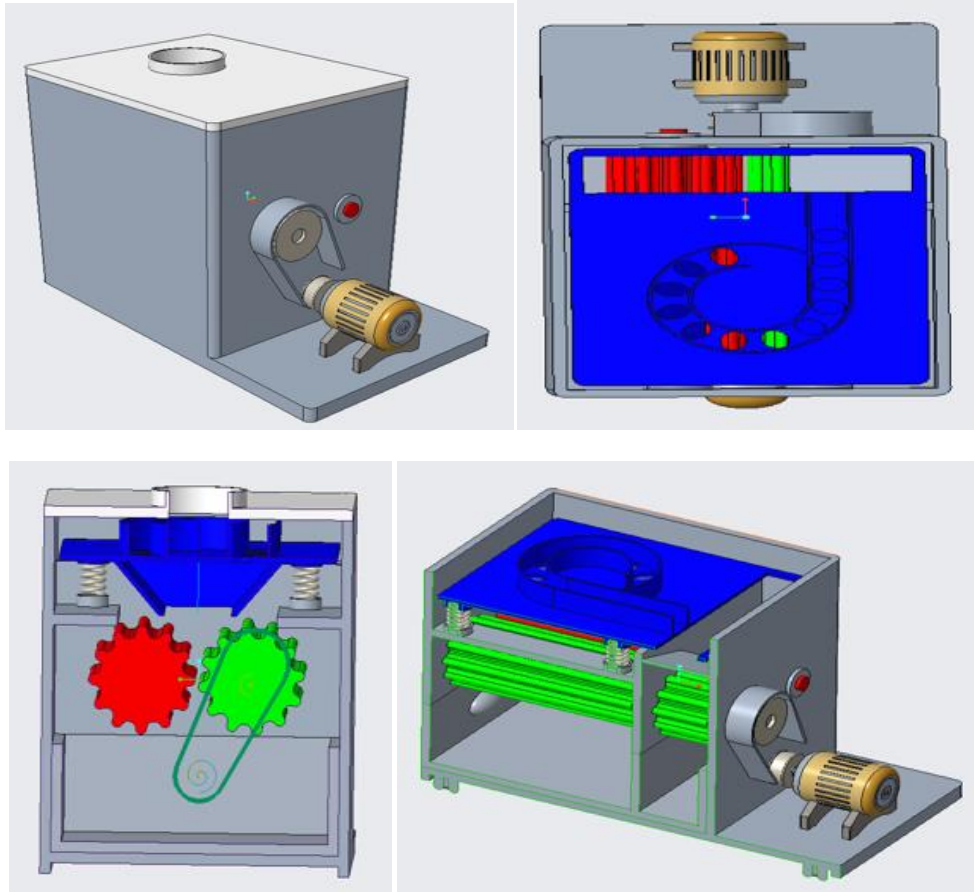
Design Details of Nutmeg separator

Team Members

Eldhose Raju   **Harikrishnan A S**   **Albin Paul**   **Jipil P Chettoor**

AGROBUY APP *Your Own Market*

Abstract

Agriculture is the primary source of livelihood for about 58 per cent of India's population. Agricultural productivity depends on several factors. These include the availability and quality of agricultural inputs such as seeds and fertilizers, assurance of remunerative prices for agricultural produce and marketing infrastructures. Poor earnings of the farmers led to the never-ending distress of agriculture sector thus results in a need for introducing a national agricultural market.

For the trading of agricultural produce in an online platform, a new app called 'AGROBUY' is designed. Through this app, the farmers can post their agriculture produces with image, quantity and locations information. After a verification process which includes quality check, the agriculture produce is ready for sale and the shop owners or the customers can buy the product at a good price less than the market price. Massive quantities of produces can traded through this app from anywhere around the country. Also there is a future price prediction system is designed for the app so that the producers as well as the consumers can have an eye on the price variations.

This app mainly aim for the farmers to sell their agricultural produces by avoiding intermediate brokers and make them to earn more than what they expect. Not only the products but also the fertilizers and manures or seeds can be afforded at a very low price by using this app. This makes the agriculture sector more secure and reliable by making the prices stable and can thus minimize the farmers' suicides.
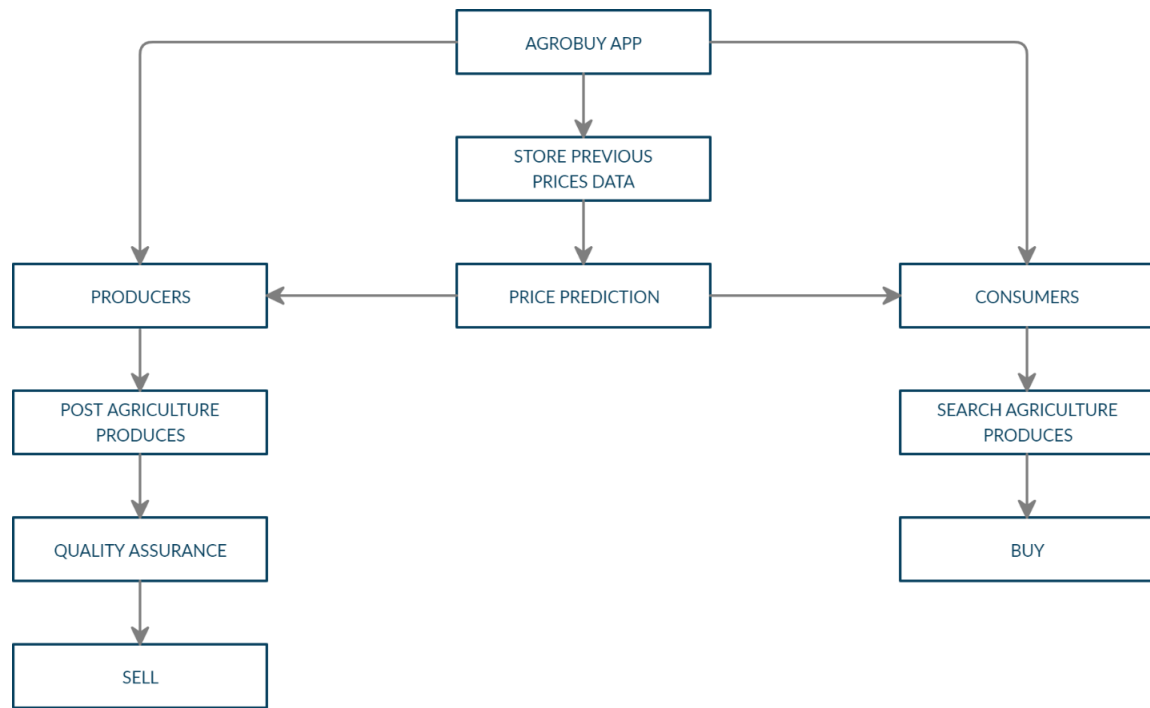
AGROBUY APP Block Diagram

Team Members

Thomas James   **Paul Mathew**   **Melvin Shaju**   **Bencin Benny**

Beyond: Connect And Learn

Abstract

Beyond is a platform to communicate, learn and share ideas and insights between different levels of academic community including students, teachers and colleges through in a simple and efficient application. Our project is a productive yet creative environment for users where they can themselves learn a subject in a new, simpler and understandable way. With direct access to our social networking side, they can always connect to other peers or teachers during there learning to have a better understanding of the topics. We also aim to create communities that understand you and aim to teach better through our social networking side of the platform.

Team Members

Rahul Vinod

Amal Shyjo

Amphibious Structure for Lifestocks

Abstract

India is a land of peoples who are directly and indirectly dependent on animal husbandry in a wide range from keeping a pet to large farm husbandry's. Climate change and global warming is a primary concern today. Sea levels are rising gradually, along with more frequent and severe hurricanes, flooding, heavy rain and other natural disasters. Proper counter measures are required for survival in such situations in terms of architecture. People living in low lying coastal areas are more susceptible to be affected by flooding.

Disasters often occur when we are least prepared, the floods that occurred in 2018and 2019 were suitable examples for this. But from the past flood experience we have started concerns and preparation to face flood in the future. At present several measures are adopted in construction to construct flood mitigation structures.

So far studies are conducted and several measures are adopted for human safeties, but when it comes to animal safety during floods zero efforts are taken. The only option opted nowadays is to release them freely but those animals grown in closed environment his surely had to face a hard time in the time. This is not only concerned about animals but a whole society dependent on them.

Our project brings out a new innovative idea named amphibious structure for livestock's. Here we are adopting the idea of a pondoon based foundation which can freely lift or float over water surface along a set of pillars. Stability of the body is attained by correction of center of gravity. This project also includes a system for hazardous time feeding and waste management system.

AMPHIBIOUS CAGES
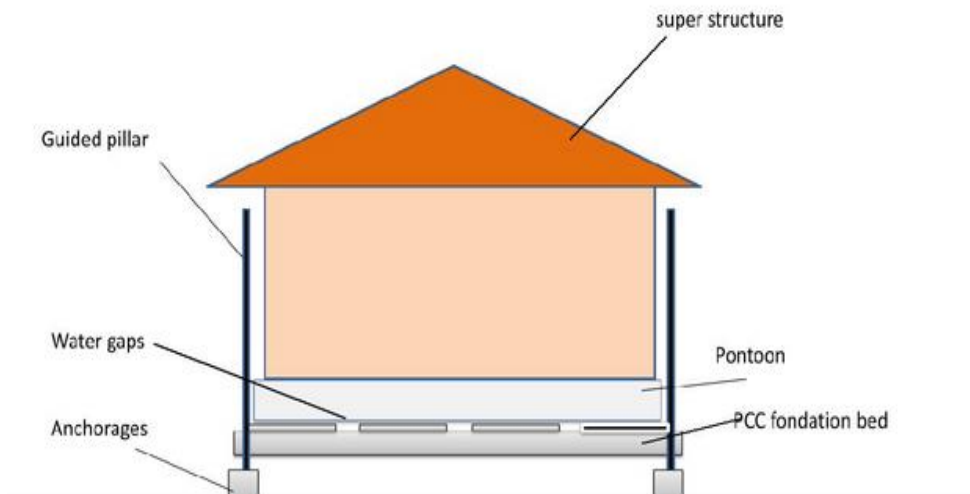
Team members

Abhinand S	**Ajwin Jose**	**Francis Charles**	**George Rahul Raj**

Mentoring Scheme

Viswajyothi College of Engineering and Technology

Innovation and Entrepreneurship Development Centre (IEDC)

Mentoring Scheme for Student Entrepreneurs

Ref: VJCET/IEDC/2019-2020/07   **Date: 02.12.2019**

As per   Kerala Start up Mission guidelines, arranging   interaction with entrepreneurs and creating a mentorship scheme for student entrepreneurs is one among the Functions of IEDCs in the academic institutions. Accordingly IEDC of academic institution shall a create a pool of internal & external mentors for supporting entrepreneurs in the college. The pool shall consists of external mentors and internal mentors selected for assisting startups.   The IEDC shall organize minimum eight numbers of mentoring programs in an year.

Based on this guidelines following personalities are selected in the pool of mentors in Viswajyothi college of Engineering and technology towards   effective interaction and mentoring of student entrepreneurs.

Internal Mentors

Mr. Aneesh Kurian
Assistant Professor, EEE & Entrepreneur
Area of interest : Electrical system design,
Electrical Machines, Solar Plant Systems, Water
Treatment Systems
E mail: aneeshpulpally@gmail.com
Mobile : 9946936642

Dr K K Rajan
Prof EEE & Dean IIIC
Area of interest : Core Electrical Engineering
Hardware, Design, Engineering, and
Manufacturing, Power system, Solar Energy
E mail : kkrajan56@gmail.com
Mobile : 9072964417

Mr. Prince Kurian
Assistant Professor, ITD
Area of interest : Web Technology & Designing
E mail: Princekurian2000@gmail.com
Mobile : 9846952048

Dr. Sheela.V.K
Assistant Professor, ITD
Area of interest : Data Management & Image
Processing
E mail: sheelavk@vjcet.org
Mobile : 9447048524

Ms. Tina Jose
Assistant Professor - CE
Area of Interest :Structural Engg
E mail : tinatresajose@gmail.com
Mobile : 9495675447

Ms. Neena M Joseph
Assistant Professor - CE
Area of Interest: Transportation Engg
E mail : neenmariya@yahoo.co.in
Mobile :   9447876078

Mr. Joe Mathew Jacob
Assistant Professor, CSE Dept, VJCET
Area of Interest : Computer Networks
joemj@vjcet.org
Mobile : 9497818504

Mr. Sivadas T Nair
Assistant Professor, CSE Dept, VJCET
Area of interest : Data Mining, Computer
Architcture
t_sivadasnair@yahoo.com
Mobile : 9447349948

Mr. Tony D
Associate Professor, ECE Dept., VJCET
Area of interest : Antenna Design
E mail: pdtony@gmail.com
Mobile : 9497680830

Mr. Cyriac M Odackal
Associate Professor, ECE Dept., VJCET
Area of interest : Microwave Electronics
E mail: cyriacpala@yahoo.co.uk
Mobile : 9447506638

Mr. Vinoj K
Associate Professor, Mechanical Engineering
Department
Area of interest : Production Engineering
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Mobile : 9847411887

Mr. Arun K
Assistant Professor, Mechanical Engineering
Department
Area of interest : Manufacturing Engineering
E mail: aruncheradiyil@gmail.com
Mobile : 9946447403

External Mentors

External Mentors

Dr. K. C. Chandrasekharan Nair
Co-founder of Technopark Trivandrum,
former CFO,Techno park and Secretary &
Registrar, Technopark TBI
Area of interest : Expert in Startup Development,
Father of Startup Mission in Kerala ,
E mail: kccnair@gmail.com
Mobile : 9447111244

Mr. Manu John James
EO & Founder, Empower Engineers
Area of interest : Electrical System Design
Mobile : 9447377101

Mr. Baby George,
Managing director, G & G Constructions
Area of interest : Urban & Regional
Planning, Project planning &
Management, Building Construction
E mail: babygeorge.george@gmail.com
Mobile : 944650117

Mr. Gopikrishnan
Director, BuildNext Construction
Solutions Pvt. Ltd
Area of interest : Green buildings, Buildings
materials, Entrepreneurship
E mail: gk@buildnext.in
Mobile : 7506033510A

Mr. Jaacs Job Pottas
Co-Founder & CTO End to end IoT solution development, Terraconnect Pvt. Ltd
Area of interest : Custom Hardware, firmware, cloud back-end and Front End design and development, IoT rule engine development, IoT framework development, working on open source technologies
E mail: jaacs@terraconnect.io
Mobile : 9207742587

Mr. Varghese Benny
Founder and CEO, Rabbitsquare, First Floor, Karakunnel Building, Near MKNM Higher Secondary School, Kumaramangalam, Thodupuzha, Kerala 685608
Area of interest : Robotics,IoT, Cybersecurity, STEM education
E mail: varghesekbenny@gmail.com
Mobile : 8086967146

Mr.Britto Saji
Co-founder and CTO
Lmntrx Tech,
Building Number II/18,
Near Karthavinpady,
Valayanchirangara Valayanchirangara P.O,
Ernakulam District,
Mazhuvannoor Panchayat,
683556
Area of interest : Android And Web application development
E mail: britto@lmntrx.com
Mobile : 9656382217

Mr. Sunil Kumar V
Former Managing Director, Supertech tools & Components
Area of interest : Tools & Components manufacturing
E mail: sunilkumarv@gmail.com
Mobile : 9447214955

Mr. Binol George
Founder- Recode AI
Area of interest : Machine Learning Technology
E mail: binolgeorge@gmail.com,
info@recodeai.com
Mobile : 9526977802, 8943133501

Innovation and Entrepreneurship Development Centre (IEDC)

Viswajyothi College of Engineering and Technology

Report on Major IEDC Activities at Viswajyothi College of Engineering and Technology for the Calendar Year 2019

December 2019

Prepared by:	Checked by :	Approved by :
Dr. Sheela V K, IT Dept. Coordinator		
Mr. Jomu M George , EEE Dept. Coordinator		
Mrs. Rini Simon CSE Dept. Coordinator	**Mr Robin Augustine, ANO**	**Dr. K K. Rajan, Nodal Officer**
Mrs. Femy John, ECE Dept. Coordinator		
Mrs. Nisa Ann Mathew, CE Dept. Coordinator		
Mr. Basil Baby, ME Dept. Coordinator		

A Report on Major IEDC Activities at Viswajyothi College of Engineering and Technology for the Calendar Year 2019

1. Introduction

Through her Email dated 7th December 2019, Ms. Sreekutty. IEDC Coordinator, KSUM asked nodal officers of IEDCs in colleges to submit a report on major activities held in the respective IEDC for the year 2019 (January - December) in the prescribed format before 20th December 2019. Accordingly the major activities carried out by IEDC at Viswajyothi College of Engineering and Technology Vazhalulam, Muvattupuzha are listed in this report and its details are given.

2. VJCET Idea Fest 2019

Based on the excellent response from students in 2018 idea fest 2019 was organized at Viswajyothi College of Engineering and Technology in the period, August-October 2019. Seventy two teams participated in Idea fest-2019. Idea evaluation was done in Each of the six departments. An expert committee headed by Head of the department has carried the evaluation. IEDC department coordinator and technical experts, domain expert were members of the evaluation team. One idea from each department was selected and provided with financial support of Rs.5000/- for proto type development. The list of winners are given below.

Viswajyothi College of Engineering and Technology
Innovation and Entrepreneurship Development Centre
VJCET Idea Fest-2019

Ref: VJCET/IEDC/KKR/2019 / 31   Dt. 13.11.2019

Innovation and Entrepreneurship Development Centre (IEDC) in association with Viswajyothi Business Incubation Centre (V-BIC) of Viswajyothi College of Engineering and Technology had organized Idea Fest-2019 during the last week of October 2019. This event had focused exclusively on innovative technology based idea of students for developing a prototype or product. Following teams are selected as winners of Idea Fest-2019. IEDC will provide them financial support upto Rs.5000/- for prototype development.

Sl. No.	Title of Idea	Team Members	Class
1.	Beyond Connect & Learn (A learning platform to link Academic Community)	Rahul Vinod, Amal Shyjo	S5 IT
2.	Automated Attendance Registering System (AARIS)	Kevin Mathew George, Philip Thomas, Anandh H, Paul Stanly	S5 EEE B
3.	Amphibious Cage (Flood Shelter For Live Stock)	Abhinand S, Ajwin Jose Francis, Charles George, Rahul Raj	S7 CEB
4.	Agrobuy App (IT based marketing of agricultural products)	Thomas James	S7CSA
5.	Stroke Rehab & Exercising Glove	Jephin Baby, Vishnu M, Amal Chandran	S7 ECB
6.	Portable Nutmeg Separator	Jipil P Chettoor, Eldhose Raju, Albin Paul, Harikrishnan A S	S7 ME B

Dr. K.K.Rajan,
Nodal officer, IEDC,
Viswajyothi College of Engineering and Technology,
Vazhakulam, Muavattupuzha,

3.   Idea Discussion Meet

Prior   VJCET Idea Fest-2019, a discussion meets are organised on Friday, 30.08.2019 and Saturday 31.08.2019   for refining the innovative business ideas of students and faculty members. Faculty members and students of each department of VJCET is required submit their   innovative technology based idea for developing into a prototype or product.   The idea should have marketing feasibility and the potential to develop to a profit making business in the long run. Dr. K. C. Chandrasekharan Nair, co-founder of Technopark Trivandrum, former CFO,Techno park and Secretary & Registrar, Technopark TBI will chair the discussion meet and look into the feasibility to convert an Idea into a start-up venture. In the discussion meet separate sessions are arranged   for different departments as follows. Venue of the meeting will be VJCET conference room. Around 87 persons including faculty members   participated in the event.

Dr. K. C. Chandrasekharan Nair,   Chairing the Idea Discussion Meet

4.   Inauguration of   Viswajyothi Business Incubation Centre

Realizing the need of entrepreneur development among students   the Viswajyothi   Business Incubation Centre (V-BIC) is   launched in VJCET on 26.04.2019. Inauguration of V-BIC was carried out by Shri Eldho Abraham honorable MLA Muvattupuzha. Dr Saji Gopinath, CEO, KSUM delivered the   keynote address. In the business incubation centre, startup   companies of   students, faculty members, alumnis and   technically and professionally qualified youngsters are   functioning for business incubation. The VJCET V-BIC   is occupying an area of 3000 square feet, with all infra structure available for business development. As on now six   companies started   functioning form V- BIC. In VJCET, V-BIC provides opportunity to students to become entrepreneurs and   they can be job providers rather than job seekers.

Inauguration of Viswajyothi Business Incubation Centre Shri Eldho Abraham MLA and Dr Saji Gopinath, CEO, KSUM

Keynote address by Dr Saji Gopinath, CEO, KSUM

5. Orientation programs

5.1 IEDC orientation programme for first years of IT Branch

An orientation class of introduction to IEDC and Startup was conducted on 1/8/2019 Afternoon at Main Auditorium. The session was handled by Mr. Ajay Basil Varghese, Nodal Officer , IEDC Cell Adishankara Institute of Science & , Kalady, Ernakulam. Mr. Ajay started the class with the need and importance of

entrepreneurship. He mention the different straggles and measures taken by different Government agencies to boost entrepreneurship among the students. Speaker Introduce the concept of startup companies by defining startups in terms of formal definition like "A startup company is a newly formed business with particular momentum behind it based on perceived demand for its product or service". The intention of a startup is to grow rapidly as a result of offering something that addresses a particular market gap. He also added that Entrepreneurs are frequently thought of as national assets to be cultivated, motivated, and remunerated to the greatest possible extent. Great entrepreneurs have the ability to change the way we live and work. If successful, their innovations may improve standards of living, and in addition to creating wealth with entrepreneurial ventures, they also create jobs and contribute to a growing economy.

He conclude the class by explaining,the way of converting a simple idea to a business , which can be run as startup by evaluating some idea, which are suggested by the students. About 55 students of first year Information Technology department was present for the session. The session was concluded by Dr. Sheela.V.K , Department coordinator and shared the various IEDC Activities of the last academic year like VJCET idea fest.

Date: 01-08-2019
Time: 2.00 pm – 4.00 pm
Venue: Classroom B 102
Number of students attended : 56

5.2   IEDC orientation programme for first years of EEE Branch

As part of first year's orientation program, a section was arranged to introduce about the innovation and entrepreneurship, Kerala Startup Mission and IEDC. Mr.Aneesh Kurian, Entrepreneur, Certified Energy Auditor and Asst. Profrossor, was the speaker for the occasion. He is an active Entrepreneur who founded few companies in last 10 years. Currently, he is the Founder & Managing Director of MAXENWAT, an Engineering Consultancy Services Pvt. Ltd which deals with energy management and water recycling and conservation. Earlier, he founded companies which dealt with Solar Power Plant installations and energy management consultancy.Mr.AneeshKurian also works as Asstistant Professor in Viswajyothi College of Engineering & Technology, Vazhakulam. The speaker gave an account of his journey with companies he initiated. He explained and discussed with the students about the thought process, attitude and knowledge one should possess for being a successful Entrepreneurs. Mr.AneeshKurianalso briefed about difficulties in starting a new venture and how the government establishments like Startup Missions, support such initiatives.

Mr.Jomu M George, Asst. Prof. & Dept. Coordinator IEDC VJCET, narrated the beginnings of First Startups in Kerala by College students, Startup Village, Kerala Startup Mission (KSUM), IEDC and FabLabs. He elaborated the steps being taken by the KSUM for the promotion of innovation and entrepreneurship. On conclusion, Mr.Jomu M George detailed about IEDC VJCET structure and activities, and

recommended interested students to associate with IEDC and draw maximum advantage of facilities provided.

Date: 01-08-2019
Time: 2:00 pm – 4:00 pm
Venue: Classroom B 102
Number of students attended : 29

Resource Persons:
- Mr.Aneesh Kurian, Entrepreneur, Certified Energy Auditor& Asst. Professor.
- Mr.Jomu M George, Asst. Prof. & Dept. Coordinator IEDC VJCET

Mr.Aneesh Kurian, addressing the students

5.3   IEDC orientation programme for first years of ECE Branch

An orientation program was conducted for first year students (2019 admission) on 1st August 2019. The programme was conducted from 1.45 pm to 4.15 pm at MBA Seminar Hall. First session was handled by Miss Gayathri Suresh, CCO, TeqnocartInnovations (Opc) Pvt. Ltd. And Mr. Shan Babu, CEO, Innovations (OPC) Pvt. Ltd. Miss. Gayathri Suresh is now doing her B Tech in Electronics And Communication Engineering at VJCET and Mr. Shan Babu is doing his B Tech in computer science

Engineering at VJCET. Currently   Teqnocart innovations (Opc) Pvt. Ltd has 4 employees and about 20 clients. They have provided internship to 35 students. They shared their experience of starting a company when they where doing their third semester of B Tech. With the help of Kerala Startup Mission and IEDC they started their company and it was legally registered. They described the whole procedure of starting a company and legally registering it, how to apply for funds etc. They inspired the students to come up with innovative ideas.   The second session was handled by Mr, Jacs Job Pottas, CEO, Pot Devices and Systems. He also shared his experience of starting a company.

Date: 01-08-2019
Time: 1.45 pm to 4.15 pm
Venue: MBA Seminar Hall.
Number of students attended : 82

Miss Gayathri Suresh, CCO, TeqnocartInnovations (Opc) Pvt. Ltd. addressing students

Shri Shan Babu   CEO, Teqnocart Innovations (Opc) Pvt. Ltd Addressing Students .

Mr, Jacs Job Pottas, CEO, Pot Devices and Systems Addressing Students

5.4 IEDC orientation programme for first years of ME Branch on 01.08.2019

An orientation class of introduction to IEDC and Startup was conducted on 01-08- 2019 at Mechanical Engineering Seminar hall at 2:30 P.M. The session was handled by Mr. Junet Babu, CEO, Torq Engineering. TORQ Engineering is a mechanical engineering firm aimed at providing optimum solutions to real world engineering problems. Primarily focused on special purpose machine design and development, new product development, introduction of new production methods, the company also provides consultancy and retrofitting services to various industrial clients. He shared his experience as an entrepreneur and various scopes of the college IEDC. He also added that Entrepreneurs are frequently thought of as national assets to be cultivated, motivated, and remunerated to the greatest possible extent. Great entrepreneurs have the ability to change the way we live and work. If successful, their innovations may improve standards of living, and in addition to creating wealth with entrepreneurial ventures, they also create jobs and contribute to a growing economy. About 85 students of first year mechanical department was present for the session. The session was concluded by Mr. Basil Baby, Department coordinator and shared the various IEDC Activities of the last academic year like VJCET idea fest.

Date: 01-08-2019
Time: 1.45 pm to 4.15 pm
Venue: Mechanical Engineering Seminar hall
Number of students attended : 85

Mr. Junet Babu, CEO, Torqe Engineering addressing students

5.5 IEDC orientation programme for first years of CE Branch on 02.08.2019

IEDC Orientation program for the first-year Civil Engineering Students students, to introduce the students to the world of innovation and entrepreneurship. Mr. Gopikrishnan is the Director of BuildNext, a Startup that won DST ISBA Startup Award as Best Graduatee for their exceptional work at Kerala Startup Mission under the category: IT / Software / Apps Development / E-commerce.

Date: 01-08-2019
Time: 1.45 pm to 4.15 pm
Venue: Civil Engineering Lecture Hall
Number of students attended : 81

Mr. Gopikrishnan is the Director of BuildNext addressing students

5.6 IEDC orientation programme for first years of CSE Branch on 01.08.2019

An orientation class of introduction to IEDC and Startup was conducted on 1/8/2019 Afternoon at Main Auditorium. The session was handled by Mr. Ajay Basil Varghese, Nodal Officer , IEDC Cell Adishankara Institute of Science & , Kalady, Ernakulam. Mr. Ajay start the class with the need and importance of entrepreneurship. He mention the different straggles and measures taken by different Government agencies to boost entrepreneurship among the students. Speaker Introduce the concept of startup companies by defining startups in terms of formal definition like - "A startup company is a newly formed business with particular momentum behind it based on perceived demand for its product or service. The intention of a startup is to grow rapidly as a result of offering something that addresses a particular market gap".

He also added that Entrepreneurs are frequently thought of as national assets to be cultivated, motivated, and remunerated to the greatest possible extent. Great entrepreneurs have the ability to change the way we live and work. If successful, their innovations may improve standards of living, and in addition to creating wealth with entrepreneurial ventures, they also create jobs and contribute to a growing economy. He conclude the class by explaining ,the way of converting a simple idea to a business , which can be run as startup by evaluating some idea, which are suggested by the students.

Mr. Ajay Basil Varghese, Nodal Officer , Adhi Sanakra Addressing the Students

About 120 students of first year Computer Science department was present for the session. The session was concluded by Rini Simon , Department coordinator and shared the various IEDC Activities of the last academic year like VJCET idea fest.

Date: 01-08-2019
Time: 1.45 pm to 4.15 pm

Venue: Main Auditorium
Number of students attended :120

5.7   Orientation programme for IEDC members of VJCET

Innovation and Entrepreneurship Development Centre is being promoted in educational institutions to develop institutional mechanism to create entrepreneurial culture in Science and Technology   academic institutions**.** IEDC coordination committee in VJCET for 2019-20 academic year was formed on 28.08.2019. In the meeting of the VJCET IEDC coordination committee held on 04.10.2019 it was decided to conduct orientation progamme for all members of IEDC in VJCET. As an orientation programmae was already conducted for first year students, the focus can be on members from other classes. Accordingly the orientation programme was organized on on Friday 11.10.2019 at R & D seminar hall. To create awareness about IEDC, its objectives, functions, current activities and to give an indication to the coordination committee members about their duties and responsibilities. Dr K K Rajan Prof EEE and Nodal officer made a power point presentation on the topic " An Introduction To Innovation and Entrepreneurship Development Centre" . The programme started at 1.45 PM. The power point presentation covered in detail sub topics such as Mission of IEDC, IEDCs In Kerala, KSUM Guidelines, Objectives of the IEDCs, Functions of IEDCs, IEDC Management, IEDC Documentation, IEDC Reporting to KSUM, IEDC in VJCET, Activities of IEDC, Idea Fest 2019 and 2020, Innovation Grant Guidelines and Viswajyothi Business Incubation Centre (V-BIC). Around 100 students from different classes attended the programme. The programme was interactive   and students raised many questions during the talk. Dr V K Sheela , IEDC coordinator, IT department and Shri Jomu George IEDC coordinator EEE department attended the meeting. Dr K K Rajan   introduced the coordination committee members to the participants. This orientation programme was very useful to the students and they got an idea about the activities IEDC in VJCET and also got guidance on how to proceed with their innovative ideas. The programme was over by 2.45 PM. Basil Eldhose, CEO, IEDC, proposed   vote of thanks to the speaker and the participants.

Date: 11-10-2019
Time: 1.45 pm to 2.45 pm
Venue: R & D Seminar Hall
Number of students attended : 71

Dr K K Rajan Nodal officer IEDC Delivering the Talk

6.   Work shops

6.1   Work shop on exploring the potential of entrepreneurship & introduction to M/s Teqnocart

The workshop conducted by IEDC, VJCET on 15 November was about the topic 'Exploring the potential of entrepreneurship and introduction to Teqnocart'. The workshop was conducted in an intention to providing the students an ideal opportunity to delve deep into the vast possibilities of entrepreneurship, motivational factors, resources, entrepreneurial abilities and explore the immense potential of entrepreneurship. This was an ample platform to learn and understand the key features of entrepreneurship along with a brief introduction to Teqnocart, one of the success stories of S5 Viswajyothians. The objective of conducting such a workshop is to develop and mould young entrepreneurs and to invite the students who have innovative ideas into the real world of entrepreneurship. Also, it is intended to make students familiar of KSUM, the idea grants, helps that KSUM provides the young entrepreneurs. Behind this, the workshop aims at introducing Teqnocart, one of the startups from S5 students of our college. The workshop had begun by 12 pm with a warm welcome speech by Mr. Sanoj Saju. This event was divided into 3 sections. First section was handled by Ms. Gayathri Suresh, COO, IEDC and CFO, Teqnocart Innovations. This section describes what entrepreneurship is, importance of entrepreneurship and the story of Teqnocart. The next section was taken by Mr. Shan Babu, CEO, Teqnocart Innovations which enabled students to get a brief knowledge about KSUM, idea grants, steps to register a startup and different types of companies. The next section was handedover to Mr. Jetson Joseph. This last section described about Edu-Tech, an educational platform from Teqnocart which provides internships, project guidance, workshops and seminars.
Date: 15-11-2019
Time: 12 pm to 4.15 pm
Venue: R & D Seminar Hall
Number of students attended :30

CEO M/s Teqnocart Addressing Students

6.2 Workshop on Data Science

Understanding the need of Data Science in this century, the IEDC and the department of Information Technology organized a workshop on Data Science on Wednesday 16.10.2019 at R & D seminar hall. Mr. Abhilash Pradeep and Mrs. Merin Abraham from M/s Spectrum Kochi were the resource persons.

Date: 16-10-2019
Time: 9.30 am to 4.15 pm
Venue: R & D Seminar Hall
Number of students attended :49

Participants of work shop with IEDC office bearers

7.   Conclusion

Major activities of IEDC of Viswajyothi College of Engineering and Technology is summarized and even details are provided as desired by IEDC coordinator, KSUM. All the details of these activities are also available/uploaded   at the KSUM website the IEDC Accreditation Platform https://iedc.startupmission.in/#/event.

Government of India
Department of Atomic Energy (DAE)
Board of Research in Nuclear Sciences (BRNS)

Dr. Debanik Roy
Programme Officer (NRFCC)

BRNS Secretariat, 1st Floor, CC,
BARC, Trombay, Mumbai-400085.
Phone: +91-2225593946
Fax: 2225593946
Email: deroy@barc.gov.in

No: 36/17/18/2016-BRNS/56

Date: 11/08/2016

OFFICE MEMORANDUM

Sub: **Nuclear Energy Awareness Seminar -2016 (NEAS-2016) to be held during September 30 th and October 1 st 2016 at Main Auditorium, VJCET - Prof K K Rajan,Prof EEE and Dean, Industry Institute Interaction , Viswajyothi College of Engineering and Technology, Vahakkulam, Muvattupuzha, Kerala 686 670 under BRNS.**

On the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the sanction of the President of India, to incur an expenditure not exceeding Rs. 1,50,000/- (Rupees one lakh fifty thousand only) for the organization of captioned event.

2.   The expenditure involved is debitable to: **04 3401 00 004 27 0231**
3.   I am also pleased to convey the sanction of the President of India to incur an expenditure of **Rs.1,00,000/-(Rupees in Words)** as the first installment of the total amount sanctioned.
4.   This issues with the concurrence of Scientific Secretary, BRNS and JS (F), DAE.

-sd/-
Dr. Debanik Roy
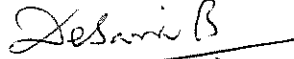
**Pay & Accounts Officer,
DAE, Mumbai-400 001.**

Copy to:

1. Director of Audit (Scientific Department), AEAP, OYC, CSM Marg, Mumbai-400 001.
2. Join Secretary (R&D), DAE, Anushakti Bhavan, CSM Marg, Mumbai-400 001.
3. **** Prof K K Rajan,Prof EEE and Dean, Industry Institute Interaction , Viswajyothi College of Engineering andTechnology, Vahakkulam, Muvattupuzha, Kerala 686 670 .**
(A)   As per the Government of India order all Banners/ Posters/ Pamphlets/ Invitation Cards, etc. should have been bilingual (Hindi and English).
(B)   The fund will be paid subject to full utilisation of the amount by the agency in two instalments as detailed below:
    (i)   First Installment: Two-third of the amount sanctioned is being released as the 1st Installment of Rs 1,00,000/- alongwith this sanction letter. The amount would be credited electronically to **A/C No: 0335053000001199, A/C Name: PRINCIPAL, VJCET, IFSC: SIBL0000335, South Indian Bank, Vazhakkulam, Muvattupuzha, Kerala.**
    ii)   Second Instalment: Balance amount will be released on receipt of documents mentioned at para (C) below.

120

बिल सं.   अनुमोदन तिथि प्राप्ति तिथि

Bill No 1752   Approved

Date Recd: 11/08/2016

₹ . हेतु

Countersigned for ₹ 1,00,000/-

(₹ One lakhs only)

Desai B

कार्यक्रम अधिकारी

Programme Officer (**BRNS**)

DEPARTMENT OF ATOMIC ENERGY

परमाणू ऊर्जा विभाग

नाभिकीय विज्ञान अनुसंधान मंडल

BOARD OF RESEARCH IN NUCLEAR SCIENCEs

कृपया निम्नलिखित को सुचित करते हुए
राशी का भुगतान इन्हे करें

Please pay

A/C No:
0335053000001199, A/C Name: PRINCIPAL,
VJCET, IFSC: SIBL0000335, South Indian
Bank, Vazhakkulam,
Muvattupuzha, Kerala.

Under intimation to

1) K K Rajan

द्योतन एंव लेखन अधिकारी, प.ऊ.वि,

Pay & Accounts Officer, DAE

(C)   The Convenor is requested to submit the following documents within one month from the concluding date of the event.

(i)   Utilization Certificate, duly certified by Convenor and audited and signed by an external Chartered Accountant or Statutory Auditor (Govt.), in the prescribed format, indicating the unspent balance (if any).

(ii)   Audited Statement of accounts showing entire receipts/ receivable from all the sources of grant/ Sponsorship (including Registration Fee) and expenditure (including commitments) duly certified by Convener and a Chartered Accountant (External) or Statutory Auditor (Govt.).

(iii)   Details of the Registration Fee collected from the participants, amount utilized by the Convener and the amount, if any, credited to the Government account.

(iv)   All Account shall be closed within **six months** of the event date .
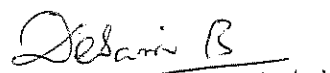
(v)   A copy of the proceedings.

(vi)   Claim (if any) in the prescribed form in duplicate with original signature for release of the balance amount.

(vii)   Brief Report of the event.

(D)   Unspent Balance, if any, may be refunded vide Demand Draft drawn in favour of **"Pay & Accounts Officer, DAE"** payable at **Mumbai** alongwith the above stated documents by rounding off to the nearest rupee.

(E)   As per MoF OM dated 12/7/12, the sanctioned should not be utilized for meeting the expenditure towards travel/ accommodation for foreign participants.
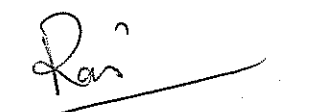
4.   Assistant Accounts Officer (Bill II), DAE, Anushakti Bhavan, CSM Marg, Mumbai-400 001.

Dr. Debanik Roy 16/8/16

**Note:
1.   All the documents as applicable be sent in time to avoid delays and unnecessary correspondence.
2.   Please quote the Sanction Number 36/17/18/2016-BRNS in all your correspondences with this Department.

O/c
11/8/16

1 8 AUG 2016

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Report on
Nuclear Energy Awareness Seminar
(NEAS-2016)

Organized by

Industry Institute Interaction Cell of
Viswajyothi College of Engineering and Technology

In Association with
Indira Gandhi Centre for Atomic Research
Kalpakkam, Tamil Nadu
&
Board of Research in Nuclear Sciences
Mumbai

on 30th September and 1st October 2016
at
Viswajyothi College of Engineering and Technology
Vazhakulam, Muvattupuzha, Kerala

Compiled by : Dr. K. Rajan

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VISWAJYOTHI COLLEGE OF ENGINEERING AND TECHNOLOGY

Manager	Director	Principal
Msgr. Dr. George Oliapuram	**Rev. Dr. George Thanathuparambil**	**Dr. Josephkunju Paul C.**

About Viswajyothi College of Engineering and Technology

Viswajyothi is the lamp of God which brings light to the whole world. It aims to convey glow for the whole world and to bring all to radiance from darkness. Viswajyothi College of Engineering and Technology (VJCET), established in the year 2001, is affiliated to M.G. University and APJ Abdul Kalam Technological University and has earned the reputation as a trend setter in Engineering Education. Presently Viswajyothi College of Engineering and Technology offers six B.Tech Engineering Degree courses and four Post Graduate Courses. The building complex of the College is situated in a sprawling campus of 26 acres,nestled among lush greenery over a hillock on the side of the Ernakulam - Thodupuzha State Highway, in central Kerala.

Our Vision

Moulding Engineers par excellence with integrity, fairness and human values

Our Mission

We commit to develop the institution into a Centre of Excellence of International Standards.

- We guide and mould our students in the attainment of intellectual and professional competence for successfully coping with the rapid and challenging advancements in technologies and the ever changing world of business, industry and services.

- We help and support our students in their personal growth shaping them into mature and responsible individuals.

- We strive to cultivate a sense of social and civic responsibility in our students, empowering them to serve humanity.

- We promise to ensure a free environment where quest for the truth is encouraged.

Industry Institute Interaction cell

Better interaction between Technical institutions and industry is the need of the hour. This will have great bearing on the Engineering Curriculum, exposure of industrial atmosphere to engineering students and subsequent placement of young graduating engineers in industries across the country. Realizing the relevance and importance of Industry Institute Interaction and based on the guidelines of AICTE and Ministry of Human Resource Development, an Industry Institute Interaction cell is formed in our institute recently.

Objective of NEAS 2016

Safety and economy are the major challenges in the development and utilization of nuclear energy. Inspite of being an important energy resource, general public appears to have apprehensions mainly due to lack of awareness. It is high time to spread awareness on nuclear energy among the public especially among young engineers. In this view, this seminar is proposed to address the myths about the use of nuclear energy especially among the young generation.

REPORT ON
NUCLEAR ENERGY AWARENESS SEMINAR
organized at

VISWAJYOTHI COLLEGE OF ENGINEERING AND TECHNOLOGY
VAZHAKULAM, MUVATTUPUZHA, KERALA

on
September 30th and 1st October 2016

NUCLEAR ENERGY AWARENESS SEMINAR (NEAS 2016)

1. INTRODUCTION

Nuclear energy is going to be the sustainable option for India in the future. Safety and economy are the major challenges in the development and utilization of nuclear energy. In spite of being an important energy resource, general public appears to have apprehensions mainly due to lack of awareness. It is high time to spread awareness on nuclear energy among the public. In this view, the Industry Institute Interaction Cell (IIIC) of Viswajyothi College of Engineering and Technology(VJCET) in association with IGCAR Kalpakkam, Board of Research in Nuclear Science, Mumbai, Nuclear Power Corporation of India Ltd, Mumbai, and Koodankulam Nuclear Power Project organised this seminar to address the myths about the use of Nuclear Energy especially among the young generation. Faculty and students from Engineering and Arts & Science Colleges, in the central region of Kerala & Professionals and Engineers from Industry were the target group of this seminar. An exhibition on nuclear energy, exhibition competition and quiz competition were also conducted as part of the seminar. This document gives a brief report on the Nuclear Energy Awareness Seminar (NEAS 2016) held on 30 th September and 1st October at Viswajyothi College of Engineering And Technology(VJCET), Vazhakulam, Muvattupuzha, Kerala.

2. INTERACTION PROGRAMME WITH KEYNOTE SPEAKER

The keynote speaker of the seminar, Dr. M. Saibaba, Director, Resource Management Group, IGCAR was invited to VJCET on the previous day of the seminar and had interaction with faculty of VJCET. A meeting of around 30 selected faculty, heads of various departments, vice principal and principal of VJCET was held on 28.10.2016 at 14.30 hours in VJET conference room. Dr. Saibaba made a presentation on the wide spectrum of multi disciplinary research and development activities being carried out at IGCAR and in the Department of Atomic Energy. He has highlighted few typical research projects to show the quality and magnitude of the work. Collaborative works being carried out in IGCAR in association with reputed academic institutions in the country were presented. The scope for academic institutions to participate in the nuclear energy programme of the country was highlighted. He stressed the need for academic institutions to take up research and development projects and faculty and post graduate students to deeply involve in it. The funded research programmes carried out under Board of Research in Nuclear Science (BRNS) and the opportunities available in the department of atomic energy for research was also mentioned in the presentation. The interaction programme was very fruitful and was helpful in motivating the faculty members.

Fig.1 : Interaction Programme with Keynote Speaker Dr. M Saibaba

3. PARTICIPATION IN THE NUCLEAR ENERGY AWARENESS SEMINAR

Four fifty four delegates attended the Nuclear Energy Awareness Seminar including 154 delegates from other institutions. There were participation from 11 Engineering Colleges and one Poly Technique. Faculty and students from four Arts and Science colleges and Science teachers from few secondary schools also attended the seminar. There was no registration fee for the seminar. The response was overwhelming and the participation was beyond our expectation.

4. INAUGURAL FUNCTION

The seminar was Inaugurated by Honourable Member of Parliament Shri Joyce George on 30.09.2016 at 09.30 hours. Shri Joyce George, in his inaugural address mentioned the need for increasing the percentage share of Nuclear Energy in India and appreciated VJCET for organising seminars on topic of national importance. Msgr. Rev. Fr. Dr. George Oliyappuram Manager of the college presided over the inaugural function. Principal VJCET, Dr. Josephkunju Paul C welcomed the gathering. Rev, Fr. Dr George Thanathuparambil, Director VJCET addressed the gathering. Shri Naveen Jacob Vice Principal, VJCET delivered a felicitation speech. Dr. K. K. Rajan, Dean Industry Institute Interaction cell proposed the vote of thanks. Dr. M. Saibaba Director Resource Management Group delivered the key note address. In the keynote address Dr Saibaba stress the need of Nuclear Energy to achieve Energy security of the nation. After the inaugural function the exhibition on Nuclear Energy was inaugurated by Shri S. A. Khan, Additional Chief Engineer Nuclear Power Corporation of India Ltd., Mumbai.

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Fig.2 : Inaugural Function of NEAS 2016

Fig.3: Dr. M Saibaba Delivering Keynote Address

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5. INVITED TALKS

There were seven invited talks in the seminar and were grouped in three Technical sessions.

5.1 Technical session -1

First Technical session was chaired by Prof. Baby John, Head of EEE Department, ILAHIA School of Science and Technology and co chaired by Smt. K. Cini, Asst Professor, EEE Department VJCET. In the first technical session, Dr. K. K. Rajan, former Director, Fast Reactor Technology Group delivered the first invited talk on "Power Scenario and role of Nuclear Energy". In this talk he explained about the present power generation capacity in Kerala and in India and the contributions of Thermal, Hydel, Nuclear and Renewable sources.

Fig.4: Dr K K Rajan, Delivering The Invited Talk

The safety and economical issues of Nuclear energy has to be effectively addressed by collaborative research and international cooperation. Public acceptability has to improved by awareness programmes.

Second invited talk was by Shri S. A. Khan, Additional Chief Engineer Nuclear Power Corporation of India Ltd., Mumbai. The title of the talk was " Success Story of PHWRs in India". He explained about the evolution of PHWRS in India and also the advance safety features incorporated in this type of reactors. During the talk he briefed about the reasons for India's preference of PHWRs and three stage nuclear power programme. He gave a detailed coverage to all the phases of PHWR programme viz. Technology Demonstration, Indigenization, Standardization, Consolidation, Commercialization and also scaling up. Questions on waste management, site selection and effects of radiations were asked by members of audience and were answered in an effective manner.

Fig. 5: Shri S. A. Khan, NPCIL, Mumbai , Delivering Invited Talk

5.2 Technical session -2

Second Technical session was commenced at 14.00 hours on 30.09.2016 and was chaired by Prof. K. U. Abraham, Head of EEE Department, Holy Kings College Engineering and Technology and co chaired by Smt Leeba Varghese   Asst Professor, Mechanical Engineering Department of VJCET.

The first talk in this session was delivered by Shri Suresh Babu, Chief Engineer from KKNPP. He explained in detail about the KKNPP project from its inception, the first pour of concrete   to the present status and the future plan at KNPP site. He   explained the about the works going on for four more new power reactors of 1000 MW each at Koodankulam. The share of power Kerala is getting now and the share Kerala is likely to   get in future were   also explained.

Dr. M. T. Jose was the second speaker for the   second session. His talk   was on radiation and its effects. He explained about different kinds of radiation and its effects on human being. He also gave a detailed coverage of the permitted radiation level for different category of people, natural irradiation level and the actual exposure received by employees of the plant and surrounding population.

Fig. 6: Prof. K. U. Abraham and Smt. Leeba Varghese, Technical Session-2

Fig. 7: Shri Suresh Babu, Chief Engineer, KKNPP Delivering Invited Talk

Fig. 8: Dr. M. T. Jose, IGCAR   Delivering Invited Talk

5.3 Technical session -3

The third session commenced on 01.10.2016 at 09.15 hours and was chaired by Prof. Paul Antony Head, EEE Department Viswajyothi College of Engineering and Technology and co-chaired by Smt. Smitha Cyriac, Assistant Professor, ECE Department of VJCET. The first talk in the session was by Shri K. V. Suresh kumar   Director , RFG, IGCAR.

Fig. 9: Prof. Paul Antony and Smt Smitha Cyriac, Technical Session-3

The presentation details the energy scenario in India and role of Nuclear Reactors, particularly Fast Reactors, in meeting the energy demands of the future. The presentation also details the

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salient features of Fast Breeder Test Reactor located at Kalpakkam and operating since 1985. He explained in detail, about the various stages of FBTR operation and the present status of FBTR. He explained the modifications carried out in FBTR based on post Fukushima experience to enhance safety. The successful operation of FBTR has given confidence for India to go for the 500 MWe capacity Prototype Fast Breeder Reactor(PFBR) which is in the commissioning stage now.

Fig.10: Shri K V Suresh Kumar IGCAR Delivering Invited Talk

The second talk in the third session was by Shri G Padma Kumar. He has presented various

Fig. 11: Shri G. Padmakumar, IGCAR Delivering Invited Talk

Third talk of this session was delivered by Dr. R. Baskaran, Head, Radiological Safety Division, IGCAR. He made the presentation on Societal application of nuclear energy. Initially he explained

about ionizing radiation and the major discoveries such as x-rays and radioactivity, then what contributes to natural background radiation and background radiation levels at various parts of India. He emphasized that mankind is constantly subject to ionizing radiation throughout day and night. He also explained about all types of radiation coming out from radio isotopes and how they are formed. Also he mentioned the success story of Padmashree Mr. Venkatapathy who made use of radiation for producing varieties of Kanagambaram. Later he explained in detail about how the ionizing radiations are used in industry, medicine, agriculture and in scientific research. At the end he highlighted the myths and truth about Nuclear reactor.

Fig. 12: Dr. R. Bhaskaran, IGCAR   Delivering Invited Talk

6.   EXHIBITION ON NUCLEAR ENERGY

An exhibition on nuclear   energy was also organised adjacent to main auditorium of VJCET where the seminar was held. The exhibition was intended for the delegates of the seminar, students of   higher secondary schools of surrounding area and the students of VJCET. There were 16 stalls in the exhibition pavilion. Exhibition was organised in three parts.

Fig. 13: Shri S A Khan Inaugurating the Exhibition

6.1 Exhibition stalls from IGCAR Kalpakkam

Five stalls were ear marked for the exhibits from IGCAR, Kalpakkam. Various   research and

development activities   being carried at IGCAR were displayed. The criteria of selection of sodium as the coolant for FBRs was explained with the help of charts and a sample of purified sodium in a bottle was displayed. Instruments sensors and devices developed in IGCAR were displayed. A team of 12 officials from IGCAR were present in the stalls for explanations and interactions with the visitors. The team was led by Senior Scientist Smt. Jalaja Madan Mohan and she coordinated all the exhibition activities of IGCAR. Officials were very keen in explaining   about the FBR tech-nology in a simple manner to student visitors.

Fig. 14: Shri   Francis George, Ex. MP Visiting the Exhibition Stall

6.2 Exhibition from KKNPP

KKNPP erected their stalls covering an area of around 20x 20 feet. A team of six officials brought models and charts from KKNPP. The charts shown details of the KKNPP reactors and their major components . The function of the reactor, fuel assembly, heat transport system, coolant circu-lation, reactor control, steam generator etc. were explained by the team with help of charts. A model of the reactor was displayed in the stall which was very   useful   for the visitors to visualise the functioning of the reactor.

Fig. 15: School Students Visiting KKNPP Stalls

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6.3 Exhibition Competition for School Students

An exhibition competition was conducted for the benefit of higher secondary school students. The theme given for the exhibition was "Energy for the Future".   Higher secondary schools in central Kerala were eligible to participate in the exhibition. The exhibits were evaluated by a committee and awarded prizes.

Fig. 16:   Displays in the Exhibition Competition

6.4   Exhibition from VJCET

Each department of VJCET has erected stalls in the exhibition hall. They have displayed selected projects done by students recently. Working models of the projects   were demonstrated by the students were an attraction in the exhibition. A stall on spoken tutorial was also   exhibited.

In addition to 454 delegates of the seminar,   around 200 faculty members of VJCET,   around 2000 students of VJCET and 1200 higher school students along with their teachers from 12 different schools in the nearby areas visited the exhibition stalls in two days. Most of the time, it was difficult to control the crowd. The keen interest shown by the   visitors and the way they have interacted with the resource persons from Atomic Energy Department   was amazing and was given tremendous satisfaction to the organisers.

Fig. 17:   Displays in VJCET Students Exhibition

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7. Quiz Competitions

A science quiz competition was conducted for higher secondary school students. Topic covered for the quiz was general science, mathematics, nuclear energy and general knowledge for higher secondary level. 25 teams of two members each from different higher secondary schools were participated in the quiz competition. Four teams were selected for the final rounds through a preliminary written test. First and second prizes were awarded to St. Peter's Senior Secondary School, Kadayiruppu and Carmel Public School, Vazhakulam respectively in the final rounds of quiz which was held on 30.09.2016 afternoon in the R & D seminar hall. Many students and teachers from schools and students and faculty of VJCET witnessed the final round of quiz. This event helped the students of higher secondary level to show their knowledge and aptitude in science subjects

8. FILM SHOW ON NUCLEAR ENERGY

Film show on basics of Nuclear Energy, constructional features of nuclear reactors and research and development activities carried out in IGCAR and other units of DAE played in placement cell auditorium from 9:00 AM to 4:15 PM. About 500 students from different schools watched the film show screened for two days. Positive response from the audience made the show a big success. Scenes of erection in reactors from stone to structure and components were indeed a rare moment for the spectators.

9. VALEDICTORY FUNCTION

Valedictory function of the seminar was held at 2.30 pm 01.10.2016. Function was chaired by Rev. Dr. George Thanuthuparambil. Principal Dr. Jospehkunju Paul C welcomed the gathering. Dr. R. Bhaskaran, Head RSD delivered the valedictory address. Shri G Padmakumar and Smt. Jalaja Madan Mohan facilitated the gathering. In the feedback session few delegates shared their experience, views and impressions on the seminar.

Fig. 18: Valedictory function

10. ACKNOWLEDGEMENT

We greatly acknowledge and thank Director IGCAR, Director HSEG IGCAR, Director RMG, IGCAR. Site director KKNPP, BRNS officials and Department of Atomic energy officials for the ex-

cellent support they have given for conducting this seminar. In spite of his busy schedule Shri Joyce George MP has graced the seminar by Inaugurating it. The speakers Dr. M. Saibaba, Shri S A Khan, NPCIL Mumbai, Shri Suresh babu, CE, KKNPP, Dr M T Jose, head RSS Shri G G Padmakumar, Hedav SEHD, IGCAR, Shri K V Suresh Kumar, Director, RFG has have taken all effort and made the technical programme very informative and attractive. Smt Jalaja Madan Mohan head TCPS has taken keen interest in coordinating this seminar from the beginning. The resource persons from IGCAR, KKNPP and NPCIL have worked very hard to bring exhibition materials and to explain this complex technology to student visitors.

The support, inspiration and encouragement from VJCET Manager, Rev. Fr. George Oliayappuram, Director, Rev. Fr. George Thanathuparambil, Principal Dr. Josephkunju Paul C, Vice Principal Shri Naveen Jacob, Head of the Departments of VJCET are greatly acknowledged. Outstanding contributions from Organising Committee members, Sub committee conveners, Sub committee members, Faculty members, Students of VJCET, session chairs, session co chairs, delegates, Volunteers, Non teaching staff, administrative and accounts staff are highly appreciated.

11. ANNEXURES

    a. Seminar brochure

    b. Programme schedule

    c. Advisory Committee, Organising committee, subcommittees and resource persons.

    d. Press reports on NEAS 2016

12. OUTCOME

Nuclear energy awareness seminar was the first of its kind in Kerala. The need for Nuclear Energy was well presented by the speakers and was fully appreciated by the delegates. The safety and economy part was presented with technical details and the fear on nuclear energy among the young generation was eliminated. The enthusiasm shown by Engineering students and the higher secondary school students were amazing. They were very keen to listen each and every point and in clarifying their doubts. This seminar on topics of national interest, conducted by the Industry Institute Interaction cell of VJCET was well received by the targeted groups.

****

BRNS · **IGCAR**

Industry Institute Interaction Cell of

Viswajyothi College of Engineering and Technology
Vazhakulam, Muvattupuzha, Kerala

In Association with

Indira Gandhi Centre for Atomic Research
Kalpakkam, Tamil Nadu

&

Board of Research in Nuclear Sciences
Mumbai

Organizes

Nuclear Energy Awareness Seminar (NEAS-2016)

at

Viswajyothi College of Engineering and Technology
On 30th September and 1st October 2016.

Advisory Committee

Rt. Rev. Dr. George Madathikandathil
Bishop, Kothamangalam Diocese,
Patron, VJCET

Msgr. Dr. George Oliapuram
Manager, VJCET

Rev. Dr. George Thanathuparambil
Director, VJCET

Dr. B. Venkatraman
Director, Health, Safety & Environment Group, IGCAR, Kalpakkam

Dr. M. Saibaba
Associate Director, Resource Management Group, IGCAR, Kalpakkam

Mr. K. A David
Director (Operations), BHAVINI, Kalpakkam

Mr. R. S. Sundar
Site Director, KKNPP, NPCIL

Dr. Pethuru Raj
Architect, IBM Bangalore

Mr. N. N Shaji
Chief Engineer, Load Dispatch Center, KSEB

Dr. Ravibabu Mulaveesala
Dept. of Electrical Engineering, IIT Ropar, Punjab

Dr. John Jose
Dept. of Computer Science & Engineering, IIT Guwahati

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Principal, VJCET

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Vice Principal

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Asst. Professor & HOD, CE

Mr. Jose P. Varghese
Professor & HOD, ECE

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Asst. Professor & HOD, S & H

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Dean & HOD, MBA

Mr. Vinoj K.
Asst. Professor & HOD, ME

Mr. Aneesh Kurian, Secretary
Asst. Professor, EEE.

For more details, contact
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REGISTRATION FORM

NEAS 2016

Name of Faculty/Student

Year and Branch/Department

Name of College and Address

Address for Communication

Mobile No.

Email ID

Signature of the Student

Signature of the Institution Head with seal

Date

NO REGISTRATION FEE

Kindly mail the registration form to kkrajan@vjcet.org

Last date of registration : **20.09.2016**

Speakers and topics

Topic	Name of Speaker
Keynote address on theme of the seminar	**Dr. M. Saibaba,** AD, RMG, IGCAR, Kalpakkam
Power scenario and role of nuclear energy	**Dr. K. K. Rajan,** Former Director, FRTG, IGCAR, Kalpakkam
Kudankulam Nuclear Power Plant, the past, the present & the future	**Shri. P. A. Suresh Babu,** CE, KKNPP, NPCIL
Nuclear radiation effects and protective measures	**Dr. M. T. Jose,** Head, RSS, IGCAR, Kalpakkam
Relevance of FBRs and experience on FBTR	**Shri. K. V. Suresh Kumar,** Station Director, FBTR, IGCAR, Kalpakkam
Research and Development on FBRs	**Shri. G. Padmakumar,** Head, CTD & SEHD, IGCAR, Kalpakkam
Societal applications of Nuclear energy	**Dr. R. Bhaskaran,** Head, RSD, IGCAR, Kalpakkam

About Viswajyothi College of Engineering and Technology

Viswajyothi is the lamp of God which brings light to the whole world. It aims to convey glow for the whole world and to bring all to radiance from darkness. Viswajyothi College of Engineering and Technology (VJCET), established in the year 2001, is affiliated to M.G. University and APJ Abdul Kalam Technological University and has earned the reputation as a trend setter in Engineering Education. A highly committed Management Team with the noble vision of transforming Viswajyothi College of Engineering and Technology into an International Center of Excellence in Engineering Education. Competent and dedicated Faculty, scientifically planned infrastructural facilities with state-of-the-art laboratories, workshops and full fledged teaching - learning processes along with an excellent work culture and campus atmosphere have enabled Viswajyothi to carve a niche for itself amongst the self- financing colleges in Kerala within a short span of time. Presently Viswajyothi College of Engineering and Technology offers six B.Tech Engineering Degree courses and four Post Graduate Courses. The building complex of the College is situated in a sprawling campus of 26 acres, nestled among lush greenery over a hillock on the side of the Ernakulam - Thodupuzha State Highway, in central Kerala.

Our Vision

Moulding Engineers par excellence with integrity, fairness and human values

Our Mission

- We commit to develop the institution into a Centre of Excellence of International Standards.
- We guide and mould our students in the attainment of intellectual and professional competence for successfully coping with the rapid and challenging advancements in technologies and the ever changing world of business, industry and services.
- We help and support our students in their personal growth shaping them into mature and responsible individuals.
- We strive to cultivate a sense of social and civic responsibility in our students, empowering them to serve humanity.
- We promise to ensure a free environment where quest for the truth is encouraged.

About NEAS 2016

Energy is an essential commodity for human development and per capita energy consumption is a measure of human development index. India's per capita consumption is close to 1000 kWh and is almost one third of world average. Our target is to achieve a percapita consumption of 5000 kWh by 2050. Considering the growing population and the increasing energy demand a five fold increase in installed capacity is required in the next 35 years. The estimated coal reserves are around 200 billion tonnes and it can last only for few years at the targeted consumption rate. Considering the environmental impacts and limitations of mining & transportation, the use of coal has to be minimized. Additional Hydraulic sources are almost fully utilized. Additional hydro potential available is mostly in the north eastern region and those will lead to submergence of vast area of land, deforestation and evacuation of people. All non conventional energy sources has to be effectively used. However, the potential is no where near the requirement. Green house gas emission and global warming is an alarming issue and each country has to limit the emission. In this context, it is pointed out that solar and nuclear are the only two sources through which our target power generation can be achieved. Large area requirement, seasonal in nature and high maintenance challenges are the major issues with solar power. In the Indian specific situation, nuclear energy appears to be a choice for energy security. Around 400 nuclear reactors are in operation in the world and 12% of the electricity generated in the world today is from nuclear source. In India the contribution of nuclear energy is only 3%. Nuclear energy has significant application in agriculture, medical and in industrial sectors. Fortunately, in India, we have moderate quantity of Uranium and abundant quantity of Thorium resources. Fertile Thorium can be converted into fissile nuclear fuel, Uranium, through Fast Breeder Reactors.

Safety and economy are the major challenges in the development and utilization of nuclear energy. In spite of being an important energy resource, general public appears to have apprehensions mainly due to lack of awareness. The safety and economy issues related to nuclear energy has to be addressed by collaborative research and development involving academic institutes.

Objective

It is high time to spread awareness on nuclear energy among the public especially among young engineers. In this view, this seminar is proposed to address the myths about the use of nuclear energy especially among the young generation.

Who can attend NEAS 2016

Faculty and students from Engineering and Arts & Science Colleges, in the central region of Kerala & Professionals and Engineers in Industry are the target group of this seminar.

Exhibition at VJCET

In connection with the Nuclear Energy Awareness Seminar an exhibition on Nuclear Energy is arranged on 30th September and 1st October at VJCET. Materials, models and posters from Indira Gandhi Centre for Atomic Research, Kalpakkam and models from Kudankulam Nuclear Power Station will be displayed in the exhibition. Experts from Department of Atomic Energy will interact with visitors. An exhibition competition will be conducted on the theme "Energy for the future" for Higher Secondary School students. Students from central region of Kerala can participate in the competition. Exhibition will be open to all.

Quiz Competition

As part of the Nuclear Energy Awareness Seminar, Science Quiz Competition will be held at VJCET on 30th September and 1st October. Students of Higher Secondary Schools from central region of Kerala can participate in this competition.

Expected Outcome

- Delegates of this seminar will get an overview of the current nuclear energy progarmme in the country.
- Delegates will be exposed to the challenges involved in nuclear power generation.
- NEAS will help the delegates to select the best option for achieving energy security of the nation.
- An opportunity to interact with senior nuclear energy experts in the country.

Nuclear Energy Awareness Seminar (NEAS 2016)

Organised by Industry Institute Interaction Cell

of

Viswajyothi College of Engineering and Technology
Vazhakulam, Muvattupuzha, Kerala.

PROGRAMME SCHEDULE

DAY-1 (30th September 2016)

Time	Event
8.30am	Registration
9.30am	Inauguration by Honorable Member of Parliament **Shri. Joice George**
	Keynote address by **Dr. M. Saibaba, Director, RMG, IGCAR, Kalpakkam** Inauguration of seminar and exhibition on Nuclear energy
	HIGH TEA
SESSION-1	**Session chair** **Prof. Baby John** HOD, EEE Dept. Ilahia School of Science & Technology(ISSAT) **Co Chair** **Smt. Cini K.** Asst. Professor, EEE Dept. VJCET
11.30am	**Invited Talk-I** Power scenario and Role of Nuclear Energy **Dr. K. K. Rajan, Former Director, FRTG, IGCAR Kalpakkam**
12.15pm	**Invited Talk-II** Success Story of Indian PHWRs **Shri S. A. Khan, ACE, NPCIL, Mumbai**
	LUNCH
SESSION-2	**Session chair** **Prof. K. U. Abraham** HOD, EEE Dept. Holy Kings College of Engineering and Technology Co Chair **Smt. Leeba Varghese** Asst. Professor, ME Dept. VJCET
2.00 pm	**Invited Talk-III** Kudankulam Nuclear Power Plant, the past, the present & the future **Shri P. A. Suresh Babu, CE, KKNPP, NPCIL**
2.45 pm	**Invited Talk-IV** Nuclear radiation effects and protective measures **Dr. M. T. Jose, Head, RSS, IGCAR, Kalpakkam**
	TEA
3.30 pm	Visit to exhibition competitions and film show

DAY-2 (1st OCTOBER 2016)

Time	Event
SESSION-3	**Session chair** **Prof. Paul Antony** HOD,EEE dept., VJCET Co Chair **Smt. Smita Cyriac** Asst professor, ECE dept VJCET
9.15 am	**Invited Talk-V** Relevance of FBRs and Experience on FBTR **Shri. K. V. Suresh Kumar, Director, RFG, IGCAR, Kalpakkam**
	TEA
10.15 am	**Invited Talk-VI** Research and Development on FBRs **Shri. G. Padmakumar, Head, CTD & SEHD, IGCAR, Kalpakkam**
11.00 am	**Invited Talk-VII** Societal Applications of Nuclear energy **Dr. R. Bhaskaran, Head, RSD, IGCAR, Kalpakkam**
11.45 pm	**Visit to exhibition competitions and film show**
12.45 pm	**LUNCH**
1.30 pm	**Valedictory Function** **Concluding remarks** Momento, Prize and and certificate distribution feedback session Vote of Thanks

Advisory Committee	
Msgr. Dr. George Oliapuram	Manager, VJCET
Rev. Dr. George Thanathuparambil	Director, VJCET
Dr. B. Venkatraman	Director, Health, Safety & Environment Group, IGCAR, Kalpakkam
Dr. M. Saibaba	Associate Director, Resource Management Group, IGCAR, Kalpakkam
Mr. K. A David	Director, Operations, BHAVANI, Kalpakkam
Mr. R. S. Sundar	Site Director, KKNPP, NPCIL
Dr. Pethuru Raj	Architect, IBM Bangalore
Mr. N. N Shaji	Chief Engineer, Load Dispatch Center, KSEB
Dr. Ravibabu Mulaveesala	Dept. of Electrical Engineering, IIT Ropar, Punjab
Dr. John Jose	Dept. of Computer Science & Engineering, IIT Guwahati

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Mr Rakesh Jose	Asst. Professor - ME
Mr C Mavin	Placement
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Dr.B Aruna	Professor - EEE
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Mrs. Jis Jose	Asst. Professor - EEE
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Mr. Lins Paul Kuriakose	Asst. Professor - Civil Engg.
Mrs. Leeba Varghese	Asst. Professor - ME
Mrs. Merlin	Asst. Professor - ECE

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Resource Persons From Department of Atomic Energy for NEAS 2016

SL.NO.	NAME	Organisation
1.	Dr. M. Saibaba	Director, RMG, IGCAR Kalpakkam
2.	Sri. S.A. Khan	ACE, NPCIL, Mumbai
3.	Sri. P.A. Suresh Babu	CE, KKNPP, NPCIL
4.	Dr. M.T. Jose	Head RSS, IGCAR, Kalpakkam
5.	Sri. K.V. Suresh Kumar	Director RFG, IGCAR, Kalpakkam
6.	Sri. G.Padmakumar	Head SCHD, IGCAR, Kalpakkam
7.	Dr. R. Bhaskaran	Head RSD, IGCAR, Kalpakkam
8.	Smt. Jalaja Madan Mohan	Head, TCPAS, IGCAR, Kalpakkam
9.	Smt. S. Premalatha	IGCAR, Kalpakkam
10.	Sri. M. Ramu	IGCAR, Kalpakkam
11.	Sri. I.Jaffar	IGCAR, Kalpakkam
12.	Sri. S. Dheeraj	IGCAR ,Kalpakkam
13.	Sri. Anupkumar P	IGCAR ,Kalpakkam
14.	Sri. Joby Joseph	IGCAR, Kalpakkam
15.	Sri. P. Hrishikesh	IGCAR, Kalpakkam
16.	Sri. Anuraj V.L	IGCAR, Kalpakkam
17.	Sri. Anu Krishnan	IGCAR, Kalpakkam
18.	Sri. Sankili Murugan	IGCAR, Kalpakkam
19.	Sri. Vinod K	IGCAR, Kalpakkam
20.	Sri. Krishnakumar V	KKNPP, Kudankulam
21.	Sri. Thomas George	KKNPP, Kudankulam
22.	Sri. Shaji V. John	KKNPP, Kudankulam
23.	Sri. Rajeev M.S	KKNPP, Kudankulam