3.4.1. The Institution ensures implementation of its stated Code of Ethics for research through the following:

Inclusion of research ethics in the Research Methodology course work

ACADEMIC REGULATIONS

COURSE STRUCTURE

AND

DETAILED SYLLABI

for

MASTER OF TECHNOLOGY

in

ELECTRICAL POWER SYSTEMS

(For the batches admitted from 2019-2020)

CHOICE BASED CREDIT SYSTEM

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SREE VIDYANIKETHAN ENGINEERING COLLEGE

Sree Sainath Nagar, Tirupati – 517 102.

M. Tech. (EPS) Course Structure

I-Semester

S. No.	Course Code	Course Title	Contact Periods per Week				Credits	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1	19MT10701	High Voltage Engineering	3	-	-	3	3	40	60	100
2	19MT10702	Power Electronics for Power Systems	3	-	-	3	3	40	60	100
3	19MT10703	Power System Security and State Estimation	3	-	-	3	3	40	60	100
4	**Program Elective – 1**		3	-	-	3	3	40	60	100
	19MT18304	Control System Design								
	19MT18305	Intelligent Controllers								
	19MT18306	Microcontroller and Applications								
	19MT10704	High Voltage DC Transmission								
5	**Program Elective – 2**		3	-	-	3	3	40	60	100
	19MT18307	Electromagnetic Field Computation and Modeling								
	19MT10705	Digital Signal Processing								
	19MT10706	Power Quality								
	19MT10707	Smart Grids								
6	19MT10708	Research Methodology and IPR	2	-	-	2	2	40	60	100
7	19MT10731	High Voltage Engineering Lab	-	-	4	4	2	50	50	100
8	19MT10732	Power System Analysis - I Lab	-	-	4	4	2	50	50	100
		Total	**17**	**-**	**8**	**25**	**21**	**340**	**460**	**800**
9	19MT1AC01	Technical Report Writing	2	-	-	2	-	**-**	**-**	**-**

II-Semester

S. No.	Course Code	Course Title	Contact Periods per Week				Credits	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1	19MT20701	Power System Modeling and Control	3	-	-	3	3	40	60	100
2	19MT20702	Static and Digital Protection of Power System	3	-	-	3	3	40	60	100
3	**Program Elective – 3**		3	-	-	3	3	40	60	100
	19MT28305	Solar Energy Conversion Systems								
	19MT20703	EHVAC Transmission								
	19MT20704	Power System Automation								
	19MT20705	Reactive Power Compensation and Management								
4	**Program Elective – 4**		3	-	-	3	3	40	60	100
	19MT28309	Wind Energy Conversion Systems								
	19MT20706	Flexible AC Transmission System								
	19MT20707	Power System Deregulation								
	19MT20708	Power System Planning and Reliability								
5	19MT2MOOC	Open Elective (MOOC)	-	-	-	-	3	-	100	100
6	19MT20731	Power System Analysis – II Lab	-	-	4	4	2	50	50	100
7	19MT20732	Power Systems and Protection Lab	-	-	4	4	2	50	50	100
		Total	**12**	**-**	**8**	**20**	**19**	**260**	**440**	**700**
8	19MT2AC01	Statistics with R	2	-	-	2	-	**-**	**-**	**-**

III-Semester

S. No.	Course Code	Course Title	Contact Periods per Week				Credits	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1	19MT30731	Internship	-	-	-	-	2	-	100	100
2	19MT30732	Project Work Phase - I	-	-	-	-	10	50	50	100
		Total	**-**	**-**	**-**	**-**	**12**	**50**	**150**	**200**

IV-Semester

S. No.	Course Code	Course Title	Contact Periods per Week				Credits	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1	19MT40731	Project Work Phase - II	-	-	-	-	16	150	150	300
		Total	**-**	**-**	**-**	**-**	**16**	**150**	**150**	**300**
						Grand Total Credits:	**68**	**Grand Total Marks:**		**2000**

M. Tech. - I Semester

(19MT10708) RESEARCH METHODOLOGY AND IPR

(Common to all M. Tech. Programs)

Int. Marks	Ext. Marks	Total Marks	L	T	P	C
40	60	100	2	-	-	2

PRE REQUISITES:

COURSE DESCRIPTION: Overview of research; research problem and design; various research designs; Data collection methods; Statistical methods for research; Interpretation & drafting reports and Intellectual property rights.

COURSE OUTCOMES: On successful completion of the course, student will be able to:

CO1. Apply the conceptual knowledge of research methodology to formulate the hypothesis, data collection and processing, analyzing the data using statistical methods, interpret the observations and communicating the novel findings through a research report.

CO2. Practice ethics and have responsibility towards society throughout the research process and indulge in continuous learning process.

CO3. Apply the conceptual knowledge of intellectual property rights for filing patents and trade mark registration process.

DETAILED SYLLABUS:

Unit - I: Introduction to research methodology (07 hours)

Objectives and Motivation of Research, Types of Research, Defining and Formulating the Research Problem; Features of research design, Different Research Designs; Different Methods of Data Collection, Data preparation and Processing.

Unit - II: Data Analysis and Hypothesis (09 hours)

ANOVA; Principles of least squares-Regression and correlation; Normal Distribution- Properties of Normal Distribution; Testing of Hypothesis – Hypothesis Testing Procedure, Types of errors, t-Distribution, Chi-Square Test as a Test of Goodness of Fit.

Unit - III: Interpretation and report Writing (04 hours)

Interpretation – Need, Techniques and Precautions; Report Writing – Significance, Different Steps, Layout, Types of reports,Mechanics of Writing a Research Report, Precautions in Writing Reports; Research ethics.

Unit - IV: Introduction to intellectual property and trade Marks (07 hours)

Importance of intellectual property rights; types of intellectual property, international organizations; Purpose and function of trademarks, acquisition of trade mark rights, protectable matter, selecting and evaluating trade mark, trade mark registration processes.

Unit - V: Law of Copyrights (08 hours)

Fundamental of copy right law, originality of material, rights of reproduction, rights to perform the work publicly, copy right ownership issues, copy right registration, notice of copy right, international copy right law.

Law of patents: Foundation of patent law, patent searching process, ownership rights and transfer

New Developments in IPR: Administration of Patent System.

Total hours: 35

TEXT BOOKS:

1. C.R. Kothari, *Research Methodology: Methods and Techniques*, New Age International Publishers, 2nd revised edition, New Delhi, 2004.
2. Deborah, E. Bouchoux*, Intellectual Property: The Law of Trademarks, Copyrights, Patents and Trade Secrets*, Cengage learning, 5th edition, 2017.

REFERENCE BOOKS:

1. R. Panneerselvam, *Research Methodology*, PHI learning Pvt. Ltd., 2009.
2. Prabuddha Ganguli, *Intellectual property right - Unleashing the knowledge economy*, Tata McGraw Hill Publishing Company Ltd, 2001

Presence of Ethics committee

SREE VIDYANIKETHAN ENGINEERING COLLEGE
(AUTONOMOUS)
SREE SAINATH NAGAR, TIRUPATI-517 102

No. SVEC/Circular/R & D/2020 **Dt.: 13-07-2020**

CIRCULAR

Sub.: Constitution of **Research Ethics Committee** for the Academic Year 2020-21 – reg.

***

The main responsibility of a research ethics committee is to protect potential participants in the research, but it must also take into account potential risks and benefits for the community in which the research will be carried out. Its ultimate goal is to promote high ethical standards in research for society.

The following members shall constitute the Research Ethics Committee.

Name of the Faculty	Designation and Department	Position
Dr. D. Suresh Babu	Associate Professor of EEE	Convener
Dr. Hemadri Prasad Raju	Associate Professor of CE	Member
Dr. N. Manikandan	Associate Professor of ME	Member
Dr. N. Ashok Kumar	Associate Professor of ECE	Member **(ECE & EIE branches)**
Dr. K. Suresh	Associate Professor of CSE	Member **(C-branches including MCA)**
Dr. G. Ganapati Rao	Assistant Professor of BS & H	Member

PRINCIPAL

Copy to: Director; **Deans :** Academics, Examinations, Training & Placement, IIIC;
HODs: CSE, CSSE, IT, EEE, ECE, EIE, CE, ME, BS&H, MCA
Dr. D. Suresh Babu, Associate Professor EEE & Convener Research Ethics Committee,
Members of Research Ethics Committee;
EA to Chairman; SAO; ARO, SWO, CAO, Director (Q&D), Director (F&A), Advisor, SVET.

No. SVEC/ Circular/ R&D/ REC/ 2020-2021

Dt. 17th July 2020.

Circular

All the members of the Research Ethics Committee are hereby informed that the meeting of the ethics committee will be held on 24th July 2020 at 3:00 PM in the Conference hall. So, all the members are requested to attend the meeting without fail.

Meeting Agenda:

1. To review ethical breaches and the counteraction for the previous academic year.
2. To review and approve the modifications in Code of Research Ethics.
3. Any other item.

Convener

Copy to:

All members of Research Ethics Committee

No. SVEC/ Minutes of Meetings/ R&D/ REC/ 2020-2021

Dt. 27th July 2020.

Meeting Minutes

Date of Meeting	Venue	Duration	Reference
24th July 2020	Conference Hall	3:00 Pm to 4:00 PM	No. SVEC/ Circular/ R&D/ REC/ 2020-2021 dated 17th July 2020

The following discussions were made in the meeting among the members of Research Ethics Committee (REC).

Meeting Agenda:

1. To review ethical breaches and the counteraction for the previous academic year.
2. To review and approve the modifications in Code of Research Ethics.
3. Any other item.

Resolutions:

1. The members of the committee discussed the previous academic year ethical breaches and the counteraction for the ethical breaches by following Code of Research Ethics was discussed.
2. It is resolved that no modification was suggested in Code of Research Ethics. So, current Code of Research Ethics is continued for the new academic year.
3. It is resolved to circulate Code of Research Ethics among the students, faculties.
4. It is resolved to conduct one day workshop on ethical practices.
5. The meeting concluded with thanks from the convener Dr. D. Suresh Babu to all the members.

Members Present:

1.	Dr. D. Suresh Babu	Associate Professor	EEE	Convener
2.	Dr. Hemadri Prasad Raju	Associate Professor	CE	Member
3.	Dr. N. Manikandan	Associate Professor	ME	Member
4.	Dr. N. Ashok Kumar	Associate Professor	ECE	Member
5.	Dr. K. Suresh	Associate Professor	CSE	Member
6.	Dr. G. Ganapati Rao	Associate Professor	BS & H	Member

Convener

No. SVEC/ Circular/ R&D/ REC/ 2020-2021

Dt. 18th Dec 2020.

Circular

All the members of the Research Ethics Committee are hereby informed that the meeting of the ethics committee will be held on 21st Dec 2020 at 3:00 PM in the Conference hall. So, all the members are requested to attend the meeting without fail.

Meeting Agenda:

1. To review ethical breaches and the counteraction for the previous academic year.
2. To review and approve the modifications in Code of Research Ethics.
3. To plan distribution methods for Code of Research Ethics.
4. Any other item.

Convener

Copy to:

All members of Research Ethics Committee

No. SVEC/ Minutes of Meetings/ R&D/ REC/ 2020-2021

Dt. 22nd Dec 2020.

Meeting Minutes

Date of Meeting	Venue	Duration	Reference
21st Dec 2020	Conference Hall	3:00 Pm to 4:00 PM	No. SVEC/ Circular/ R&D/ REC/ 2020-2021 dated 18th Dec 2020

The following discussions were made in the meeting among the members of Research Ethics Committee (REC).

Meeting Agenda:

1. To review ethical breaches and the counteraction for the previous academic year.
2. To review and approve the modifications in Code of Research Ethics.
3. To plan distribution methods for Code of Research Ethics.
4. Any other item.

Resolutions:

1. The members of the committee discussed the previous academic year ethical breaches and the counteraction for the ethical breaches by following Code of Research Ethics was discussed.
2. It is resolved that no modification was suggested in Code of Research Ethics. So, current Code of Research Ethics is continued for the new academic year.
3. It is resolved to circulate Code of Research Ethics among the students, faculties.
4. It is resolved to collect all the necessary information regarding ethical practices and create display boards on ethical quotations and anti-ragging instructions.
5. It is resolved to conduct one day workshop on ethical practices.
6. The meeting concluded with thanks from the convener Dr. D. Suresh Babu to all the members.

Members Present:

1.	Dr. D. Suresh Babu	Associate Professor	EEE	Convener
2.	Dr. Hemadri Prasad Raju	Associate Professor	CE	Member
3.	Dr. N. Manikandan	Associate Professor	ME	Member
4.	Dr. N. Ashok Kumar	Associate Professor	ECE	Member
5.	Dr. K. Suresh	Associate Professor	CSE	Member
6.	Dr. G. Ganapati Rao	Associate Professor	BS & H	Member

Convener

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Due Date:	Aug 26, 2021
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Purchase Order No.:	SVET/DFA/License/PO/00939/2019
Sales Order No.:	SO936336
Due Date:	Jan 15, 2020
Payment Terms:	Net 15
Service Start:	Jan 01, 2020
Service End:	Dec 31, 2020

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Product Name	Product Description	Amount
OCPLUS-GROWTH-RAMP	OC Plus Growth Ramp - Single-campus Enterprise Subscription	INR 473,046.29
	Subtotal	INR 473,046.29
	CGST - 0%	INR 0.00
	SGST - 0%	INR 0.00
	IGST - IN 18%	INR 85,148.33
	UTGST - 0%	INR 0.00
	Total	INR 558,194.62

Total Invoice Amount In Words: Five Hundred Fifty Eight Thousand One Hundred Ninety Four Point Six Two

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Automation of Aerators based system on Water Quality Parameters in Aquaculture

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Abstract: The aquaculture in India is another important sector of the economy, in particular, job creation in the rural area. The aquaculture sector is currently facing many challenges. Fish density in farms varies, but the farmer is interested in high-density packaging to increase profits, this could raise the problems of pollution, diseases and causes stress in fish, which leads to inferior product quality. The primary objective is to monitor the aquaculture system using various sensors to reduce risks. Controlling water quality parameters (dissolved oxygen, pH, and temperature) in aquaculture to improve quality, productivity which in turn reduce costs and increase profits. Water quality is monitored continuously with the help of sensors placed in the pond and aerators are automatically turn ON and OFF based on sensed values. The sensed data and status of the Aerators will transmit to the aqua farmer mobile via GSM.

Keywords: Sensors, pH, DO, Temperature, GSM.

I. Introduction

Research in aquaculture contributes to an increase in stabilized production. Over the last ten years, several scientists have made constant efforts to develop modern production technologies that revolutionize aqua production. Fish World magazine found that the amount of oxygen in the water changes depending on the period. When the temperature of water increases, the fish metabolism rate improves, and the volume of oxygen in water falls.

A low water temperature reduces the frequency of fish occurrence and increases the amount of oxygen present in the water. When the amount of oxygen present in water decreases to a certain limit, the growth of the fish becomes difficult. pH is essential in aquaculture as a measure of the acidity of the water or soil. Fish cannot survive for longer periods in waters below pH 4 and above pH 11. The optimum pH for fish is between 6.5 and 9. Fish grow poorly and reproduction is constantly affected by higher or lower pH levels. Water quality is monitored continuously with the help of sensors placed in the pond and aerators are automatically turn ON and OFF based on sensed values. The sensed data and status of the Aerators will transmit to the aqua farmer mobile via GSM. Table 1 shows the limit Indicators of water quality for fish farming. Water quality values exceed the water threshold The farmer receives a warning with a possible solution given in Table 2.

S.No	Water Quality Parameters	Range
1	Temperature	21^0C-33^0C
2	pH	(7.5-8.5) ppm
3	Dissolved Oxygen (DO)	(4-10) ppm

Table.1 Threshold range of water quality parameters

S.No	Water quality parameter	Below threshold range	Above threshold range
1	Temperature	No measures Taken	Turning on acrators
2	pH	1.Agriculture lime(25kg per acre) 2.pvc lime(25kg per acre)	1.sugar 2.Lemon salt 3.Gypsm 4.probiotics
3	Dissolved Oxygen	Turning on acrators, oxygen pills	Impractical

Table.2 Measures Should be taken for water quality parameters

II. LITERATURE SURVEY

The development and demonstration of a continuous water quality monitoring system is discussed, and a prototype of the WSN system is described. The system uses open source sensors and hardware to measure water quality [1] continuously. The problems discussed in real-time animal and environmental monitoring will facilitate decision-making in agricultural management and thus sustainable operation. Biosensors that control the physiology and behaviour of sentinel animals provide information on the welfare of animals and their responses to environmental changes and control actions [2]. The question of an energy-efficient, ubiquitous IoT-based aquaculture architecture is discussed. The system uses sensors to acquire water data in real time. It applies changes in the aquatic environment without human intervention promptly [3]. They discussed how to create an effective IoT (IoT) application for IoT for Aquaponic to produce an autonomous, self-regulating system with a wireless sensor network. This system uses the open standard 6LoWPAN, which helps us build a global infrastructure - the fully networked and managed an Aquaponic system [4]. The process of disseminated observing of the main variables of water quality and the confirmation of the conception of a remote monitoring structure using the IoT concept, including technologies aiming at aquaculture water quality, have been discussed [5]. The presented system for monitoring and controlling water quality is an essential tool for maintaining good water quality in aquaculture. The multi-SVM model is optimally developed

by analysing variables; the parameters of classifiers are optimized by analysing the results of cross-validation and classifying experiments. [6] They examined overall system performance and enabled the use of wireless submarine sensor networks for long-term monitoring of water. The architecture consists of several components that allow nodes to exchange data underwater, control water quality and minimize power consumption [7]. A cloud-based water monitoring system with RESTful API architecture was discussed that monitors water temperature in real time and demonstrates that a water monitoring system, with the right choice of water temperature sensor tools, can evaluate farmers for effective water temperature monitoring [8]. A WSN-based monitoring system for evaluating environmental variables in pond aquaculture tanks was discussed. [9]. Recent increase The origin and distribution of TAAD in aquaculture facilities along call with their significant impact for a new access to the water Animal Health Management it brings them together necessary circle of stakeholders Develop action plans applicable and advantageous as in short, medium and long term Timing for Risk the situation [10].

III. Methodology

Figure 1 consists of subcategories, which are system architecture where technology is required for system development, equipment design indicating the devices used for implementation and finally the software design which consists of the description of the function.

A. System architecture

The construction of a system for water temperature monitoring consists of four main layers, which are shown in Fig. 1. The Layers are Perception, Network, Transport, and Application. The four layers of the diagram are as follows.

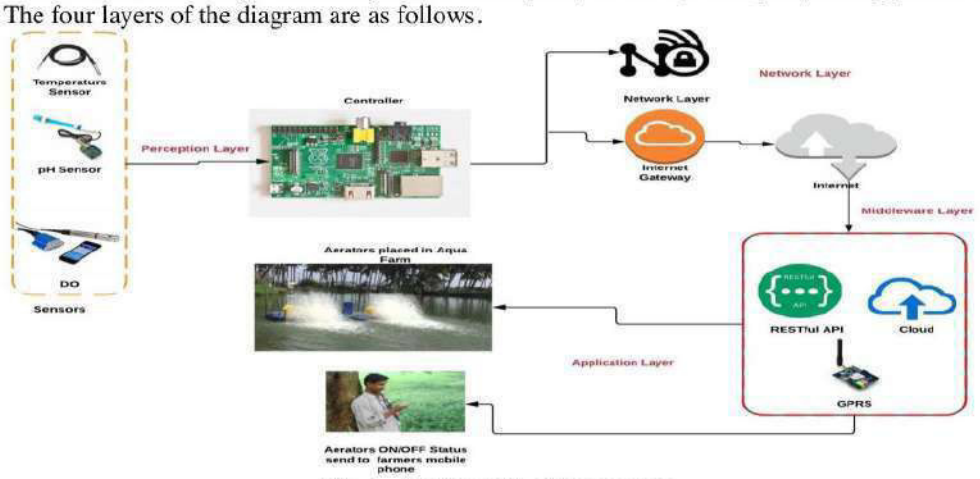

Fig. 1. Architecture of the system

First, the perception layer is mainly used to detect the temperature in real time, with the Raspberry Pi connected to a digital temperature sensor. Basically, of fact, the place of observation is the water resource of the aquaculture. The second is the network layer, which is responsible for the essential functions of data and information transfer, as well as for connecting systems and cloud platforms. Sensing data and data retrieval by interested parties has become possible thanks to the telecommunications networks available in their respective fields. The third is the middleware layer, a set of data controlling cloud sub-layers and REST-ful API, located between the network layer and the application layer. Finally, the application layer provides features that allow users to access the real-time temperature through their mobile devices, as determined by the water temperature.

The WSN block is a fundamental element of the system and is responsible for measuring some of the critical environmental factors such as the proportion of oxygen discharges and the temperature and pH in the polar water. The WSN block includes string linear WSN sensor nodes, some running nodes, and a gate node. The gateway node automatically creates a wireless network and manages it individually or by hand. Not only do the gateway be responsible for receiving data from sensory notes, but they are also to the monitoring computer in the service center for further processing with the GPRS module. At the same time, sensor nodes were linked to plucks with different sailors and ensure that there is a measurement in the water of the target centers. The data collected has been moved by the WSN legend with jump or multi-jump to a gate note. Route notes work as route designers to find the best route to a bridge note for data passing the gate and do not reach the gateway only in a few plants. Finally, the bridge Notes, sensory notes, and behavioral notes all work together to make measurement tasks and communication.

B. Software design

The data acquisition is complete the sensors as shown in Fig.2. if any change in the value of the water parameter, the actuators are informed about the measures to be taken. Temperature changes or The level of dissolved oxygen detected by the respective sensors is compared with the thresholds. Aerators are reported for activation without human intervention. The pH can be adjusted by mixing the calibration content in pond water, e.g. as lime, are controlled. The amount of this calibration content to be mixed is calculated and displayed on the farmer's smartphone. The expert system processes data and analysis based on the stored rule base. If the values of the water parameters differ from the threshold range, the notifications will be sent to the farmer's smartphone. Regular parameter measurements are also sent to a connected smartphone or display device. Changes to the parameter value are eliminated by the automatic activation of the aerators after the expert system signal. The rule engine algorithm for the parameters is given below.

Algorithm: Rule Engine_Temperature

Initial: Set Set-Point for temperature.

Process: TEMP JUDGMENT [Acquired Data]

If Acquired Data > Temp Set-Point

Understand temperature is above the Set-Point.

Transfer the information to controller.

Control the aerators to Turn ON.

Else

Understand the temperature is equal to the Set-Point.

Do not transfer the information.

End if.

End Procedure.

Algorithm: Rule Engine_pH

Initialize Set-Point for pH.

Process: pH JUDGMENT [Acquired Data]

If Acquired data > Set-Point of pH

Understand pH is above the Set-Point.

Transfer the information to controller.

Send message to add calibrating solution.

Else

Understand the temperature is equal to the Set-Point.

Do not transfer the information.

End if.

End Procedure.

Algorithm: Rule Engine_Dissolved Oxygen

Initial: Initialize Set-Point for Dissolved Oxygen.

Process: DO JUDGEMENT [Acquired Data]

If Acquired data > Set-Point of DO

Understand DO level is above the Set-Point.

Transfer the information to controller.

Control the Aerators to Turn ON

Else

Understand the DO level is equal to the Set-Point.

Do not transfer the information.

End if.

End Procedure.

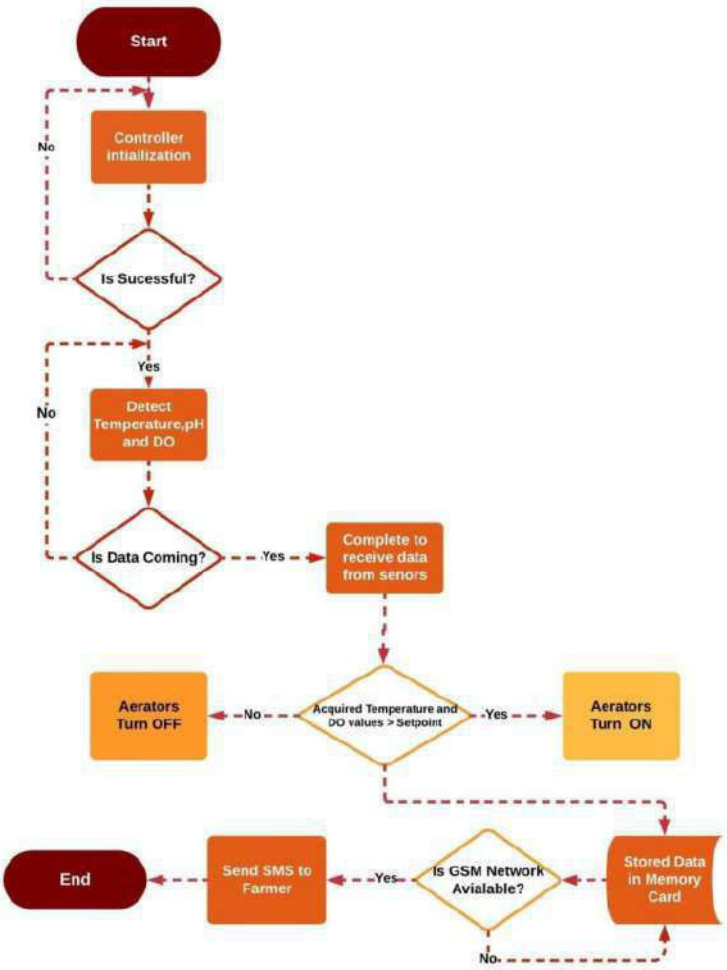

Fig.2. Software Flowchart

IV. CONCLUSION

In this study, we present a WSN-based monitoring system for monitoring environmental variables (dissolved oxygen concentration, pH, and water temperature in this application) in freshwater pond aquaculture for monitoring. Accurate and reliable parameters for water quality, as manual testing requires time and water. Quality parameters can change over time, and it makes sense to take active measures before the permanent damage is happening. Although initial costs are high, there are no additional costs or maintenance after installation is complete. Besides, periodic manual tests are not required. This increase in productivity and contributes to the improvement of foreign trade raises the nation's GDP.

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paper new

ORIGINALITY REPORT

21%	12%	17%	11%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Bing Shi, Victor Sreeram, Dean Zhao, Suolin Duan, Jianming Jiang. "A wireless sensor network-based monitoring system for freshwater fishpond aquaculture", Biosystems Engineering, 2018 Publication	4%
2	Submitted to Sacred Heart – Ateneo Cebu Student Paper	2%
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Automation of Aerators Based System on Water Quality Parameters in Aquaculture

Authors Authors and affiliations

G. Hemanth Kumar, D. R. Kumar Raja

Conference paper
First Online: 19 May 2020

37 Downloads

Part of the Lecture Notes in Electrical Engineering book series (LNEE, volume 601)

Abstract

The aquaculture in India is another important sector of the economy, in particular, job creation in the rural area. The aquaculture sector is currently facing many challenges. Fish density in farms varies, but the farmer is interested in high-density packaging to increase profits, this could raise the problems of pollution, diseases and causes stress in fish, which leads to inferior product quality. The primary objective is to monitor the aquaculture system using various sensors to reduce risks. Controlling water quality parameters (dissolved oxygen, pH, and temperature) in aquaculture to improve quality, productivity which in turn reduce costs and

Research Advisory Committee

Dt: 25-04-2019

College Research Mentoring Committee

S.No.	Name of the Research Advisor	Area of Research Mentoring
1.	**Dr. T. Lazar Mathew** - **Research Advisor** Former Director, DRDO, Advisor, Medical Sciences Engineering & Technology	Biomedical Instrumentation
2.	**Dr. V. Ganesan** - **Adjunct Faculty** Professor (Superannuated) Department of Mechanical Engineering, IIT Madras, Chennai.	IC Engines and Gas Turbines
3.	**Principal, Deans & HODs**	Sree Vidyanikethan Engineering College

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Sree Sainath Nagar, Tirupati – 517 102

Minutes of Meeting

Minutes of meeting of Senior Officers, Principal, Directors, Deans and HODs with Research Advisor Dr. Lazar Mathew, held on 14-12-2019.

Members Present:

1. The Director, Quality and Development, SVEC.
2. The Director, Academics, SVEC.
3. The Principal, SVEC.
4. The Vice Principal, SVEC.
5. The Dean, Examinations, SVEC.
6. The HOD, ECE, SVEC.
7. The HOD, CSE, SVEC.
8. The HOD, CSSE, SVEC.
9. The HOD, IT, SVEC.
10. The HOD, Mechanical, SVEC.
11. The HOD, Civil, SVEC.
12. The HOD, BS&H, SVEC.
13. The Representative, EEE, SVEC.
14. The Representative, EIE, SVEC
15. The Alumni Relations Officer, SVET.

With a warm welcome, Dr. Lazar Mathewgreeted the Senior Officials and asked Mr. S. Sreenivasa Chakravarthi, Alumni Relations Officer, SVET, to walk through the previousMinutes of the Meeting. After the minutes' walk through, he appreciated Dr. V. R. Anitha, for writing the report on his lecture "**How to write a proposal for grant to funding agencies**". He suggested to circulate the report among departments.

Research Adviserwas glad that all the Research Centers' report were received as per the schedule and the print ready copy shall be available by 31st December, 2019. He suggested research centers' coordinators to send the finalized copies with suggested modifications to Dr. Mathew, Dr. D. V. S. Bhagavanulu, Director (Academics), SVEC and Dr. I. Sudarsan Kumar, Director (Quality & Development), SVET. He asked Micromachining Research Center Coordinator to present the Annual Report as a sample and cited as one of the best performing research centers as the UG students' involvement & contribution (in terms of paper publications, internship at IIT-M, awards) for the research center was appreciating. He also added that this research center aimed

to conquer all the 4Ps (Publications, Projects, PhDs & Patents) and working in the direction.

Dr. Mathew stated that Research in Sree Vidyanikethan has reached the minimal level. Though research publications quality is improved, he felt that additional efforts should be needed for taking it to the next level. He invited SVEI management to draw special attention in this direction for enhancing research caliber and capacities in terms of both people and infrastructure.

For ensuring strong and quality research, Dr. Mathew advised to have focus on 6 Research centers primarily. They are as under:

1. Micromachine Research Center.
2. MEMS Research Center.
3. One among Computer Science related Research Centers.
4. VLSI research center with new name and objectives
5. Renewable Energy Lab; inviting proposal from Dr. Hari Krishna, Dept of EEE, SVEC.

Research adviser mentioned that Dr. M. S. Sujatha, HoD, EEE, SVEC had presented an interdisciplinary idea and a few suggestions were given to conduct the feasibility study. He said that, in his next visit (in February), he will finalize on her interdisciplinary idea.

Action Items:

1. Dr. M. S. Sujatha, to improvise and present the Interdisciplinary Project.

The meetingconcluded with thanks from the members to **Dr. Lazar Mathew.**

***

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Minutes of Meeting

Minutes of meeting of Senior Officers, Principal, Directors, Deans and HODs with Research Advisor Dr. Lazar Mathew, held on 27-11-2019.

Members Present:

1. The Director, Quality and Development, SVET.
2. The Director, Academics, SVEC.
3. The Principal, SVEC.
4. The Dean, Academics, SVEC.
5. The Dean, Industry Relations, SVEC.
6. The Dean, Training & Placements, SVEC.
7. The HOD, ECE, SVEC.
8. The HOD, EEE, SVEC.
9. The HOD, EIE, SVEC.
10. The HOD, CSE, SVEC.
11. The HOD, CSSE, SVEC.
12. The HOD, IT, SVEC.
13. The HOD, Mechanical, SVEC.
14. The HOD, Civil, SVEC.
15. The HOD, MCA, SVEC.
16. The Alumni Relations Officer, SVET.

Dr. Lazar Mathew welcomed the members to the Senior Officials Meeting and greeted them. He asked Mr. S. Sreenivasa Chakravarthi, Alumni Relations Officer, SVET, to walk through the previous Minutes of the Meeting.

Research Adviser informed that he gave a guest lecture on **How to write a proposal for grant to funding agencies** to an audience of 25 people from all Sree Vidyanikethan Educational Institutions. He added that he is ready to give such lectures to varied audience on diversified topics. Dr. I. Sudarsan Kumar, Director, Quality & Development, SVEC, asked HoDs / HoI to inform the attendees of the lecture to give talk in their respective departments/institutions. Also, he asked them to submit detailed report on the talk to the Head of the Institution on or before 10th December, 2019.

Research Adviser also mentioned that Dr. O. Eswara Reddy, HoD, Civil, SVEC, has presented his idea on Land Sliding on Tirumala Ghat Road, in collaboration with Dept of IT & Dr. Neelima from IIT, Indore. He asked them to conduct the feasibility study for next 3 months and based on its results & report, the project may be further considered. He said that, Dr. M. S. Sujatha, HoD, EEE, SVEC, shall present the idea for another Interdisciplinary project in his next visit. He asked Dr. S. Hemachandra, Dean, Industry Relations, SVEC, to explore the possibilities on Activities inviting Ideas & Innovations from Students.

Dr. Mathew is glad that Research Centers are performing considerably well and expects them to perform even more to raise the Research Standards in Sree Vidyanikethan. He asked HoDs / HoIs to motivate their students for actively participating in the Research and get the most benefitted out of the Research Centers. Dr. Mathew visited all the Research Centers and gone through their Annual Reports.

Research Adviser cited that Research centers are progressing in terms of Publications, PhD Registrations & Supervisions and Patents. He added that, the progress is minimal in terms of getting funded projects. He felt that more efforts are needed to convince and attract Govt. funding agencies. On the other hand, he added, it is posing a great challenge for private organizations and budding Govt. organizations to get the funded projects. As a solution to break the ice, Dr. Mathew suggests the following:

1. Get Domain Specific Experts as Research Consultants.
2. Empowering and orienting the Faculty to towards research.
3. Recruit the People with real Research zeal and strong domain potential.

He asked HoDs / HoIs to identify the Active Domain Experts for inviting them as Research Consultants.

Dr. Mathew invited the opinions and suggestions from the members on overcoming the barrier of "Islands of Expertise". After exchanging opinions, suggestions, and perceptions, members concluded the following as the steps to grow the Expertise levels:

1. Empower the Internal Faculty.
2. Enhance Research Infrastructure (Space, Equipment/Software).
3. Need Domain Expertise: to receive and grow.
4. Liaisoning.
5. Residential Campus.

Action Items:

1. Dr. M. S. Sujatha, to present a PPT on the Interdisciplinary Project.
2. Dr. S. Hemachandra, to explore on the activities inviting Ideas & Innovations from Student community.

The meeting concluded with thanks from the members to **Dr. Lazar Mathew.**

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Minutes of Meeting

Minutes of meeting of Senior Officers, Principal, Directors, Deans and HODs with Research Advisor Dr. Lazar Mathew, held on 19-10-2019.

Members Present:

1. The Director, Quality and Development, SVET.
2. The Director, Academics, SVEC.
3. The Principal, SVEC.
4. The Dean, Academics, SVEC.
5. The Dean, Industry Relations, SVEC.
6. The Dean, Examinations, SVEC.
7. The HOD, EIE, SVEC.
8. The HOD, CSE, SVEC.
9. The HOD, Civil, SVEC.
10. The HOD, BS & H, SVEC.
11. The HOD, MCA, SVEC.
12. The Representative, ECE, SVEC.
13. The Representative, IT, SVEC.
14. The Representative, Mechanical, SVEC.
15. The Representative, Central Library, SVEI.
16. The Alumni Relations Officer, SVET.

With a warm welcome, Dr. Lazar Mathew greeted the members and appreciated the International Conference happening in Sree Vidyanikethan, organized by Dept. of EEE. He congratulated Dr. M. S. Sujatha and Team for inducing all the efforts and making the conference as a true International par.

After walking through the previous minutes, Dr. P. C. Krishnamachari, Principal, SVEC, stated that 4 projects (2 from IT Dept. & 2 from BS&H Dept.) were applied to Govt. funding agencies under STRIDE category. Research Advisor anticipated that the applied projects may fetch funding from Govt. He also encouraged the members to speed-up the "under review" projects to apply, as the due date is 30th October. Dr. Mathew suggested active

participation of students (specifically PG Students) in the Research Centers activities. In his December's visit, he looks forward for the students in the research center meetings.

Research advisor mentioned the progress of identified Interdisciplinary projects. He admired the 5 ideas proposed by Dr. K. C. Varaprasad and finalized on 2 ideas out of them. He added that, He extended time to invite the interdisciplinary ideas from Dr. O. Eswara Reddy & Dr. M. S. Sujatha.

Dr. Mathew felt that the research atmosphere in Sree Vidyanikethan is not growing and measures are to be taken to keep it growing. He welcomed the members to discuss on his opinion. After exchanging of opinions and perceptions, it is recommended to have 1:17 Faculty Student Ratio, for the stable research growth in Sree Vidyanikethan. Dr. Mathew also felt that this 1:17 ratio helps to meet the research quality irrespective of NBA, NAAC & NIRF specifications.

Research advisor stated that its time to enlarge the "Islands of Expertise" by exploring various opportunities. He stressed that the strength of any Research Center is measured in terms of 4Ps: Publications, Projects, PhDs, Patents. Hence, he proposed to have an audit of all the 14 Research Centers in December, 2019. The audit team shall include Dr. Lazar Mathew, Dr. D. V. S. Bhagavanulu, Dr. I. Sudarsan Kumar, HoD of respective department. Dr. Bhagavanulu mentioned that, by 30th November, 2019, Research Coordinators shall submit the progress report of the their Research centers from inception to till date and these are being used as benchmarking for the audit. Dr. I. Sudarsan Kumar, added that these progress reports also helps research coordinators to prepare Annual Reports of respective research centers as December is fast approaching.

Dr. Mathew appreciated Dr. V. R. Anitha, Professor of ECE & Research Coordinator, NMDC, SVEC for arranging Research Center Visit and holding discussions with the International delegates. And, members informed Dr. Mathew about an interactive session with ***Dr. Abul K.M. Azad***, Associate Dean and Professor, Department of Engineering Technology, College of Engineering and Engineering Technology, Northern Illinois University (NIU), USA and Sree Vidyanikethan Research Centers Members. Dr. I. Sudarsan Kumar was joyous to share that Dr. Abul Azad extended his support to Sree Vidyanikethan, by accepting to be a SPOC for arranging Research Resources (People, Domain, Technology, etc.,) from NIU and get associated with NIU. In this regard, he asked HoDs / HoI to identify faculty who can explore this opportunity and make at most benefit out of this collaboration. This faculty should identify People & their Areas of Research interest from NIU and request Dr. Abul Azad to facilitate the contact for having collaborative work.

Research advisor invited the members to discuss on the opinions and suggestions from the International Experts and Visitors. Members discussed and segregated their opinions and suggestions as under:

Attractions:

1. Sree Vidyanikethan's pleasing lush green campus.
2. Beautiful Library.
3. Heartfelt Hospitality.

Scope for Improvement:

1. Isolated Research in the Campus. This has to be addressed and promote interdisciplinary research.
2. Latest Collection of Books & Magazines need to be maintained in Library.
3. No. of Titles in Library has to be increased.
4. Obsolete Infrastructure to be replaced with current trend and sufficient need.

Towards the conclusion, Dr. K. Saradhi, Dean Examinations, SVEC, suggested having Student Development Activities Plan for PG students, similar to that of UG students, anticipating active participation in the activities of research centers. Dr. I. Sudarsan Kumar mentioned that the lecture by Dr. Mathew on Grant Writing would be organized in November month. Dr. P. C. Krishnamachari stated that ***Dr. V. Rama Rao***, Director, IIT-Delhi will be visiting Sree Vidyanikethan on 14th November and asked Dr. V. R. Anitha to coordinate the visit. Dr. O. Eswara Reddy confirmed the visit of ***Prof. Krishna R. Reddy***, Director, Geotechnical & Geoenvironmental Engineering Laboratory & Sustainable Engineering Research Laboratory, Department of Civil and Materials Engineering, University of Illinois, Chicago, USA in January 2020. Also, members confirmed the Semi Technical Talk on 30th October by ***Dr. Sujaya Lakshmi***, Assistant Professor, North Carolina Central University on "Joy @ Workplace".

Action Items:

1. Dr. Mathew to present a Guest Lecture on Grant Writing in his next visit.
2. Dr. I. Sudarsan Kumar, to identify 20 people as audience for the Guest lecture.
3. Dr. O. Eswara Reddy, to present a PPT on the Interdisciplinary Project.
4. Dr. M. S. Sujatha, to present a PPT on the Interdisciplinary Project.

The meeting concluded with thanks from the members to **Dr. Lazar Mathew.**

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Minutes of Meeting

Minutes of meeting of Senior Officers, Principal, Directors, Deans and HODs with Research Advisor Dr. Lazar Mathew, held on 26-09-2019.

Members Present:

1. The Director, Quality and Development, SVET.
2. The Director, Academics, SVEC.
3. The Principal, SVEC.
4. The Vice Principal, SVEC.
5. The Dean, Industry Relations, SVEC.
6. The HOD, ECE, SVEC.
7. The HOD, EIE, SVEC.
8. The HOD, CSE, SVEC.
9. The HOD, IT, SVEC.
10. The HOD, Mechanical, SVEC.
11. The HOD, MCA, SVEC.
12. Research Coordinator, Center for Computer Networks & Cyber Security, SVEC.
13. Research Coordinator, NMDC Center, SVEC.
14. Research Coordinator, Center for Intelligent Computing, SVEC.
15. Research Coordinator, Data Analytics Research Center, SVEC.
16. Dr. L. V. Reddy, Professor, Dept. of IT SVEC.
17. The Alumni Relations Officer, SVET.

Dr. Lazar Mathew, in his welcome note, appreciated the Mohana Mantra – 2019, the techno-cultural event in the Sree Vidyanikethan and appraised students for organizing such events.

After discussing about the previous minutes, Research Advisor stated that Two projects are ready to apply for STRIDE. Another project is under review and may complete in his next visit.

Dr. Mathew mentioned that he reviewed all the Internal Projects funded by SVET. He expressed his satisfaction on the progress of Internal Projects and anticipated that these projects will definitely take Sree Vidyanikethan Research to next level. He felt that the Research teams should grow stronger to conduct research stably. He suggested having

students involved in the internal projects and disseminating the work as per their potential and capacity. Dr. I. Sudarsan Kumar, Director, Quality and Development, SVET suggested that the problem have to be partitioned logically in such a way that it can be disseminated judiciously, among UG, PG and PhD levels of Students. Dr. Mathew proposed to have only interdisciplinary teams in future for effective research outcome. In his next visit, he wished to meet individual members and interdisciplinary teams to discuss on their research intensions as under:

1. Identify a potential problem – in terms of the domain and area of work
2. Identify the fund needed – in terms of What and why is it needed.
3. Solution to the problem – in terms of ultimate result to benefit the society.

Research Advisor said that Two International Conferences will be held in 2019 (in October by Dept. of EEE and in December by NMDC Research Center) and One in the 1st quarter of 2020. In this regard, he asked Dr. V. R. Anitha, Professor of ECE & Research Coordinator, NMDC to present the conference preparations, to be held in December 2019. Following that, He asked Dr. Narendra Kumar Rao, HoD of CSE and Mr. S. Sreenivasa Chakravarthi, Research Member of Center for Intelligent Computing, to present the conference preparations, to be held in February 2020. Dr. Narendra stated that a FDP or SDP is being planned to organize in the month of October, 2019 for paving the platform to have a wide range of experts on the Conference.

Dr. Mathew said that he also reviewed the progress of Research Scholars and found satisfactory with their work. He added that, there is a scope for them to improve and their supervisors should drive them for necessary improvements. Also, he mentioned that the Center for Rural Development is planning to organize a Medical Camp in the month of October, 2019. Dr. I. Sudarsan said that, the planned lecture on Grant Writing by Dr. Lazar Mathew to targeted audience deferred to October.

Action Items:

1. Dr. Mathew to present a Guest Lecture on Grant Writing in his next visit.
2. Dr. I. Sudarsan Kumar, to identify 20 people as audience for the Guest lecture.
3. Dr. K. C. Varaprasad, to present a PPT on the Interdisciplinary Project.
4. Dr. O. Eswara Reddy, to present a PPT on the Interdisciplinary Project.
5. Dr. M. S. Sujatha, to present a PPT on the Interdisciplinary Project.

The meeting concluded with thanks from the members to **Dr. Lazar Mathew.**

***

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Sree Sainath Nagar, Tirupati – 517 102
DEPARTMENT OF MECHANICAL ENGINEERING

Date: 31.12.2019.

Minutes of Meeting held on 20th -21st December, 2019

Presided over by : **Dr. V. GANESAN**

Attended by : All the faculty members of the Dept. of Mechanical Engineering

Date(s) & Venue : 20th - 21st December, 2019.

Agenda : Interaction with faculty members of ME Department.

The following points were discussed in the interaction, and following recommendations were made by Dr.V. Ganesan:

S. No	Faculty Name	Tasks Assigned
1	Dr.K.C.Varaprasad [HoD]	Try to install one work station for the dept. Also explore the possibility of having a high end server for the department. Hasten up faculty concerned in getting the quotation for I C Engine setup and make arrangement for placing the order. I have dicussed with the director & advisor and director finance. The engine should start working on or before 20-02-20. Do the needful
2	Dr.T.Hari Prasad	It was nice that the two day workshop on OPENFOAM went well. Credit goes to you & your team. Now take responsibility to form a group along with 3 or 4 faculty and interested students. Send me the list by second week of January. The list of Faculty of our dept. who have attended the OPENFOAM workshop to be sent before second week of january
3	Dr. R. Satya Meher	Complete the patent submission work. Also try to invove yourselves with OPENFOAM to simulate Heat Exchanger flows. The progress may be reported during my next visit
4	Dr. B. Sachuthananthan	MAKE ARRANGEMENT TO CONDUCT TESTS with WATER HYCINTH OIL using the internal fund. Progress of the work to be reported me by 30-01-20
5	Dr. K. Lakshmi Narasimhamu	It was nice that you have completed the program on fuel-air Cycle with Scilab. Incorporate graphics and send me the code by 30-01-20
6	Dr. B. Sreenivasulu	Make a Scilab companion for your subject. The Scilab code should be sent to me by30-01-2020. The submitted paper for my review will be corrected and sent back to you for revsion. Try to submit it to Institution of Engineers Journal

S. No	Faculty Name	Tasks Assigned
7	Dr. A.K.Damodaram	As discussed, and as per your statement, 2 papers are on the pipeline. This may be sent to me by 15-01-20 for my review. Start concentrating on FLIP learning and ABCD. A report may be prepared and send to me before my next visit
8	Dr. Sadu Venkatesu	Concentrate on CFD work. Download OPENFOAM and learn how to operate it. Forward your write up on the patent application by 15th January.
9	Dr. S. Ragu Nathan	Not met. May be attending the workshop.
10	Dr. K Pol Reddy	Not met. May be attending the workshop.
11	Dr. M. Babu Raj	I will send back the revised paper after my review. Start learning Scilab
12	Dr. R. Vinoth	Complete the work already assigned.
13	Mrs.C.Navya	Complete the work already assigned and send me he details on 3D printing by 15th Jan.
14	Mrs K.Lakshmi Kala	Complete the work already assigned
15	Mr. K. Harshavardhan Reddy	Send me a report on what you have done so far. The rport should reach me by 20th Jan
16	Mr. G.Vidyasagar Reddy	Not met. May be attending the workshop.
17	Mr. T Naveenkumar	More progress is expected on the assigned work. Try to complete the work already assigned.
18	Mr. A. Venkatesh	Complete the already assigned work. If not able to meet it should be informed earlier. Send me a report on the work already completed
19	Dr. J.S. Binoj	Complete the assigned work as discussed
20	Dr. N. Manikandan	Wait for the corrected paper to be sent back from my side and submit it to a suitable journal
21	Dr. N. Ananthakrishna	Complete the draft proposal of the project and analyze the results from the data obtained and send the analysis to me
22	Mr. D.Raghurami Reddy	Complete the task already assigned. Learn Open Foam. Should show better progress
23	Dr. R.L.Krupakaran	Complete the work already assigned and as discussed make the quotation ready
24	Mr. B.Vishnu Vardhana Naidu	As the last month assigned work is not completed make sure that this is completed this month
25	Mr. S sreekanth	Seems to be not interested in completing the assigned work. If not interested in research this fact may be informed to me. We may not waste our time in meeting each other.

S. No	Faculty Name	Tasks Assigned
26	Dr. P.Bhanu Prakash	Complete the wear paper and send it to me for review by 20th Jan
27	Dr. Deepak Kumar Naik [N F]	Prepare the two papers you have promised and send to me for my comments. Learn Scilab
28	Mr. G.Kuladeep	Did not meet. Complete the already assigned work. fI not able to meet it should be informed earlier. If not interested in research please let me know. If not able to show any progress I will report it to HoD and you need not meet me and the matter may sorted out with HoD.
29	Mr. S.Lakshmi Narayana	Try to complete the experiments WITH 12 SAMPLES and report the result by 20th Jan
30	Mr. M.Gangaraju	Shown the soft copy of the program developed on cotter joint along with graph before my next visit. Complete the course work at the earliest
31	Mr. P prakash	Learn OPENFOAM and Scilab. Send the paper you are writing, for my review on or before 15th Jan.
32	Mr. G M Surendranatha	Concentrate on the completion of course work. Learn Scilab
33	Mr. Mahesh Halli	Learn Scilab. Write a review paper on the topic of your interest
34	Mr. s Praveen Kumar	Learn Scilab. Write a review paper on the topic of your interest
35	Mr. Chandrasekara Mishra	Learn Scilab. Write a review paper on the topic of your interest

(Dr.K.C.Varaprasad)
HOD, ME

Dr. K.C. VARAPRASAD
Professor & Head
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Sree Vidyanikethan Engineering College
TIRUPATI - 517 102

O/L

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Sree Sainath Nagar – 517 102, TIRUPATI

SVEC/DA/05/2016-17 15.02.2017

A meeting of committee constituted for exploring the possible time slots for holding meeting with students for innovative ideas, cluster meetings and faculty meetings in the departments was held on 14.02.2017 @ 02:30 PM in SO's chambers.

MEMBERS PRESENT:

1. Dr. C. Subhas, Dean (Academics) - Convener
2. Dr. P. V. Ramana, HOD(ECE) - Member
3. Dr. K. Ramani, HOD(IT) – Member
4. Dr. M. Saravanan, HOD(EIE) - Member

MINUTES

1. Resolved that all the HODs will identify students from all the programs from first year to final year within a week's time who have potential for sharing innovative ideas. HODs will collect write-ups from such students on their ideas by 10.03.2017 and advice them to keep their PPT presentations on their ideas ready by 15.03.2017. Students will present their ideas centrally on a day at 11:00 AM during the next visit of Dr. Lazar Mathew scheduled from 16.03.2017. This exercise will be repeated every month with suitable dates and deadlines.

2. Resolved to hold faculty meetings and cluster meetings in the departments from 4:00 PM onwards on third and fourth Saturdays respectively. To facilitate the meetings, B. Tech. timetables will be adjusted to have SDA for the last period (3:55 PM – 4:45 PM) for which class work will be suspended after taking attendance. In case of laboratory courses, last period will be suspended directly. For M. Tech. students it is left to the departments whether to run the last period or suspend it.

3. Resolved that the Principal will give necessary instructions to the HODs to implement the above resolutions.

Convener

Copy to: Principal, Director and COO for information.
Members: HODs of ECE, EIE & IT.
SAO (SVEC); Director (F&A) and Special Officer, SVET.