

Faculty Conclave 2017 – Call for papers

BVBCET took a new direction in academic reforms by embracing outcomes based education paradigm after the grant of autonomy. Since then, several experiments are being conducted on the campus in the areas of pedagogic practices, curriculum design, teaching – learning, assessment, research and entrepreneurship. Today BVBCET stands out as a leader on the strengths of its clear vision, sustained processes and practices and has become – “KLE Tech”. You are the agents of transformation that is happening in KLE Tech. And it is your innovations in these areas that are enriching the engineering education ecosystem of the campus.

Faculty Conclave – the annual event provides a forum for the faculty members to showcase their innovative experiments and learn from each others’ experiences. The previous faculty conclaves are a success in terms of the enthusiastic participation of many and were able to inspire several others.

The seventh in the series – “**Faculty Conclave 2017**” – is scheduled during **July 27-28, 2017**. This conclave is expected to provide a platform for the faculty members to exchange their thoughts and share their experiences in academic space. The broad areas of focus are:

1. Curriculum Innovation	2. Outcomes Assessment
3. Experiential Learning – Open ended experiments, projects, field visits	4. Pedagogies in Engineering Education
5. Research Experiences, Entrepreneurship and Industry – Institute Collaboration	6. Graduate Program Experiences (MTech)
7. Technology Enhanced Learning & MOOC Experiences	

Faculty members are invited to share their ideas and experiences of the academic year 2016-2017 in the form of papers to be presented during the conclave. The papers can be submitted by an individual or a group. Extended Abstracts of the papers (pdf only) not exceeding 500 words may be mailed to facultyconclave@bvb.edu clearly writing focus area in subject line of email, choosing from the table above. **The abstract of the paper is expected to indicate the focus of the paper in terms of clearly stated objectives, methodology and measures used along with the inferences drawn.** Outcome of the review of abstracts will be communicated to the respective author(s) by 19-06-2017. Full papers, not exceeding 05 pages, in IEEE format, may be sent by latest 16-07-2017. The authors of selected papers will be making their presentation during the faculty conclave.

Important Dates

1. Submission of Abstracts 10-06-2017	4. Communication of Paper Review 15-07-2017
2. Abstract Review Communication 19-06-2017	5. Submission of final paper 22-07-2017
3. Submission of full Papers 08-07-2017	6. Faculty Conclave 27-07-2017 and 28-07-2017

Director, CEER

Schedule for Faculty Conclave-2017, July 27-28, 2017

Date: 27-July-2017

Venue: BioTech Auditorium

INAUGURATION	9.30 to 9.45 am
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SESSION 1		Time: 9.45 to 11.15 am	
Theme: Graduate Program Experiences (MTech) & Technology Enhanced Learning & MOOC Experiences			
Sl. No	Paper-ID	Title	Authors
1	FC17_25	Augmenting cloud concepts learning with open source software environment	Meenaxi M Raikar, Vijayalakshmi M., Padmashree Desai
2	FC17_22	Art of publishing refereed papers through experience of PG minor projects	Vishwanath P. Baligar
3	FC17_17	Automated tool for improving students programming productivity	Mahesh S Patil, Satyadhyan R Chickerur, Indira Bidari
4	FC17_23	Google Forms that Made Teacher's Life Easier: An Experience and Experimentation	Rohith Hallur
Tea Break from 11.15 to 11.30 am			



SESSION 2		Time: 11.30 am to 01.00 pm	
Theme: Experiential Learning – Open ended experiments, projects, field visits + Research Experiences, Entrepreneurship and Industry – Institute Collaboration			
Sl. No	Paper-ID	Title	Authors
1	FC17_12	Course Project in Mobile Computing – An experiential learning	Shrinivas D Desai
2	FC17_16	Application of Statistical Methods in Bioprocess Engineering Laboratory to Reinforce Students’ Ability in Data Collection, Analysis and Interpretation.	Sharanappa A, L.R.Patil, V.S.Hombalimath, Deepak Yaraguppi, Anil R Shet
3	FC17_4	An experience of Project Based Learning in SAPM course	Sagar Patil, S.V.Patil
4	FC17_38	A post-placement program to bridge the gap between Institute & Automotive Industry	Venkatesh Mane, Prabha Nissimagoudar; Gireesh H M
Lunch Break from 1.00 to 2.00 pm			



SESSION 3		Time: 2.00 to 3.30 pm	
Theme: Outcomes Assessment and Experiential Learning – Open ended experiments, projects, field visits			
Sl. No	Paper-ID	Title	Authors
1	FC17_21	Tutorial on Computer Organization and Architecture- Advantages and Challenges	Umadevi.F.M, Namrata D.H. Meena S.M.
2	FC17_14	Outcomes Of Integrating Total Station And Surfer8 Software In Survey Practice Laboratory	Khalida H. Munatsher
3	FC17_24	Enhancing students learning skills through Integrated Course Project Design Model(ICPDM)	Vijayalakshmi M, Mahesh S.Patil,Aruna S.Nayak,Vidya S.Handur, G.S.Hanchinamani
4	FC17_30	Teaching Operating Systems Concepts With Programming assignments	Shantala Giraddi, Priyadarshini Kalwad, Nagartna Kulenavar, Suvarna Kanakaraddi
Tea Break from 3.30 to 3.45 pm			



SESSION 4		Time: 3.45 to 5.15 pm	
Theme: Pedagogies in Engineering Education + Experiential Learning – Open ended experiments, projects, field visits			
Sl. No	Paper-ID	Title	Authors
1	FC17_34	Pedagogical Interventions through Software tools in Postgraduate Engineering Programme	Rakesh Tapaskar , M.B.Gorawar; R.S.Hosmath;P.P.Revankar
2	FC17_19	Activity (Video to Concept) based Teaching Learning: A Case study in Discrete Mathematical Structures	Nitya N. Kulkarni, Ms. Nirmala Patil; Mr. Karibasappa K. G; Ms. Meena Maralappanavar
3	FC17_33	The Flipped classroom: An Inverted method of Teaching and Learning	Jyoti Patil, Nalini C.Iyer, Sujata Kotabagi, R.V Hangal, Sujata N, Soumya B, Dr. Subbanna Bhat
4	FC17_8	Improving Data Analysis Skills in Freshman Engineering Students: A Constructive Approach	Preethi Baligar, G.H. Joshi, G N Bhadri, Y.Velankar
5	FC17_3	Course project based collaborative learning of internet of things	Vishwanath P. Baligar

Schedule for Day 2

Date: 28-July-2017

Venue: BioTech Auditorium

SESSION 1		Time: 9.30 to 11.00 am	
Theme: Pedagogies in Engineering Education + Research Experiences, Entrepreneurship and Industry – Institute Collaboration			
Sl. No	Paper-ID	Title	Authors
1	FC17_5	Digital Collage-as a Pedagogical Tool for Effective Learning of Immunological Concepts	S.V. Desai
2	FC17_28	Collaboration with Industry in the Information Storage and management course design	Suvarna G Kanakaraddi, Meenaxi Raikar, A.K.Chikaraddi, Jayalaxmi G , Shantala G
3	FC17_37	Integrating Genomics and Proteomics - A Bio-informatics-based approach to Establish Gene-Protein Relationship.	Sharanappa A, S.V. Desai
4	FC17_9	An Experiential Learning in Electrical Machines Laboratory Course	Minal Salunke, Javeed Kittur
Tea Break from 11.00 to 11.15 am			

The session will be followed by a presentation on Relative Grading by Dr. Anil Nandi between 11.15 and 12.00 noon.



Dear Faculty,

As a part of the annual event Faculty Conclave-2017, Pre-Conclave workshops for all faculty have been organised on the **26th, July 2017**. We urge you to make best use of this opportunity and register for the workshops using the link shared below **on or before 24th July, 2017.**

The schedule for the workshop is as follows:

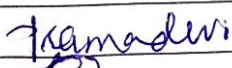
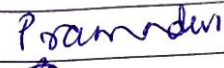


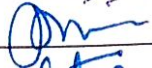
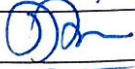
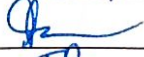



Sl. No	Title of Workshop	Resource Person	Time/Venue
1A	Outcome Based Education(OBE)	Dr. P. G. Tewari & Team Principal, BVB College of Engineering and Technology, Dean Academics and Professor , School of Mechanical Engineering	Morning Parallel Sessions: 9.00 am to 12.00 noon CSE Lab 1, CLite
1B	Impartus Lecture Capture Solution (LCS)	Mr. Ramprasad G. B. Senior Client Manager, Impartus	
2A	Rubrics Based Assessment	Dr. G.H. Joshi & Team Director-CEER, Dean-Curriculum Innovation and Program Assessment and Professor , School of Computer Science	Afternoon Parallel Sessions: 1.30 to 4.30 pm CSE Lab 2, CLite
2B	3 T: Teaching, Technology and Transformation using Colpoll	Dr. Murli Nagasundaram Expert on creativity, innovation and design thinking with particular reference to management innovation and business/experience design.	

	Title of Workshop	Outcomes of the Workshop
MORNING	Outcome Based Education(OBE)	<ol style="list-style-type: none"> 1. State the need for Outcome Based Education 2. Explain the terms Program Education Objectives, Program Outcomes, Course Outcomes and Topic Outcomes 3. Formulate Course Outcomes(CO) Topic Outcomes(TO) for a course 4. Apply taxonomy of learning (Blooms taxonomy of learning) to frame topic outcomes 5. Map Course Outcomes to Program Outcomes (Course Articulation Matrix) 6. Map Courses(core) to Program Outcomes (Program Articulation Matrix)
	Impartus Lecture Capture Solution (LCS)	<ol style="list-style-type: none"> 1. Record the lecture session 2. Edit recorded content 3. Publish the videos 4. Add additional content to recorded videos 5. Enable Live streaming and video conferencing
AFTERNOON	Outcome Based Education(OBE)	<ol style="list-style-type: none"> 1. Identify the need for Rubrics Based Assessment 2. Explain the terms criteria and scale 3. Differentiate between different types of rubrics 4. Formulate rubrics for an assessment by aligning it to topic outcomes
	3 T: Teaching, Technology and Transformation using Colpoll	<ol style="list-style-type: none"> 1. Administer courses by sharing learning material. 2. Improve student learning by utilising feedback 3. Enable student learning beyond the classroom

Faculty Conclave 2016-2017

Attendance Sheet

SI No	Faculty Name	Attendance	
		Day 1	Day 2
1.	SMT. VINAYA HIREMATH	V. Hiremath	V. Hiremath
2.	SRI. GURURAJ. JOSHI	Gururaj J	Gururaj J
3.	SMT. GEETANJALI RAO	Geetanjali	Geetanjali
4.	DR. VIMALA SWAMY	Vimala S.	Vimala S.
5.	SRI. M.M. DANDIN	MMD	MMD
6.	SMT. ROHINI MALAGI	Rohini Malagi	Rohini Malagi
7.	SRI. SHASHIDHAR N KUBSAD	Shubsad	Shubsad
8.	Sri. H.S.PATIL	H.S. Patil	H.S. Patil
9.	SRI. ABHISHEK. S. PATIL	Abhishek	Abhishek
10.	MS. DIVYA SHARMA	Divya S.	Divya S.
11.	MS. JAYASHREE B SHETTAR	J Shettar	J Shettar
12.	SMT. JYOTI.S. BALI	J.S Bali	J.S Bali
13.	SRI. VINODKUMAR.V. METI	Meti	Meti
14.	SMT. MANJULA PANDARIKAR	Manjula	Manjula
15.	SRI. ROHITH HALLUR	Rohith	Rohith
16.	DR. UDAY M MUDDAPUR	V. Muddapur	Muddapur
17.	SRI. LAXMIKANT.R. PATIL	L.P. Patil	L.P. Patil
18.	SMT. ZABIN.K. BAGEWADI	ZBagewadi	ZBagewadi
19.	DR.SHIVALINGSURJ V DESAI	Desai	Desai
20.	SRI. ANIL RAMDAS SHET	Anil	Anil
21.	SMT. PREMA MALALI	Malali	Malali
22.	SRI. GURUNATH KAMPLI	Grunath	Grunath
23.	SRI. VEERESH A HIREMATH	Hiremath	Hiremath
24.	SMT. KHALIDHA H MUNTASHER	KMM	KMM
25.	MS. NIKITA KESHAV	NK	NK
26.	SRI. FATHEALI A SHILAR	Fatheali	Fatheali
27.	SRI. CHAITANYA S AKKANAVAR	ABSENT	ABSENT
28.	DR. A.M.SAJAN	Sajan	Sajan
29.	DR. C.C. HADIMANI	Hadimani	Hadimani

30.	DR. P RAMADEVI		
31.	DR.(SMT). S. DHANALAKSHMI		
32.	SRI. S.R. KURUNDAWADE	Sandeep	Sandeep
33.	DR.(SMT) MEENA S MARALAPPANAVAR	Meena	Meena
34.	DR. V P BALIGAR		
35.	DR. SATYADHYAN CHICKERUR	Satya	Satya
36.	DR. SHASHIKUMAR G. TOTAD	S. G. Totad	S. G. Totad
37.	DR. KARIBASAPPA K.G.	- ABSENT -	KARIBASAPPA
38.	SRI. NARAYAN D.G.	N D G	N D G
39.	SMT. JAYALAXMI G N	J G N	J G N
40.	SMT. SUJATHA C	Sujata	Sujata
41.	SRI. GURURAJ .S.HANCHINAMANI	G.S.H	G.S.H.
42.	SMT. LALITHA MADANBHAVI	L. Madandhan	L. Madandhan
43.	SMT. VIDYA HANDUR	VH	VH
44.	SRI. CHANDRASHEKHAR .D. KERURE	Kerure	Kerure
45.	SRI. PARIKSHIT P HEGADE	Hegade	Hegade
46.	SRI. MOULA HUSSAIN	Moula	Moula
47.	SRI. MANJUNATH K GONAL	Gonal	Gonal
48.	SRI. P.M. DHULAVVAGOL	Dhulavagol	Dhulavagol
49.	SRI. ANAND.S. METI	Meti	Meti
50.	SRI.MAHESH.S.PATIL	Patil	Patil
51.	SRI. VISHWANATH.G. GARAGAD	V.G G	V.G G
52.	SRI. DEEPAK KUMAR MEHTA	mehta	mehta
53.	DR. P. SUBBANNA. BHAT	Bhat	Bhat
54.	DR. (SMT) SAROJA V SIDDAMAL	Siddamal	Siddamal
55.	SMT SUJATA .S. KOTABAGI	Kotbagi	Kotbagi
56.	SMT. UJWALA PATIL	Patil	Patil
57.	SMT. R.V.HANAGAL		- ABSENT -
58.	SMT. TANUJA R PATIL		
59.	SRI. ANAND K CHANDRASHEKHAR	Chandrashekar	Chandrashekar
60.	SRI. RAGHAVENDRA.M. SHET	shet	shet
61.	SRI. KIRAN M. R.	KMR	KMR
62.	SMT. SOUMYA S PATIL	Soumya	Soumya
63.	SMT. VIJAYA S ELIGAR	Vijayar	Vijayar
64.	SRI. SHAMSHUDDIN K.	- ABSENT -	

65.	SRI. S.M. PATTANASHETTI	- ABSENT -	SP
66.	MS. SNEHA V METI	Sneha	Sneha
67.	SRI. SANJAY ELIGAR	Sligara	Sligara
68.	SRI. SHIVASHANKAR A HUDDAR	Shuddar	Shuddar
69.	SRI. RAMAKRISHAN S	S	S
70.	SRI. ARUN L KAKHANDKI	Arun	Arun
71.	SRI. PRASHANT V ACHARI	Prashant	Prashant
72.	MS. SHRUTI P MARALAPPANAVAR		- ABSENT -
73.	SRI. VASANT REDDY G	Vasant	Vasant
74.	SMT. PREETI S PILLAI	Preeti Pillai	Preethi pillai
75.	SRI. SHASHIDHAR S NEELAKANTHMATH	SNeelakanthmath	SNeelakanthmath
76.	SRI. RAGHURAJA ADI	Radi	Radi
77.	MS. SOUMYA BAKALE	Bakale	Bakale
78.	SMT. MINAL S SALUNKE	Minal	Minal
79.	MS. ANUPAMA R ITAGI	Anupama	Anupama
80.	SRI. KIRAN R PATIL	Kpatil	Kpatil
81.	SRI. SACHIN ANGADI	S	S
82.	SMT. LEAH S JOSHI	Leah	Leah
83.	MS. SUSHMA V	Sushma	Sushma
84.	SRI. JAVEED KITTUR	Javeed	Javeed
85.	SMT. SUJATA N M	- ABSENT -	
86.	SMT. JAYANTI D SHINGE	Jayanti	Jayanti
87.	SMT. ANUSHA KODOLLI	Kodolli	Kodolli
88.	DR.(SMT). UMA NEELI	Uma	Uma
89.	SRI. Y.M. UMATHAR	Umathar	Umathar
90.	DR (SMT). DAKSHYANI. R MAMMIGATTI	Dakshyani	Dakshyani
91.	DR. M.B. PAGE	Page	Page
92.	DR(SMT). SHAILA.V. CHOUGALA	Shaila	Shaila
93.	DR.(SMT). SUMEDHA.S. SHINDE	S	S
94.	SMT. ROOPA. S. ALGUR	Roopa	Roopa
95.	DR. NARAYANA SWAMY	Swamy	Swamy
96.	DR. GURURAJ N. BHADRI	G.Bhadri	G.Bhadri
97.	SMT. P VINOTHINI ACHARYA	P	P
98.	DR.(SMT). NIVEDITA S KABBUR	Nabbur	Nabbur
99.	SRI. ROSHAN KUMAR ARYA	Rohan	Rohan

100	DR. B.B.KOTTURSHETTAR	DR	DR
101	SRI. T. VEERAMAHANTESH SWAMY	V. Veeramm	V. Veeramm
102	DR. K.G.KODANCHA	KK	KK
103	DR. ANIL S. BADIGER	Anil	Anil
104	DR. SANJAY V KOTABAGI	Sotbaji	Sotbaji
105	Sri. C.M. Koti	Koti	- ABSENT -
106	DR. RAVI C GUTTAL	Ravi	Ravi
107	DR I.G.SIDDHALINGESHWAR	I.G.S	I.G.S
108	DR. G. U. RAJU	Raju	Raju
109	SRI. B.S.KAKOL	Kakol	Kakol
110	SRI. VEERESH G BALIKAI	V. Balikeri	V. Balikeri
111	SRI. M.B. GORWAR	Gorwar	Gorwar
112	DR. P.P. REVANKAR	PP	PP
113	SRI. G. M. HIREMATH	Hiremath	Hiremath
114	SRI. VINAYAK.P. KHATAWATE	- ABSENT -	- ABSENT -
115	SRI. NAGARAJ L EKABOTE	Ekabote	Ekabote
116	SRI. ADARSH PATIL	AP	AP
117	SRI. M C. CHOUKIMATH	M.C.	M.C.
118	SRI SHREESHAIL M L	Shree	Shree
119	SRI S M MUKHANDMATH	S Mukhandmath	S Mukhandmath
120	SRI SRIDHAR M	SM	SM
121	SRI. ADITYA DESHPANDE	Aditya	Aditya
122	SRI. SUDHIR PAWASKAR	Sudhi	Sudhi
123	SRI. VINAYAK KULKARNI	VK	VK
124	SRI. R.S. HOSAMATH	R.S. Hosmath	R.S. Hosmath
125	SRI. GIRISH CHALAGERI	GC	GC
126	SRI. BASANAGOUDA SHIVALLI	Bhivalli	Bhivalli
127	SRI. PRASANNA RARAVI	Pranav	Pranav
128	SRI. S.V. KHANDAL	Khandal	Khandal
129	SRI. SANJEEV M KAVALE	S	S
130	SRI. AJITHKUMAR MADIVAL	Madival	Madival
131	DR.S.V.PATIL	S.V. Patil	S.V. Patil
132	DR. N.G. CHACHADI	Chachadi	Chachadi
133	DR. GURUBASAVARAYA HIREMATH	- ABSENT -	Hiremath
134	SRI. NAGARAJ.R. NAVALGUND	NA	NA

135	SRI. SAGAR.B. PATIL	<u>Patil</u>	<u>Patil</u>
136	MS. JAYANTI M. BELUR	Jayanti	Jayanti
137	SRI. JAYANT M ALAGAWADI	Alagawadi	Alagawadi
138	MS. SUPREETHA B M	Supreetha	Supreetha
139	MS. RANJEETA KELAGERI	R. Kelageri	R. Kelageri
140	SRI. CHETAN V HIREMATH	Chetan - Hiremath	Chetan. Hiremath
141	DR. PRAKASHGOUD PATIL	Patil	Patil
142	DR. P.S. HIREMATH	P.S. Hiremath	P.S. Hiremath
143	SRI. S V SEERI	S. V. Seeri	S. V. Seeri
144	MS. BHARATHI M SHETTAR	Bhettar	Bhettar
145	SRI. ASHOK.K. CHIKARADDI	Ashok	Ashok
146	SMT. SUJATA R. KULKARNI	Kulkarni	Kulkarni
147	SMT. DEEPA C. MULIMANI	Deepa	Deepa
148	SRI. AMIT.V. KACHAVIMATH	Amit	Amit
149	DR. A. S. BENNAL	A.S.B	A.S.B
150	SMT. VEENA.H. CHOUDAPUR	Veena	Veena
151	DR(SMT). VARSHA.V. KOPPAL	Koppal	Koppal
152	SRI.GANGADHAR V MUDDAPUR	Gangadhar	Gangadhar
153	SMT. SANGEETA. KOLAVEKAR	Kolavekar	Kolavekar
154	SRI. SUDHIR HIREMATH	Sudhir	Sudhir
155	SRI. SHIVARAJ B RADDER	Radder	Radder
156	DR. NITIN G KULKARNI	Kulkarni	Kulkarni
157	SRI. PRAVEEN H J	Praveen	Praveen
158	SRI. MAHESH V KATTALE	MK	MK
159	SRI. VINAY M TALAGERI	VT	VT
160	SMT. PREETI BALIGAR	Baligar	Baligar
161	MS. SHRADDHA G REVANKAR	Shradha	Shradha
162	SRI. M.M.KURUGODI	MMK	MMK
163	DR. M .V.ATRE	MV	MV
164	SRI. ANAND BARIYA	Anand	Anand
165	SRI. PRAKASH N KURDEKAR	Prakash	Prakash
166	SRI. A.K. KULKARNI	A.K.	A.K.



KLE Society's
B. V. Bhoomaraddi College
of Engineering & Technology



KLE Technological
University
Creating Value
Leveraging Knowledge

FACULTY CONCLAVE

Seventh edition

2017

27th & 28th July, 2017

Centre for Engineering Education Research
KLE Technological University, Hubballi

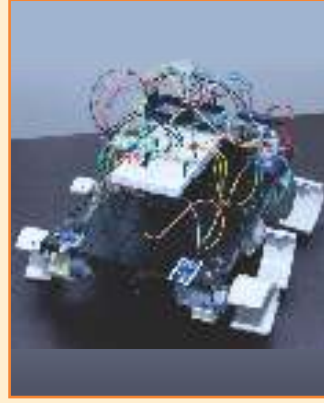


Centre for Engineering Education Research
KLE Technological University, BVB Campus, Vidyanagar, Hubballi - 580031.



KLE Technological University awarded as Ranked No 1 for
“Outstanding Institutional Transformation in Engineering Education” by IUCEE

Students in Action Engineering Exploration Course





Message from Vice Chancellor



Dr. Ashok Shetter

Vice Chancellor,
KLE Technological University, Hubballi

Dear Colleague,

It is a moment of pride for all of us at KLE Technological University to be part of the "Faculty Conclave 2017". Innovations by you all in Engineering Education space which got a fillip with granting of autonomy to our Institution in 2007 is one of the main reasons behind the success and fame of our Institution.

A few of the recognitions our Institution has received during the academic year 2016-2017 are:

1. MIT Report recognizing our Institution as one under the category "Institutes to be watched" for innovations in Engineering Education.
2. IUCEE recognizing as "The Outstanding Engineering Institution" for transformations in Engineering Education.
3. "Compass – The 3D Experience Magazine" from M/S Dassault Systems features our innovations in its issue: # 10-2016

I thank the entire faculty fraternity for your commitment and team work shown in this wonderful journey. We have lot of ground yet to be covered in realizing our vision and I seek your absolute commitment in this endeavor.



Message from Director



Dr. Gopalkrishna Joshi

Professor of Computer Science & Engineering,
Director, Centre for Engineering Education Research,
KLE Technological University, Hubballi

It is with great pleasure that we are hosting the seventh edition of Faculty Conclave during July 27-28, 2017. The innovative experiments done by our faculty members in Engineering Education during the academic year 2016-2017 are being showcased in this conclave. Faculty Conclave has emerged as an effective platform for sharing of experiences and learning from each others' practices. The conclave has seen a steady increase in faculty participation and quality of deliberations over the years. It is also a matter of pride for all of us that this practice of holding conclave is recognised as a best practice by IUCEE consortium member Institutions and many have started conclave in their respective Institutions.

We have introduced pre-conclave workshops this year and chosen themes of Institutional relevance for these workshops. We hope that faculty members find these workshops useful for their academic practices.

A lot of efforts have gone in organising this conclave. We thank Dr. Ashok Shetter, Vice Chancellor, KLE Technological University for his encouragement. We also acknowledge the contributions of all those who have volunteered their services as resource persons for workshops, session chairs, reviewers for papers and event organisers.

Come, let us learn from each other and perform better.

FACULTY CONCLAVE - 2017**Organising Committee**

Sl.No.	Responsibility	Team
01.	Co-Ordinator	Dr. Gopalkrishna Joshi Professor of Computer Science & Engineering, Director, Centre for Engineering Education Research
02.	Technical Committee	Vijaylaxmi M. Associate Prof, School of Computer Science and Engineering Kaushik M. Assistant Prof. Dept. of Instrumentation & Technology
03.	Program Committee	Preethi Baligar Assistant Prof. Center for Engineering Education Research Aruna S. Nayak Associate Prof., School of Computer Science and Engineering
04.	Print and Publicity Committee	Padmashree Desai Associate Prof., School of Computer Science and Engineering Vinay Talageri Teaching Assistant, Center for Engineering Education Research
05.	Logistics & Food	Dr. S. V .Desai Assistant Prof., Dept of Bio Technology
06.	Finance	Dr. B. S. Hunagund Prof, Dept. of Bio Technology

Highlights of Faculty Conclave 2017**Invited papers on following themes /categories**

1. Curriculum Innovation
2. Outcomes Assessment
3. Experiential Learning - Open ended experiments, projects, field visits
4. Pedagogies in Engineering Education
5. Research Experiences, Entrepreneurship and Industry-Institute Collaboration
6. Graduate Program Experiences (M Tech)
7. Technology Enhanced Learning & MOOC Experiences

Pre Conclave workshop details : 26-07-2017

Sl.No.	Title of Workshop	Resource Person	Time / Venue
1A	Outcome Based Education (OBE)	Dr. P. G. Tewari Principal, BVB College of Engineering and Technology, Dean Academics and Professor, School of Mechanical Engineering	Morning Parallel Sessions: 9.00 am to 12.00 noon CSE Lab 1, CLite
1B	Professor Orientation Program	Mr. Ramprasad G. B. Senior Client Manager, Impartus	
2A	Rubrics Based Assessment	Dr. G.H. Joshi Director-CEER, Dean-Curriculum Innovation and Program Assessment and Professor, School of Computer Science	Afternoon Parallel Sessions: 1.30 to 4.30 pm CSE Lab 2, CLite
2B	3 T: Teaching, Technology and Transformation using Colpoll	Dr. Muri Nagasundaram Expert on creativity, innovation and design thinking with particular reference to management innovation and business/experience design.	

	Title of Workshop	Outcomes of the Workshop
MORNING	Outcome Based Education (OBE)	<ol style="list-style-type: none"> 1. State the need for Outcome Based Education 2. Explain the terms Program Education Objectives, Program Outcomes, Course Outcomes and Topic Outcomes 3. Formulate Course Outcomes(CO) Topic Outcomes(TO) for a course 4. Apply taxonomy of learning (Blooms taxonomy of learning) to frame topic outcomes 5. Map Course Outcomes to Program Outcomes (Course Articulation Matrix) 6. Map Courses(core) to Program Outcomes (Program Articulation Matrix)
	Professor Orientation Program	<ol style="list-style-type: none"> 1. Record the lecture session 2. Edit recorded content 3. Publish the videos 4. Add additional content to recorded videos 5. Enable Live streaming and video conferencing
AFTER NOON	Rubrics based Assessment	<ol style="list-style-type: none"> 1. Identify the need for Rubrics Based Assessment 2. Explain the terms criteria and scale 3. Differentiate between different types of rubrics 4. Formulate rubrics for an assessment by aligning it to topic outcomes
	3 T: Teaching, Technology and Transformation using Colpoll	<ol style="list-style-type: none"> 1. Administer courses by sharing learning material. 2. Improve student learning by utilising feedback 3. Enable student learning beyond the classroom

Date : 27-July-2017
 Venue : BioTech Auditorium
 INAUGURATION : 9.30 to 9.45 am

Schedule for Faculty Conclave - 2017, July 27-28, 2017

SESSION 1		Time: 9.45 to 11.15 am	
Session Chair :		Prof. B. L. Desai	
Reviewers		Prof. Nalini Iyer	Prof. G.H. Joshi
Theme: Graduate Program Experiences (MTech) & Technology Enhanced Learning & MOOC Experiences			
Sl.No.	Paper-ID	Title	Authors
1	FC17_25	Augmenting cloud concepts learning with open source software environment	Meenaxi M Raikar, Vijayalakshmi M., Padmashree Desai
2	FC17_22	Art of publishing refereed papers through experience of PG minor projects	Vishwanath P. Baligar
3	FC17_17	Automated tool for improving students programming productivity	Mahesh S Patil, Satyadhyan R Chickerur, Indira Bidari
4	FC17_23	Google Forms that Made Teacher's Life Easier: An Experience and Experimentation	Rohith Hallur
Tea Break from 11.15 to 11.30 am			

SESSION 2		Time: 11.30 am to 01.00 pm	
Session Chair:		Prof. Uma Mudenagudi	
Reviewers:		Prof. Satyadhan Chikkerur	Prof. B.S. Hunagund
Prof. P. R. Patil			
Theme: Graduate Program Experiences (MTech) & Technology Enhanced Learning & MOOC Experiences			
Sl.No.	Paper-ID	Title	Authors
1	FC17_12	Course Project in Mobile Computing – An experiential learning	Shrinivas D Desai
2	FC17_16	Application of Statistical Methods in Bioprocess Engineering Laboratory to Reinforce Students' Ability in Data Collection, Analysis and Interpretation.	Sharanappa A, L. R. Patil, V. S. Hombalimath, Deepak Yaraguppi, Anil R. Shet
3	FC17_4	An experience of Project Based Learning in SAPM course	Sagar Patil, S.VPatil
4	FC17_38	A post-placement program to bridge the gap between Institute & Automotive Industry	Venkatesh Mane, Prabha Nissimagoudar; Gireesh H.M.
Lunch Break from 1.00 to 2.00 pm			

SESSION 3			Time: 2.00 to 3.30 pm	
Session Chair:		Prof. S. S. Quadri		
Reviewers:		Prof. Meena Maralappanavar Prof. Yogesh Velankar Prof. Anil Nandi		
Theme: Outcomes Assessment and Experiential Learning – Open ended experiments, projects, field visits				
Sl.No.	Paper-ID	Title	Authors	
1	FC17_21	Tutorial on Computer Organization and Architecture-Advantages and Challenges	Umadevi. F. M, Namrata D.H. Meena S.M.	
2	FC17_14	Outcomes Of Integrating Total Station And Surfer8 Software In Survey Practice Laboratory	Khalida H. Munatsher	
3	FC17_24	Enhancing students learning skills through Integrated Course Project Design Model(ICPDM)	Vijayalakshmi M, Mahesh S. Patil, Aruna S. Nayak, Vidya S. Handur, G. S. Hanchinamani	
4	FC17_30	Teaching Operating Systems Concepts With Programming assignments	Shantala Giraddi, Priyadarshini Kalwad, Nagartna Kulenavar, Suvarna Kanakaraddi	
Lunch Break from 1.00 to 2.00 pm				

SESSION 4			Time: 3.45 to 5.15 pm	
Session Chair:		Prof. B. B. Kotturshettar		
Reviewers:		Prof. Priyatam Kumar Prof. N. R. Banapurmath Prof. V. N. Gaitonde		
Theme: Pedagogies in Engineering Education + Experiential Learning – Open ended experiments, projects, field visits				
Sl.No.	Paper-ID	Title	Authors	
1	FC17_34	Pedagogical Interventions through Software tools in Postgraduate Engineering Programme	Rakesh Tapaskar , M. B. Gorawar; R.S.Hosmath; P. P. Revankar	
2	FC17_19	Activity (Video to Concept) based Teaching Learning: A Case study in Discrete Mathematical Structures	Nitya N. Kulkarni, Ms. Nirmala Patil; Mr. Karibasappa K. G; Ms. Meena Maralappanavar	
3	FC17_33	The Flipped classroom: An Inverted method of Teaching and Learning	Jyoti Patil, Nalini C. Iyer, Sujata Kotabagi, R. V. Hangal, Sujata N, Sourmya B, Dr. Subbanna Bhat	
4	FC17_8	Improving Data Analysis Skills in Freshman Engineering Students: A Constructive Approach	Preethi Baligar, G.H. Joshi, G N Bhadri, Y.Velankar	
5	FC17_3	Course project based collaborative learning of internet of things	Vishwanath P. Baligar	

Date : 28-July-2017
Venue : BioTech Auditorium

SESSION 1		Time: 9.30 to 11.00 am	
Session Chair :		Prof. P. G. Tewari	
Reviewers	Prof. A.B. Raju	Prof. S.V. Patil	Prof. G. U Raju
Theme: Pedagogies in Engineering Education + Research Experiences, Entrepreneurship and Industry – Institute Collaboration			
Sl.No.	Paper-ID	Title	Authors
1	FC17_5	Digital Collage-as a Pedagogical Tool for Effective Learning of Immunological Concepts	S.V. Desai
2	FC17_28	Collaboration with Industry in the Information Storage and management course design	Suvarna G. Kanakaraddi, Meenaxi Raikar, A. K.Chikaraddi, Jayalaxmi G, Shantala G.
3	FC17_37	Integrating Genomics and Proteomics - A Bio-informatics-based approach to Establish Gene-Protein Relationship.	Sharanappa A, S.V. Desai
4	FC17_9	An Experiential Learning in Electrical Machines Laboratory Course	Minal Salunke, Javeed Kittur
Tea Break from 11.00 to 11.15 am			

Date : 28-July-2017
Venue : BioTech Auditorium

SESSION 2		Time: 11.30 to 12.45 pm	
Session Chair :		Prof. P. G. Tewari	
Reviewers	Prof. A.B. Raju	Prof. S.V. Patil	Prof. G. U Raju
Theme: Pedagogies in Engineering Education + Research Experiences, Entrepreneurship and Industry – Institute Collaboration			
Sl.No.	Paper-ID	Title	Authors
1	FC17_1	Importance of Critical Thinking and Test Software for Learning Enhancement in Thermodynamics	T. M. Yunus Khan, Nagaraj Ekabote
2	FC17_41	A Journey: Workshops to Start-ups	Uma Mudenagudi, Ujwala P, Shankar S, Sujata C, Ashok Shettar
3	Presentation on Relative grading by Prof. P.G.Tewari and Prof. Anilkumar V. Nandi		
4	Presentation by Impartus		
Lunch 12.45pm onwards			

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Course project based collaborative learning of internet of things

Vishwanath P. Baligar

School of Computer science and engineering

vpbaligar@bvb.edu

Abstract

Internet of Things (IoT) is the requirement of today's world. Controlling the things through internet is the basic requirement of the IoT. Things here refer to the devices, instruments, machines and so on. Internet is used to transmit the data from the place where the devices are placed to the servers or to the cloud storage. The required data is gathered through electronic devices which make use of sensors. The IoT course has been introduced at second semester as an elective for post graduate students of computer science and engineering (CSE). It was very challenging to teach this subject to the CSE students, as they are good in software development but scared to touch things / devices / hardware / machines / circuits. This subject is included by considering the recommendations by the industry experts who are members of Board of Studies (BoS) and other members of BoS. The same is approved by the Academic Council. The syllabus was designed to meet the latest technological challenges. Six teams were made out of seventeen students in the class. There were 2 to 3 students in each team. The team was asked to come up with three project ideas based on their area of interest. For each of the team, out of three ideas, one idea was chosen. Total six ideas / projects were chosen out of thirty six ideas and are: 1) Remote heart pulse monitoring system. 2) Protecting yields from rain. 3) Automatic railway gate. 4) Smart irrigation system. 5) Home automation system and 6) Smart street light system. The required IoT kits were sponsored by TEQIP, which include: Arduino Boards, Raspberry Pi-3, motors, relays, pumps and many types of sensors. All these six projects are IoT projects and make use of ThingSpeak cloud for storing and analysing the data gathered by the sensors. It has been observed that the students are able to collaborate and work in an efficient way. All the projects were successfully implemented and have come up with six products / prototypes. The outcomes are: 1. a project exhibition was conducted to showcase the ideas. 2. The students, course teacher and faculty members who attended the exhibition were interviewed by KLE Dhwani FM 90.4 and the same was broadcasted. The major outcome is in terms of publications. All the six projects are now in the process of publishing scopus indexed Journals / IEEE International Conferences. The main focus is to impart in depth knowledge to students on IoT by studying theory and doing course projects. This is proved by expected to publish six scopus indexed papers.



Enhancing students learning skills through Integrated Course Project Design Model (ICPDM)

Vijayalakshmi M., Mahesh S.Patil, Aruna S.Nayak,
Vidya S.Handur, G.S.Hanchinamani
School of Computer science and engineering
viju11@bvb.edu

Abstract

The role of technical education is not only to fulfill the requirements of industry or to drive economic growth of the country or to create equality in socio-economic conditions but also to impart lifelong learning skills to students to adapt to perpetually changing technology and global market needs. For the undergraduate engineering students to become acceptable by the industry, their critical thinking and problem solving ability, design and analysis capability, interpersonal and communication skills need to be honed. Through integrated curriculum, the students can pursue learning in a holistic way thus avoiding restrictions imposed by course boundaries and it helps develop positive attitudes for continued successful learning throughout their undergraduate study. An integrated curriculum fosters learning experiences that are designed to be mutually reinforcing and synthesized across traditional subject areas. This calls for certain curriculum reforms and here we are proposing integrated course project design model (ICPDM). Earlier approach was that course projects were done in isolation, which increased the students' learning overhead as it lacked the application of knowledge across courses. Apart from this, it failed to impart design skills, soft skills and collaborative and cooperative learning to the students. This paper presents a model ICPDM for integrated course design, which is used for implementation of ICP. ICP has proved to be the best option to incorporate design and lifelong learning skills to the students through the courses without overburdening students and faculty and providing good time management strategy. The culture of cooperative and collaborative learning has also been enhanced amongst the students. This activity has also been able to reach out successfully to a heterogeneous mix of students.

Automated tool for improving students programming productivity

Mahesh S Patil, Satyadhyam R Chickerur, Indira Bidari
School of Computer science and engineering
mahesh_patil@bvb.edu

Abstract

Many programming courses are part of engineering curriculum, in each of these courses the outcomes focus on programming productivity parameters such as coding standards, design patterns and optimization. But often faculty have encountered difficulties in evaluating students programming productivity since the procedure of evaluation for these parameters is manual. Students may also propagate mistakes while self evaluating such skills. Here comes the need of tools to assist faculty in teaching and evaluating programming productivity skills, also allow the students to self-evaluate their skills. Such tools can also be used by the industries to measure and assist productivity skills of their coders. This paper presents the design and implementation of such a tool. The tool is designed to evaluate programmer's efficiency considering the parameters such as usage of memory and machine cycles or frequently used constructs for C programming. The main idea of this solution is to measure the number of defects each developer produces. Users can also view his/her coding inefficiency result in the form of graph as well as in percentage along with line numbers. This tool can detect many efficiency bugs in code written by novices when compared to experts code. In future, the tool shall be designed to measure the productivity using various other parameters.

Teaching Operating Systems Concepts With Programming assignments

Shantala Giraddi, Priyadarshini Kalwad, Nagartna kulenavar, Suvarna Kanakaraddi
School of Computer science and engineering
shantala@bvb.edu

Abstract

Operating systems classes always include a heavy lecture component to explain topics as operating systems architectures, synchronization, process management, memory management and file system. However in addition to these lectures students need some form of personal exploration to investigate how the concepts and algorithms are implemented. The authors report a series of programming assignments suitable for a one semester operating systems course to address this issue. Simulation of functionalities of operating systems, survey of contemporary operating systems, implementation of shell, that acts as OS interface to the user and addition of new API to an existing operating system. These projects are of moderate complexity but students need to understand core components of operating systems. Results show that these assignment increase understanding level of core concepts and also expose students to various aspects of a real-world operating system.

The programming assignments were specially designed so as to make students explore the various components of OS.

The authors found that these assignments definitely enhance the learning experience and there was a remarkable change in the learning level of the students as evident in the grades obtained by the students.

Digital Collage-as a Pedagogical Tool for Effective Learning of Immunological Concepts

S.V. Desai
Biotechnology department
desaisv@bvb.edu

Abstract

Digital collage is an extended version of traditional collage which has gained immense acceptance in the recent days It is a form of graphic art that uses virtual images from various online sources and juxtaposed together to form one assemblage to convey a specific theme. Immunology, as a course is intricately associated and holds scientific rationale for several aspects of daily life. The course provides immense scope for context-building and story-telling exercises for teaching-learning process. The objective of the pedagogical exercise was to attain a comprehensive understanding of the concept by engaging the students in active-learning through story-building and collage-making. The activity was performed for Immunology course of IV semester undergraduate students of Engineering in Biotechnology. Twelve topics, central to the understanding of the course and their applications were selected for the activity and assigned to each student group. The activity comprised three phases: 1). Drafting of technical sketch related to the topic; 2). Story-building to explain the topic & developing a digital-collage to elucidate the same and 3). Oral presentation of the activity by the group members. The contents of the technical script and stories developed were reviewed for the relevance to the topic and feasibility for collage-making. A common template was followed to ensure an uniform pattern of collage layout. The activity was followed by rubrics-based assessment and mapping to Graduate attributes, Global competence and Performance Indicators. The activity was instrumental in addressing the graduate attributes related to understanding of domain knowledge, oral and written communications. A formal feedback based on anonymity was collected and the results analyzed. Majority of the respondents opined that the activity was a new experience which helped in deeper understanding of the concept, sensitized their creativity, honed their communication skills and incited a sense of concerted team-work.

Augmenting cloud concepts learning with open source software environment

Meenaxi M Raikar, Vijayalakshmi M., Padmashree Desai
School of Computer science and engineering
mmraikar@bvb.edu

Abstract

Cloud computing technology usage has emerged as a prominent field in providing the computation services to the cloud users. The three main components of cloud services include compute, network and storage. The 3As - AnyTime, AnyWhere and AnyDevice – concept changed the industry towards user-centric needs to collaborate and connect with people, which makes software industries to adopt the cloud based development environment. This created the scope for educationist to enable the students with the skills related to cloud computing technology. A course on distributed and cloud computing is introduced in the postgraduate, Computer Science and Engineering stream to cater this.

The authors discuss the challenges faced in teaching-learning cloud computing technology and the method followed to overcome these. Two main challenges are designing the course content and adopting suitable open source infrastructure tools for hands-on experience. The authors have identified open source software environments which provide basic services for educational purpose. A laboratory course is designed in line with the theory course. The activities planned in the course are assessed based on the outcome based evaluation.

In the current academic year 45% of the students used cloud computing technologies either in major, capstone projects or elective courses. The graduate attribute addressed in the course are domain knowledge gain in cloud computing concepts, problem solving, usage of modern tools and life long learning. The average attainment of the stated graduate attribute is 73.52% in the course internal semester assessment.

Tutorial on Computer Organization and Architecture- Advantages and Challenges

Umadevi.FM, Namrata D.H. Meena S.M.
School of Computer science and engineering
uma_devi_fm@bvb.edu

Abstract

Teaching Computer Organization and Architecture to the students of Computer Science and Engineering is a responsible task, as this course lays foundation for various other courses like System Software, Principles of Compiler design and Operating System. But it's always been a challenge for the course instructor to teach the course effectively. The students of Computer Science and Engineering have been inclined towards software courses and hence teaching a course without associated laboratory, has been a drawback. Traditionally this course was taught solely focusing on the textbook as the resource material. Students usually relied on their imaginations to understand the hardware-related concepts. But wrong imaginations lead to misunderstanding of the concepts. To aid students with better understanding of concepts, course instructors decided to redesign the course. Earlier this course was taught in Autonomous B.V. Bhoomaraddi College curriculum for five credits; four credit theory and one credit self-study. The course was redesigned in KLE Technological University Curriculum. For this course the allotted credits was four, which challenged course instructors to teach the course effectively. So it was thought of assigning three credits to theory and one credit to tutorial. The tutorial was planned to address the previously mentioned challenges. The most popular RISC ARM processor was chosen as a case study. To measure the effectiveness of the tutorial, activities were conducted and evaluated as per designed rubrics. Behavior of ARM was correlated with theory taught in class which targeted the general purpose modern computing machine. In this paper we highlight the challenges and the advantages of tutorial. As a result, we have noticed that students have shown better understanding of the subject than the last few years. Results were found satisfactory. In future the course can be made still effective by focusing more on assembly coding.

Collaboration with Industry in the Information Storage and management course design

Suvarna G Kanakaraddi, Meenaxi Raikar,
A.K.Chikaraddi, Jayalaxmi G, Shantala G
School of Computer science and engineering
mmraikar@bvb.edu

Abstract

We live in a digital era deluged with huge data. An enormous amount of digital data is continually generated, collected, stored, and analyzed through software in the digital universe. Individuals constantly generate and consume information through numerous activities, such as web searches, e-mails, uploading and downloading content and sharing media files. To provide solutions on various domains most of the organizations are providing storage solutions. Among these organizations DELL-EMC is one of the leading storage solution providers. Information Storage and Management (ISM) is a unique course developed by DELL-EMC and it provides a comprehensive understanding of the various storage infrastructure components in data center environments. To provide exposure on storage technology solutions to the students, an ISM course was introduced for VII semester Computer Science and Engineering students (CSE). EMC's Curriculum on ISM course addresses the knowledge about storage technology emerging solutions.

EMC Academic Alliance provides an opportunity to the students on ISM certification with free of cost. Based on these opportunities, ISM course contents are taken from EMC and course learning objectives are set according to the expectations of the industry. Authors have motivated the students by conducting online mock test on ISM certification. Through which students have got an exposure on writing certification exam. At the end of this course EMC Proven Professional Certification Online exam on ISM was conducted and 50% of the students have qualified the exam with the target score of 85%. This certification creates an opportunity to the students to look for software jobs. Through this course we have mapped Department Program Outcome on Data Engineering criteria. With this course students have enhanced their skills in attempting online certification exams, which helps to build their career. By establishing the industry Alliance with DELL-EMC the authors are able to enhance the skills of students / next generation IT professionals on cloud technology, big data analytics and data storage.

Google Forms that Made Teacher's Life Easier: An Experience and Experimentation

Rohith Hallur
CEER
rohith.hallur@bvb.edu

Abstract

Abstract: "Present generation is born after internet was Born" which speaks about Technology, Smartphones, and Social Networks. These tech-giants show its impact on students, who are getting into engineering profession. The process of learning engineering requires lot of efforts from both learners and teachers. Several researches are under process in order to optimise the teaching process to address the current generation. It has also become very difficult for the present generation learners to adapt to the old pedagogy techniques and tools to get interactive with teachers. The techniques of teaching have generated huge data which is a big challenge for the teachers to manage. To handle such huge data several tools are available which also facilitate its analysis. One such user-friendly tool is Google form. Usage of Google form reduces workload, increases efficiency and accuracy of a teacher's work. This paper speaks about an experience of usage of Google Forms in engineering education which changed means of approach towards students, thinking, collection of information and working style of a teacher in this era.

Course Project in Mobile Computing – An experiential learning

Shrinivas D Desai

Department of Information science

sd_desai@bvb.edu

Abstract

As a predominant technology among our student bodies (with smart phones and tablets), along with the growing market for Android or iPhone developers, students are yearning for understanding the computations that happen at the back-end. In this paper a case study of course project in “Mobile computing” course is presented. As a course project, the students were encouraged to develop new applications to retrieve the back end data such as SIM information, Nearest Tower Information and Protocol stack employed during Internet browsing. The main objective the course project is to strengthen the theoretical concepts in the class by experimenting with real-time mobile system. Assessment of student's “understanding level” prior and after the course project is recorded. Different data like minor exam results, quiz results and feedback results were analyzed.

Finally it is found that; the students have developed a good level of understanding, the underlying wireless and mobile communication networks, their technical features, and mapping theoretical concepts learnt in class with practical results. The skill of programming and integrating existing mobile apps is found to be complementing to the course outcomes.

A post-placement program to bridge the gap between Institute & Automotive Industry

Venkatesh Mane, Prabha Nissimagoudar; Gireesh H M

School of Electronics and Communication engineering

mane@bvb.edu

Abstract

automotive industry has grown significantly in the recent years and the expectations from an undergraduate are peaking up day by day. The automotive industry giants like Robert Bosch, KPIT, Mercedes Benz, wants industry ready graduates to put them on the project directly without spending much time on the OJTs (on job trainings). This would greatly reduce the time to market their products. The automotive industry looking for the skilled engineers having strong hands on experience in embedded C, model based design & development, communication protocols like CAN, LIN, Flexray, modern industry tools like CANalyzer/Busmaster, VMLAB.

To address the industry needs stated above during sixth semester every student go through the automotive electronics theory course along with automotive electronics lab and Advanced automotive course is conducted only for the automotive industry placed students after the completion of the graduate program. The paper details about the post placement program conducted for the automotive industry placed graduates. This course greatly helped the students to crack the post placement test conducted by the industry and it also has significantly reduced the training programs conducted at the industry. This indirectly boosted the placement count.

Pedagogical Interventions through Software tools in Postgraduate Engineering Programme

Rakesh Tapaskar, M.B.Gorawar; R. S. Hosmath; P. P. Revankar

School of Mechanical

pp_revankar@bvb.edu

Abstract

Educational institutes have been practicing the proprietary software extensively with a profound impression that only the proprietary software can accomplish the educational requirements leading anticipated outcomes. In fact, open source software (OSS) tools can provide the indispensable flexibility to combine languages, scripts, learning objects and lesson plans, effectively, without the cost and rigidity of proprietary software and other added benefits. The present pedagogical intervention highlights the idea computational tools and software in postgraduate engineering curriculum in Energy Systems Engineering . The proposed work on the available options which can potentially employ Software tool with benefits to educational institutes and student's community. The outcomes of implementing these pedagogical strategies have shown the accelerated learning skills of the students in the engineering discipline

Outcomes Of Integrating Total Station And Surfer8 Software In Survey Practice Laboratory

Khalida H. Munatsher

School of Civil and Environmental engineering

khalida@bvb.edu

Abstract

During the past decades remarkable changes in the technology have occurred. Due to which the advancement in the civil engineering practices at field is growing and it is required to update. One of the trending technologies is Total Station. Total Station is modern surveying equipment with Electronic Distance Measurement (EDM), used by civil engineers and surveying engineers at field for various applications. An effort was set to refine the curriculum for up to date technology and to contribute for the enhancement of students acquiring industry – based skills. In order to achieve this, the students of semester IV were introduced with the equipment 'Total Station' which they used to carry out the open ended experiment in Survey Practice II laboratory course. This activity was implemented successfully for the first time in curriculum for the semester IV students. The assessment focused on three parameters and they are data collection, analysis using software and documentation. As per the assessment the attainment of parameters data collection and documentation is 82.45% and 80.91%, whereas the attainment of the parameter analysis using software is comparatively less which is 75.67%.

Activity (Video to Concept) based Teaching Learning: A Case study in Discrete Mathematical Structures

Nitya N. Kulkarni, Ms. Nirmala Patil; Mr. Karibasappa K. G; Ms. Meena Maralappanavar

School of Computer science and engineering

nitya@bvb.edu

Abstract

Discrete mathematical structure is one of the most important foundation courses that a computer science and engineering department offers in the 2nd year. The course deals with describing discrete objects and their relationships among themselves and with the other objects. One of the basic concepts the course focuses on is logic building. Logic helps students to develop mathematical reasoning that seeds to software development skills. There have been many deliberations on how to teach logic. Traditional methods of teaching propositional and predicate logic are being questioned as the methods fail to develop student's ability to reason. There has been emphasis on visual methods in the recent years for teaching logic mainly due to large population of visual learners as the ability to reason is directly connected to vision.

The first order logic is basically applied in documenting the complete and correct formal specifications to develop software. These formal specifications are written on the basis of customer requirements which are usually unstructured. Hence, along with the basics of first order logic, the ability to reason, in-order to apply in different fields of computer science is also essential.

In this paper authors attempt to address the effect of teaching / learning first order logic visually by the amalgamation of traditional and visual methods.

The basics of first order logic was taught to students using traditional method of chalk and talk in which the examples of real world as well as examples related to computer science were discussed. After cultivating the basic foundation of logic, students were asked to submit the assignment by mapping the concepts learnt in the class to the content of video. The new pedagogical activity involved in identifying propositions from the given video, connecting them with logical connectives based on the content video content and solving these premises using inference rules and laws of logic.

The authors analyzed the course attainment comparing 2016-17 and 2015-16 batches. The study shows that there has been improvement by 22%. Since the experimentation was conducted for the first time, making decisive conclusions on the method is premature. However we found that students appreciated the assignment and submitted with great fervor.

Improving Data Analysis Skills in Freshman Engineering Students: A Constructive Approach

Preethi Baligar, G.H. Joshi, G. N. Bhadri, Y. Velankar

CEER

preethi.b@bvb.edu

Abstract

With the advent of the information-age and digitization, vast amounts of data is getting generated and collected by trillions of communicating devices. As a consequence data-driven decisions are shaping the economy of a nation by predicting considerations for current and future profitability, safety, security, personalization of services, among many others. In the context of engineering work, the collection of meaningful data, subsequent analysis and drawing of relevant inferences is of importance in designing technological solutions to real world problems. This role begets a working knowledge in statistical thinking. But the path to Statistics education is replete with challenges like lack of student interest; Statistics induced anxiety, lack of teachers' awareness in pedagogical content knowledge, non-use of technology and restriction of practice and assessment to non-real world problems.

In this study, the authors present the content, pedagogy and assessment for fostering the competency of descriptive Statistics in an introductory first year undergraduate engineering course titled, "Engineering Exploration". The work focuses on adopting constructivist learning approach and active learning strategies in the organizing the students existing body of knowledge and create opportunities for application of descriptive Statistics to real world datasets(WHO, UNESCO, India census data). The students summarize and explore the dataset using Microsoft EXCEL tool.

Within the framework of a pre post, repeated measures (1 group), quasi-experimental design (without randomization), background information(stat and non-stat), pre-test and the post-test scores are being used to measure the gain in learning (after 3 hours) for the group (sample=824). Having conducted the paired t-test on the paired scores, for significance level, $\alpha = 0.05$, the intervention resulted in a significant difference ($p = 9.07E-64$ for overall performance)

Application of Statistical Methods in Bioprocess Engineering Laboratory to Reinforce Students' Ability in Data Collection, Analysis and Interpretation.

Sharanappa A. L.R.Patil, V.S.Hombalimath, Deepak Yaraguppi, Anil R Shet
Biotechnology department
sharanappaa@bvb.edu

Abstract

Bioprocess engineering is a highly interdisciplinary field of study, which deals with the design and development of equipments and processes for the manufacturing of bioproducts from biological materials. It finds varied applications in the field of agriculture, food, pharmaceuticals, nutraceuticals and chemicals. The course demands practical exposure where-in students can actively experience the interconnection between biology and engineering. The present study was conducted for VI semester undergraduate students of engineering in Biotechnology for Bioprocess Engineering Laboratory. The laboratory comprises fermentation studies for the production of valuable products, aimed at understanding the relationship between variables and kinetic parameters of the microorganism. The exercise results in the generation of voluminous data, which necessitates for optimization of the process parameters. Collection, analyses and interpretation of the data plays an important role in understanding the relationship between process parameter and productivity for optimization of the process. Application of statistical methods to facilitate such learning was performed in Bioprocess Engineering Laboratory. Through this process, students successfully demonstrated their ability in planning & conduct of experiment, choosing proper statistical tools for analysis & interpretation of data to draw meaningful conclusion, and formulating testable hypothesis. As part of this course implementation and framework, the results evaluation and assessment of student learning through defined rubrics combined with feedback are presented. The assessment and feedback revealed the significance of statistical usage in understanding of submerged fermentation process.

An Experiential Learning in Electrical Machines Laboratory Course

Minal Salunke, Javeed Kittur
Department of Electrical and Electronics engineering
minal@bvb.edu

Abstract

This work illustrates the use of Design of Experiments (DOE) as an experiential learning in Electrical Machines laboratory. DOE is a systematic method to determine the relationship between factors affecting a process and the output of that process. This information is needed to manage process inputs in order to optimize the output. The objective of this work is to provide an exposure to students on experimentation and simulation environment as a part of structured enquiry problem in the course. A common problem statement was given to the class of eighty students. A batch of five students worked as a team in order to accomplish the task. The problem statement focused on developing the second order response surface methodology based model to predict the speed of a motor by conducting DOE with two control factors and three levels each. Sixteen teams were given common problem statement with varied ranges of control factors. Full Factorial Design (FFD) was selected as a suitable design of experimental layout plan. Each team conducted nine trails for two control factors and three levels. To further validate the model, nine additional experiments with random control factors have been carried out to test the accuracy of the model. Students were introduced to open source simulation tool which was used to predict the response. As per the estimate of laboratory schedule for solving structured enquiry problem, the students were assessed in accordance with the rubrics published well in advance. The competencies addressed for activity are problem analysis, ability to design experiments, individual and team work, simulation. The analysis was concentrated on deviation of predicted and actual measured values of motor speed, regression, and variation of output response with respect to two control factors. This activity helped the students to analyze the results for the proposed problem. As per the assessment, the attainment of the competencies - problem analysis, experimental design planning, individual and team work is around 65.6%, 90.5% and 84.2% respectively. However there is scope for improvement in area of coding as the attainment is comparatively low with 72.5%. As per the students' feedback, their learning is enhanced after having undergone this activity in comparison with classroom learning.

Integrating Genomics and Proteomics - A Bio-informatics-based approach to Establish Gene-Protein Relationship.

Sharanappa A, S.V. Desai
Biotechnology department
desaisv@bvb.edu

Abstract

The central dogma of life beginning with DNA leading to RNA and subsequently to protein is the unifying principle and corner stone to the understanding of biology. The concept is best elucidated at length by Genomics and Proteomics via Transcriptomics. With the advent of sophisticated and high throughput sequencing, enormous data is being generated. This has made the bio-informatics tools indispensable to decipher the data into meaningful conclusions. The objective of the present study was to comprehend the understanding of Genomics and Proteomics with the use of Bio-informatics tools. The activity was performed for Genomics & Proteomics course of VII semester undergraduate students of Engineering in Biotechnology. The students were grouped into team of four and assigned with one pathogenic bacteria. The activity involved identifying a pathogenesis-related protein, retrieving the DNA sequences of the protein, finding conserved domains, building phylogenetic relationship amongst the homologous organisms, genome annotation, predicting secondary structure of proteins and deducing its stability. In the process, the students were engaged in active learning by the use of various Bio-informatics tools and repositories based which included Is Genebank, BLAST, Clustal Omega, SOPMA, SWISSPROT and PROTPARAM. The students were thus able to predict the secondary structure of protein beginning with DNA sequences. The activity was instrumental in addressing the Graduate attributes pertaining to the understanding of domain knowledge, use of modern engineering tools and written communication skills. A formal anonymous feedback from the students revealed that the activity helped in appreciating the intricate relationship between Genomics and Proteomics by integrating the related concepts.

The Flipped classroom: An Inverted method of Teaching and Learning

Jyoti Patil, Nalini C.Iyer, Sujata Kotabagi, R.V Hangal, Sujata N, Soumya B, Dr. Subbanna Bhat
Department of Instrumentation Technology/ E&I
jyoti_patil@bvb.edu

Abstract

The flipped classroom is a new pedagogical method, which employs video lectures and practice problems as homework assignments and group based problem solving activities in the classroom. The Flipped classroom has both in-class and out-of-class activities which improve learning methods. The flipped classroom is a class where the lecture and homework have been reversed. Usually the students prefer traditional classroom teaching to video lectures, with Flipped class approach students became self learners. The present paper provides a detailed interactive method for learning Circuit Analysis and Linear Integrated circuits through Flipped classroom. It also emphasizes on the results of comparison between Traditional classroom teaching and Flipped classroom. The self-perceived knowledge after participation in the course became more interesting for problematic and conceptual courses. The students showed positive feedback towards the method of Flipped learning and enjoyed the associated benefits such as in-depth self learning to explore concepts. We used pre- and post-course tests to measure changes in self-perceived knowledge. Analysis of the impacts showed that flipped classroom brought positive impacts toward students' learning activities such as achievement, motivation, engagement, and interaction. Several issues in this discussion become implications that can be taken into consideration for future.

Art of publishing refereed papers through experience of pg minor projects

Dr. Vishwanath P. Baligar

School of Computer science and engineering

vpbaligar@bvb.edu

Abstract

Publishing quality papers in both National and International conferences and Journals is one of the great challenges faced by Engineering Institutions. Minor Project is introduced at III semester MTech in Computer Science and Engineering is of sixteen weeks duration. To publish quality papers with scopus index, based on the experience of Minor Project requires lot of in-depth knowledge, choosing tools and making use of the latest technology. Since the time is too short and is only 16 weeks, we have come up with many ideas and used new innovative process to publish more than ten papers in International Conferences and Journals with Scopus Index. Another six are under process. The total number of students present in the class is 21. The students are able to publish quality work done under the head Minor Project. Choosing the latest area was the first challenge, after preliminary discussion with the students, Internet of Things was selected as the theme for Minor Project and it was not compulsory. The students were given a chance to choose the area of interest. Twelve students out of Twenty One students selected IoT as their area of Minor Project, rest of them have chosen other areas. The second challenge was to impart in-depth knowledge; this was achieved by conducting a workshop under TEQIP. The workshop was on "A Two Day Workshop on Raspberry Pi". Other required skills like pushing the data to the cloud and working on the data was taught in the Labs. The third challenge was; most of the students are from Computer Science and Engineering background are having less experience on hardware, writing device drivers, interfacing machine, lack of knowledge on sensors and working with high voltage devices. This was overcome by the support given by our Institute to purchase the IoT kits under TEQIP. The students were given the IoT kits and trained and the students are able to adopt themselves to the kits and the Technology and at the end they are able to publish quality papers as said. Hence the goal of publishing quality papers is achieved through Minor Projects.

Importance of Critical Thinking and Test Software for Learning Enhancement in Thermodynamics

T. M. Yunus Khan, Nagaraj Ekabote

Abstract

Thermodynamics is one of the exciting and thought-provoking subjects and equally one of the difficult subjects to teach and learn the basic and applied principles of thermodynamics. There are many emerging progressive methods available in open literature to address the difficulties associated in teaching and learning environment. The new approach, which is a blend of critical thinking and TEST software, has been applied as a new methodology while teaching thermodynamics. This method has proven to be effective in helping students to understand and develop confidence in their ability to solve engineering thermodynamics problems. The effectiveness of the method applied was done based on the students' performance, interactions during lecture hours, evaluation of the assignments and students' feedback.

An experience of Project Based Learning in SAPM course

Sagar Patil, Dr. S.V. Patil

Abstract:

In this descriptive paper, authors have made an attempt to understand importance of the Project Based Learning (PBL) in Security Analysis and Portfolio Management (SAPM) course of 3credits and 40hrs offered in 3rd semester for MBA students. Wherein a class of 37 students (n=31) were divided into 3-4 members per group and course project was given. It included compulsory design of online portfolio using dummy account in moneycontrol.com. With few challenges the exercise was carried out and it was found that Project Based Learning is more appropriate tool to employ in this course. Moreover, e-portfolio is a good tool for quick learning (Barett 2001). Further, e-portfolio assessment is very easy in developing strategies and handholding of the stakeholders resulting good understanding and quick learning (Garthwait & Verrill, 2003). In the rest of the paper, few observations and learning's have been shared.

A Journey: Workshops to Start-ups

Uma Mudenagudi, Ujwala P, Shankar S, Sujata C, Ashok Shettar

Abstract

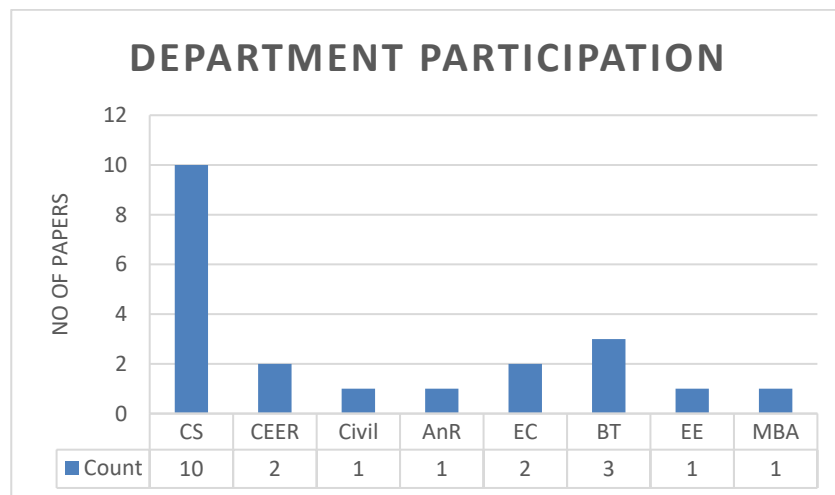
In this paper, we discuss the role of summer and winter workshops conducted during vacations in student learning. This is a story of conducting summer and winter workshops, which lead to two student's start-ups. The main goal of the workshop is to make students learn the basics of image processing (IP), computer vision (CV) and computer graphics (CG), so that students are ready to take up real time projects. The workshop is conducted in two phases, two weeks of conceptual learning with hands-on experience with tools, and four weeks of project phase. We observe this workshop is effective in learning the course beyond classroom teaching, as they explore the literature for state of art and design alternative solutions for the real time problems. Summer workshops are conducted during June-July and around 600 students are trained with the help of nine workshops till date.

Summary of Faculty Conclave- 2016-2017

A Two-days Faculty Conclave 2016-2017 was organized by Centre for Engineering Education Research (CEER), KLE Technological University, Hubballi on 27-28th, July, 2017. The event was seventh in series of its kind being arranged since 2011. The event being conducted annually provides a platform to showcase new pedagogical practices and research in the space of engineering education at KLE Technological University, Hubballi.

The conclave was formally inaugurated by Dr. Ashok Shettar, Honorable Vice-Chancellor, KLE Technological University and addressed the gathering. Dr. Gopalkrishna, Director, CEER, KLE Tech welcomed the audience.

The event had in all 21 paper presentations by the faculty members belonging to different schools and Departments of the institute and spread over five sessions.



Five distinct themes namely,

1. Curriculum Innovation.
2. Outcomes Assessment
3. Experiential Learning.
4. Pedagogies in Engineering Education.
5. Research Experiences, Entrepreneurship and Industry-Institute Collaboration.

6. Graduate Program Experiences.
7. Technology Enhanced Learning & MOOC Experiences.

The papers presented were subjected to peer-review process before the deliberations. The presentations were reviewed by panel of reviewers who put forth their comments and followed by the discussion with audience. The sessions were coordinated by senior Professors who chaired the sessions.

The two key highlights of the Faculty Conclave- 2017 were:

1. The abstracts of all the papers presented were compiled and released as “ Proceedings of the conclave “ during the inaugural session.
2. A series of four pre-conclave workshops were organized as a run-up to the conclave with themes of institutional relevance. The following were the pre-conclave workshops organised.
 - a. Workshop on Outcome-Based Education (OBE) was organized by Dr. P.G. Tewari, Principal, B.V.B. College of Engineering & Technology, Hubballi.
 - b. Workshop on Rubrics-Based Assessment was conducted with Dr. G.H. Joshi & team.
 - c. A session on Impartus Lecture Capture Solution (LCS) was undertaken by Mr. Ramprasad, Senior Client manager, Impartus.
 - d. An orientation session 3T- Teaching, Technology and Transformation using CollPoll was delivered by Dr. Murli Nagasundaram.

The faculty of the institute actively participated in the deliberations during the conclave. The event served as a forum for exchange of ideas and practices followed across the various schools and Departments of the KLE Technological University.

A formal feedback from the participants of the conclave was collected with an objective to improve the conduct of the event. Majority of the respondents opined that the event was well organized and the pre-conclave workshops conducted were relevant and useful. They also expressed satisfaction with the paper submission and review process adopted. Many respondents were interested to know more about research in engineering education and sought mentoring and implementation support from CEER regarding innovations in teaching and learning process.

Dr. P.G. Tewari, Principal, BVBCET, Hubballi and Prof. Anil Nandi presented about the Relative Grading aspects being implemented in the institute. The session highlighted the pros and cons of the system.

Certificate of participation and mementoes were distributed to the presenters. The event concluded with formal vote of thanks by Dr. Gopalkrishna Joshi.

Glimpses of Faculty Conclave- 2017



Welcome note by Prof. Gopalkrishna Joshi
Director, CEER, KLE Tech



Inaugural address by Dr. Ashok Shettar
Hon'ble Vice Chancellor, KLE Tech



Release of Proceedings



Program co-ordination by
Prof. Kaushik M.



Audience gathering @ conclave



Workshop by Dr. P.G. Tewari
Principal, BVBCET



Author presentation
Prof. Preethi Baligar



Talk by Dr. Murali N. on teaching using ColPoll



Workshop by Ram, Impartus Innovations
