

Self-Study Report – PART II
Department Evaluative Reports – Dubai Campus

Submitted for Re-accreditation
To
The National Assessment & Accreditation Council
Bangalore



BITS Pilani
Pilani | Dubai | Goa | Hyderabad

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE,
PILANI. RAJASTHAN**

November 2015





Birla Institute of Technology & Science, Pilani
Pilani | Dubai | Goa | Hyderabad

**BITS PILANI – DUBAI CAMPUS
EVALUATIVE REPORT OF THE DEPARTMENT**

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DUBAI CAMPUS: EVALUATIVE REPORT OF THE DEPARTMENT BIOTECHNOLOGY

1. **Name of the Department:**Department of Biotechnology
2. **Year of establishment of the Department:**2007
3. **Is the Department part of a School/Faculty of the university?**
Departments function as independent entities in the university and are not part of any school or faculty.
4. **Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.).**

On campus	B.E (Hons) Biotechnology
	M.E. Biotechnology
	Ph.D. Biotechnology

5. **Interdisciplinary programmes and departments involved**
Biotechnology is an interdisciplinary program in itself and involves support from the Computer science, Chemical Engineering and General sciences departments.
6. **Courses in collaboration with other universities, industries, foreign institutions, etc:**
Note: some of our structure courses like Practice School and thesis dissertation are done by our students in industries and universities outside BITS.
7. **Details of programmes discontinued, if any, with reasons:**Nil
8. **Examination System:**Semester and Choice Based Credit System
9. **Participation of the department in the courses offered by other departments**
General Biology BIO F111 and Biology Laboratory BIO F110 are the General Sciences courses which are offered by the department.
10. **Number of teaching posts sanctioned, filled and actual (Professors/AssociateProfessors/Asst. Professors/others).**

	Sanctioned	Filled (includes offer letters given)	Actual number
Senior Professor	Note**	01	01
Professor		03	03
Associate Professors		02	02
Asst. Professors		Nil	Nil
Others		Nil	Nil

Note**:The faculty positions for the University is broadly governed by Growth plan which also covers designation-wise breakup with a larger vision. Keeping in mind the fluidity of movement of faculty and proposed



student to faculty ratio in each campus for first degree, higher degree as well as Ph.D. programmes, individual department needs are not fixed. Besides, as we are in expansion plan which calls for new programmes, courses being introduced, the demand on faculty in terms of numbers, for each department, is broadly governed by all the above factors and hence it is not possible to have a fixed number of faculty for each department. Recruitment of faculty, therefore, varies, based on departmental needs.

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./M.Phil. students guided for the last 4 years
Dr. R.N. Saha	Ph.D.	Senior Professor	Drug Design and Delivery	34 years	5 Ph.D completed, 6 Ph.D continuing, M.Pharm 10 guided
Dr. D.J. Shariff	Ph.D.	Professor	Biology	34 years	1 completed
Dr. Neeru Sood	Ph.D.	Professor	Plant and Agricultural Biotechnology	15 years	3 (ongoing)
Dr. S. Ramachandran	Ph.D.	Associate Professor	Environmental Biotechnology	7 years	1 (ongoing as Co-Supervisor)
Dr. Trupti Gokhale	Ph.D.	Associate Professor	Microbial Biotechnology	13 years	0

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors Nil

13. Percentage of classes taken by temporary faculty – programme-wise information Nil

14. Programme-wise Student Teacher Ratio (Refer to Support document for calculation)

	FD	HD
Academic Year	Student Teacher Ratio	Student Teacher Ratio
2010-2011	98/5 = 19.6	NA
2011-2012	65/5 = 16.0	5/4 = 1.25
2012-2013	50/5 = 10.0	8/4 = 2.0
2013-2014	54/5 = 10.8	8/4 = 2.0
2014-2015	69/6 = 11.5	3/4 = 0.75



15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual

	Sanctioned	Filled(includes offer letters given)	Actual number
Lab Instructors	Note**	01	01
Technical Assistant		01	01

16. Research thrust areas as recognized by major funding agencies

Environmental Biotechnology, Microbial Biotechnology, Plant and Agricultural Biotechnology

17. Number of faculty with ongoing/completed projects in the last five years from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Completed projects: NIL

Ongoing projects:

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount (Lakhs)	Duration
1.	Roof top rainwater harvesting for safe, potable, and healthy drinking water and ground water replenishment for BITS Pilani, Pilani campus	PI: Dr. Rajiv Gupta, Co-PIs: Dr. Sunil Bhand, Dr. Utpal Roy, Dr. Neeru Sood, Dr. Trupti Gokhale	CoE: Water, Waste and Energy management, BITS Pilani	Rs. 91lakhs	5Years
2.	Zinc Recovery from Industrial Waste using Bioleaching	PI: Dr. Suresh Gupta, Co-I: Prof. S. K. Verma, Dr. Anupam Singhal, Dr. S. Ramachandran	CoE: Water, Waste and Energy management, BITS Pilani	Rs. 48.00 Lakh	5Years

18. Inter-institutional collaborative projects and associated grants received

a) National collaboration: The Department has an active collaboration with International Centre for Biosaline Agriculture, Dubai through which collaborative projects are been carried out. However, there are no grants received.

b) International collaboration: Nil

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received. Nil



20. Research facility / centre with : NIL

- state recognition
- national recognition
- international recognition

21. Special research laboratories sponsored by/created by industry or corporate bodies: NIL

22. Publications:

Sl No.	Details	Specify number here
	Number of papers published in peer reviewed journals (national / international)	10
	Monographs	Nil
	Chapters in Books	Nil
	Edited Books	Nil
	Books with ISBN with details of publishers	Nil
	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	9
	Citation Index – range / average	(1 to 10)/ 1.3
	SNIP	0.284
	SJR	0.1942
	Impact Factor – range / average	(0.073-4.9)/ 0.7107
	h-index	1
	Number of papers published in peer reviewed conferences (national / international)	45

Details of the publications as per the number give above (Give details in the last five years

SL No	Authors	Title of the Publications	Details of the Journal	National/International	Year
1	Pranay Sood, Neeru Sood and Trupti Gokhale	“Microwaves: An Alternative Bacterial Sterelization Technique?”	GSTF Journal of Biosciences Vol. 3, No. 2, DOI: 10.5176/2251-3140_3.2.52, http://dl6.globalstf.org/index.php/jbio/article/view/1352	International	2015
2	Menon K, Jayakumar A.P., Shahid M, Sood N, Rao N.K.	Seed Dormancy and Effect of Salinity on Germination of <i>Citrullus colocynthis</i> .	International Journal of Environmental Science and Development, Volume 5, Issue 6, Pages 566-569	International	2014
3	Menon K, Ahmed I, Sood N, Rao N.K.	The Potential of Castor as a Biodiesel Feedstock Crop for the Arabian	ICREGA'14 - Renewable Energy: Generation and Applications, Springer	International	2014



		Peninsula	Proceedings in Energy 2014, Pages 1-9, Springer International Publishing.		
4	Madhumitha Balasubramani, Jyotsna Lakshmi Kumar, Nanduri Kameswara Rao, Neeru Sood, Trupti Gokhale, Somasundaram Rajeswari, Makram Belhaj Fraj and Sanjeet Mishra	Stress-Tolerance of Sinorhizobium spp. Nodulating Sesbania and Cowpea in Desert Soils	<i>Journal of Pure and Applied Microbiology</i> , 8(1): 323-331.	International	2014
5	Adarsh Venkataraman Ganesan, Hardeep Kumar, S. Swaminathan, K. K. Singh, Reenu Anne Joy, Neeru Sood, Trupti Gokhale, R. K. Mittal	Analysis of MEMS-Based Microneedles for Blood Monitoring.	<i>Bionanoscience</i> , June 2014, 4(2): 128-135	International	2014
6	Samrudhi R. Sharma, N. Kameswara Rao, Trupti S. Gokhale, Shoaib Ismail	Isolation and characterization of salt-tolerant rhizobia native to the desert soils of United Arab Emirates.	<i>Emirates Journal of Food and Agriculture</i> , 25 (2): 102-108.	National	2013
7	Kiran Menon, Reenu Anne Joy, Neeru Sood, R. K. Mittal	The Applications of BioMEMS in Diagnosis, Cell Biology and Therapy: A Review	Journal of BioNanoScience, Volume 3, Issue 4, pp 356-366. (Springer Verlag Publication).	International	December 2013
8	NK Rao, Neeru Sood, Trupti Gokhale, Jyotsna Kumar, Ketul Sanghavi, S. Rajeswari & Sanjeet Mishra	Isolation of Stress tolerant Rhizobia from the UAE Soils,.	Biosalinity News Vol.13, issue, pp8-9	National	2012
9	Kiran Menon, Kamalpriya Anala, Gokhale Trupti, and Neeru Sood	Cloud computing: Applications in biological research and future prospects.	Proceedings of 2012 International Conference on Cloud Computing, Technologies: Applications & Management, IEEE Xplore, 102-107	International	2012



10	Trupti Gokhale, Almas Wali, Shailee Parikh, Neeru Sood	Research of marine isolates in development of biosensors for environmental pollutants	<i>Engineering Review.</i> 32(1), 17-22	International	2012
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Details of the conferences attended (Give details in the last five years)

SL No	Authors	Title of the Publications	Details of the conference	National/International	Year
1	Gayathri Ganesh, Dr. Neeru Sood, Dr. Trupti Gokhale,	Isolation of Copper Resistant Bacteria for synthesis of copper nanoparticles	ICNGCCT 2015 organized by Zelus Events, Dubai, UAE	National	22nd - 23rd April 2015
2	Trupti Gokhale, Parvathy B., Revathy Krishnakumar, Vidhya Venugopal, Juweria Anam, Neeru Sood	Phytoremediation of recalcitrant compounds, ,	3 rd Global Sustainable Biotech Congress 2014, NMU, Jalgaon, India.	International	1-5 th December 2014,
3	Menon K, Jayakumar A.P., Shahid M, Sood N, Rao N.K.	Seed dormancy and effect of salinity on germination of Citrullus colocynthis	2nd Journal conference on Environmental Science and Development (JCESD'14), Erzurum, Turkey 2014.	International	2014
4	Menon K, Ahmed I, Sood N, Rao N.K.	The Potential of Castor as a Biodiesel Feedstock Crop for the Arabian Peninsula	3rd 'International Conference on Renewable Energy: Generation and Applications' (ICREGA'14), Al Ain, UAE	National	2014
5	S.Rajeswari, Trupti Gokhale, Salma Shariff, Swathi Murali, Aarti Swaminathan, Khaled M. and Neeru Sood	Interactive Effect Of Micro And Macro Nutrients In Barley Cultivars Differing Salt Tolerance,	International Conference in Biotechnology and Bioengineering-2014, Dubai, UAE	National	29-30 th October 2014
6	Gayathri Ganesh Neeru Sood and Trupti Gokhale	Isolation of Copper Resistant Bacteria and Fungi for	International Conference in Biotechnology and Bioengineering-2014, Dubai,	National	29-30 th October 2014



		Synthesis of Copper Nanoparticles	UAE		
7	Akshay Deshpande, Saima Sirajuddin, Sarah Nuruddin, Salma Sheriff, Neeru Sood and Trupti Gokhale	<i>Photobacterium Sps</i> : A Bioanalyte In Development Of Biosensors	International Conference in Biotechnology and Bioengineering-2014, Dubai, UAE	National	29-30 th October 2014
8	Vivin Karthik, Sridevi Thyagarajan, Neeru Sood, Trupti Gokhale & Sanjida Ahmed	DNA Ancestry Test Confirms The Predominance Haplogroup J (Y-Dna) And H (Mt-Dna) Among The Middle Eastern Population	International Conference in Biotechnology and Bioengineering-2014, Dubai, UAE	National	29-30 th October 2014
9	Nirupama Dixit, Anyaa Mittal, Neeru Sood, Trupti Gokhale, KK Singh	Nanoparticles In Drug Delivery And Therapy Of Alzheimer's Disease	International Conference in Biotechnology and Bioengineering-2014, Dubai, UAE	National	29-30 th October 2014
10	Deborah Nazareth, Anyaa Mittal and Neeru Sood	Study of Potential Cancer Biomarkers for Early Diagnosis	International Conference in Biotechnology and Bioengineering-2014, Dubai, UAE	National	29-30 th October 2014
11	Srishti Singh, Anyaa Mittal and Neeru Sood	Biomarkers: A Novel Approach in Diagnosis of Cardiovascular Diseases	International Conference in Biotechnology and Bioengineering-2014, Dubai, UAE	National	29-30 th October 2014
12	Irshad Ahmed, Aswathy, Hydari Masuma, Prakash Kumar BG, Salma Sheriff, Ramachandran S.	Development Of Tubular Photobioreactor For Sustainable Production Of Microalgae'	International Conference in Biotechnology and Bioengineering-2014, Dubai, UAE	National	29-30 th October 2014
13	Salma Sheriff, Gunjan Khera, Irshad Ahmed, Shariff DJ, Prakash Kumar BG, Ramachandran S.	Microalgal Biodiversity In Arid Regions And Its Biotechnological applications	International Conference in Biotechnology and Bioengineering-2014, Dubai, UAE	National	29-30 th October 2014



14	Khalil ur Rahman, Shoaib Ismail and S Ramachandran	Nutrient Management Through Agro-Forestry Production System	International Conference in Biotechnology and Bioengineering-2014, Dubai, UAE	National	29-30 th October 2014
15	Hydari Masuma, Prarthna Clare, Sridevi Thyagrajan, Akshay Deshpande, Anaz Anjum.S. Ramachandran	Scale up Model of Tubular Photobioreactors for Biodiesel Production Using Micro-algae	International Conference in Biotechnology and Bioengineering-2014, Dubai, UAE	National	29-30 th October 2014
16	Vrinda Nair and Shariff D J	Study on effects of desalination effluents on the coastal waters of UAE	International Conference in Biotechnology and Bioengineering-2014, Dubai, UAE	National	29-30 th October 2014
17	Salma Sheriff and D.J.Shariff	A Tissue Engineering approach to treat cardiac diseases using Cardiomyocytes differentiated from Human Peripheral Blood	4th Annual International Conference on Advances in Biotechnology (BIOTECH 2014), Dubai, UAE.	National	10-11th March 2014,
18	Adarsh Venkataraman Ganesan, Reenu Anne Joy, Kiran Menon, Hardeep Kumar, K.K. Singh, Trupti Swarup Gokhale, Neeru Sood	An integrated microsystem for piezo-resistive detection of mutations in Hemoglobinopathies	The 1 st Middle East Molecular Biology Congress & Exhibition 2014-Dubai, UAE	National	2014
19	Varghese S.S., Menon K, Damodar S, Singh K.K, Sood N, Swaminathan S	Graphene: A Promising platform for bio-sensing applications	4th Annual International Conference on Advances in Biotechnology (BIOTECH 2014), Dubai, UAE.	National	10-11th March 2014,
20	Reenu Anne Joy, Adarsh Venkataraman Ganesan, Kiran Menon, Seba Sara Varghese, S. Swaminathan, K.K.	Design and simulation of a microcantilever based sensor for thalassemia screening in the UAE	4th Annual International Conference on Advances in Biotechnology (BIOTECH 2014), Dubai, UAE.	National	10-11th March 2014,



	Singh, Trupti Gokhale, Neeru Sood				
21	Rajeshwari Somasumdaram, Trupti Gokhale, Neeru Sood, N. K .Rao	Isolation and characterization of microbial strains associated with leguminous plants from desert soils	4th Annual International Conference on Advances in Biotechnology (BIOTECH 2014), Dubai, UAE.	National	10-11th March 2014,
22	Pranay Sood, Neeru Sood, Trupti Gokhale	Microwaves: An Alternative Bacterial Sterilization Technique?	4th Annual International Conference on Advances in Biotechnology (BIOTECH 2014), Dubai, UAE.	National	10-11th March 2014,
23	S Rajeswari, Neeru Sood, Khaled Masmoudi and Henda Masmoudi	Gene Expression Analysis of Barley Genotypes Contrasting for their Tolerance to Salinity Stress	4th Annual International Conference on Advances in Biotechnology (BIOTECH 2014), Dubai, UAE.	National	10-11th March 2014,
24	Gaurav Chaudhary, Hardeep Kumar, Anyaa Mittal, Neeru Sood, K.K. Singh	Sensitivity Analysis of BNNT based Nano Bio-Sensor	4th Annual International Conference on Advances in Biotechnology (BIOTECH 2014), Dubai, UAE.	National	10-11th March 2014,
25	Gera S, Ramachandran S, Prakashkumar BG	Development of pretreatment methods for biomass based substrates for fermentation processes with focus on Ziziphus sp	4th Annual International Conference on Advances in Biotechnology (BIOTECH 2014), Dubai, UAE.	National	10-11th March 2014,
26	Sarah Nuruddin, D.J.Shariff and Salma Sheriff	A survey on the awareness of Stem cells therapy in Dubai	4th Annual International Conference on Advances in Biotechnology (BIOTECH 2014), Dubai, UAE.	National	10-11th March 2014,
27	Gaurav Chaudhary, Anyaa Mittal, Neeru Sood, K.K. Singh	Design and Analysis of Nano-mechanical Resonator for Virus Detection	IEEE Sensors Applications Symposium (SAS 2014), Queenstown, New Zealand.	International	18th-20th February, 2014
28	Hardeep Kumar, Anuj Kumar, K.K. Singh, Neeru Sood, R.K. Mittal	Design and Simulation of a Micro Hotplate for MEMS based	IEEE Sensors Applications Symposium (SAS 2014), Queenstown, New Zealand.	International	18th-20th February, 2014



		Integrated Gas Sensing System			
29	Neeru Sood, N.K. Rao, B. Madhumita, Jyotsna Kumar, Trupti Gokhale, S. Rajeshwari, Ketul Sanghavi, M. Belhaj Raj & Sanjeet Mishra	Stress Tolerance response of rhizobia isolated from Desert soil	Indo-Mauritius conference on Biotechnology For Better Tomorrow BTBT-2013	International	11-12 Nov, 2013
30	Trupti Gokhale, Priya Somani, Arshi Agarwal, Salma Sheriff, S. Rajeshwari & Neeru Sood	Polyhydroxyalkanoates: Optimization and Characterization	Indo-Mauritius conference on Biotechnology For Better Tomorrow BTBT-2013	International	11-12 Nov, 2013
31	Irshad Ahmed S, Salma Sheriff, G. Vijaya, Neeru Sood, Trupti Gokhale	Use of alternate medicine for a healthy tomorrow	Indo-Mauritius conference on Biotechnology For Better Tomorrow BTBT-2013	International	11-12 Nov, 2013
32	Salma Sheriff and D.J. Shariff	Potentials of Adult stem cells in regenerative medicine and tissue engineering	International Stem cell summit-2013 (ISCS-2013), Chennai, India	International	4th-6th January 2013
33	A. Dalmia, K. Menon, Pushkala Muralidharan, Prakash Kumar B G, Neeru Sood	Economic Analysis of Energy Production from Waste and Agricultural Sources	Presented in Materials and Renewable Energy (MRE 2013) International Congress held in Athens, Greece	International	July 1-3, 2013.
34	Adarsh Venkataraman Ganesan, Hardeep Kumar, S. Swaminathan, K.K. Singh, Reenu Anne Joy, Neeru Sood, Trupti Gokhale, R.K. Mittal	Design and Simulation of Microneedles for Blood Alcohol Detection	International Conference on Emerging Technologies from Micro to Nano, Goa, India	International	23 rd -24 th February 2013
35	Reenu Anne Joy, Kiran Menon, Neeru Sood, Trupti Gokhale	Microsensors for Water Quality assessment: A Review	International Conference on Emerging Technologies from Micro to Nano, Goa, India	International	23 rd -24 th February 2013



36	Hardeep Kumar, Adarsh Venkataraman, Reenu Anne Joy, Neeru Sood, K.K.Singh, S.Swaminathan and R.K.Mittal	Nano Sensing of H2S- Comparative Study of Different Sensing Methods	International Conference on Emerging Technologies from Micro to Nano, Goa, India	International	23 rd -24 th February 2013
37	K.Menon, R.A.Joy, Neeru Sood and R.K.Mittal	A Review of Trends & Progress in BioMEMS Research	International Conference on Emerging Technologies from Micro to Nano, Goa, India	International	23 rd -24 th February 2013
38	Zubair Ahmed and Anand Kumar	Éxpression of neprilysin, a beta-amyloid degrading enzyme in the adipose derived stem cells of human subcutaneous fat tissue'	World Conference on Regenerative Medicine, Leipzig, Germany	International	23-25th October 2013
39	Kiran Menon, Kamalapriya Anala, Gokhale Trupti, and Neeru Sood	Cloud computing: Applications in biological research and future prospects	ICCCTAM-12, Dubai, UAE	National	8-9 th December 2012
40	Arpita Neogi and D.J. Shariff	Assessment of genetic counseling understanding at the preconception stage in UAE and India	Human Genome Meeting, Sydney, Australia	International	March 2012
41	Arpita Neogi, Aishwarya and D.J. Shariff	Attitudes and Practices of an undergraduate population from India	62nd American Society of Human Genetics Annual Meeting, San Francisco	International	6-10th November 2012
42	Trupti Gokhale, Almas Wali, Shailee Parikh, Neeru Sood	<i>Lux</i> genes as biosensors for environmental pollutants	IN-TECH 2011, Bratislava, Slovak Republic	International	1 st -3 rd September 2011
43	Neeru Sood, Tarandeep Ahuja, Bharat B Gulyani & Trupti Gokhale	Use of Algal Biomass for Decolourization and Degradation of Textile Dyes	1st International Conference on Algal Biomass, Biofuels & Bioproducts, St Louis, USA	International	17 - 20 July 2011



44	Bharat B Gulyani, Juna Jaics, V. K. Sangal, B. G. Prakash Kumar, Neeru Sood & Uma Ramachandran	Water Quality Modeling and Simulation	Advances in Chemical Engineering (AChemE2011) , at Thapar University -Patiala	International	27-28 February, 2011
45	Ramachandran S, Saldanha M., Ahmed I., Jain PK., Verma SK.	Application of recombinant <i>Nostoc calciola</i> for the removal of Zinc(II) from textile industry effluents	15th International Biodeterioration & Biodegradation Symposium (IBBS-15), Vienna, Austria		19-24th September 2011

23. Details of patents and income generated : Nil

24. Areas of consultancy and income generated : Nil

25. Faculty selected nationally / internationally to visit other laboratories / institutions industries in India and abroad : Nil

26. Faculty serving in National committees b) International committees c) Editorial Boards d) any other (please specify) : Nil

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs). Nil

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects : **100%**
- percentage of students doing projects in collaboration with other universities / industry / institute : **4% with International Center for Biosaline Agriculture and also almost 100% of our students do PS1 and PS2 in industries**

29. Awards / recognitions received at the national and international level by

Faculty :

- Dr. Trupti Gokhale** received the Best Paper Award for Technology Transfer at the INTECH 2011 conference at Bratislava, Slovak Republic, September 2011
- Dr. Trupti Gokhale** Received the Best Paper Award at the 3rd Global Sustainable Biotech Congress 2014, 1-5th December 2014, Jalgaon, India.

Doctoral / post doctoral fellows :

- Ms. S. Rajeshwari** received the best paper award at the 4th Annual International Conference On Advances In Biotechnology (**BIOTECH 2014**), 10-11th March 2014, Dubai, UAE.



- **Ms. Salma Sheriff** received the best oral presentation award at the International Conference On Biotechnology And Bioengineering-2014 (**ICBB 2014**), 29-30th October 2014, Dubai, UAE.
- **Ms. S. Rajeshwari** received the best participant's award during the MTCD-2014 workshop at BITS Pilani, Pilani Campus, India.

Students :

- **Ms. Gayathri Ganesh** won an award for **Best Presentation** at the Student Paper Presentation Contest held in conjunction with ICNGCCT 2015 **organized by Zelus Events**, on 22nd & 23rd April 2015, Dubai.
- **Ms. Shristi Singh** received the best oral presentation award at the International Conference On Biotechnology And Bioengineering-2014 (**ICBB 2014**), 29-30th October 2014, Dubai, UAE.
- **Ms. Gayathri Ganesh** received the best oral presentation award at the International Conference On Biotechnology And Bioengineering-2014 (**ICBB 2014**), 29-30th October 2014, Dubai, UAE.
- **Ms. Nirupama Dixit** received the best poster presentation award at the International Conference On Biotechnology And Bioengineering-2014 (**ICBB 2014**), 29-30th October 2014, Dubai, UAE.
- **Ms. Suchita Gera** received the best poster award at International Conference On Emerging Trends In Biotechnology, Jawaharlal Nehru University, New Delhi.
- **Ms. Salma Sheriff** received the best oral presentation award at International Stem Cell Summit-2013 (ISCS-2013), Chennai, India, 4th-6th January 2013.
- **Jyotsna Kumar, Manisha Ramaseshan, KTT Arjun and Surya R Chockalingam** received the Best Idea Prize at 3rd Engineering Students Renewable Energy Competition, UAE University, Al Ain, UAE, 5th May 2012.
- **Sana Qadri and Samrudhi Rakesh Sharma** won an award at the Students Renewable Energy Competition, UAE University, Al Ain, UAE, 7th May 2011.
- **Arpita Neogi** received the Developing Country Travel Award from American Society of Human Genetics to attend the 12th International Congress of Human Genetics meeting held in Montreal, 11-15 October 2011.

30. Seminars/ Conferences/Workshops organized and the source of funding (national/ international) with details of outstanding participants, if any.

- 4th ANNUAL INTERNATIONAL CONFERENCE ON ADVANCES IN BIOTECHNOLOGY (BIOTECH 2014) jointly organized by Department of Biotechnology BITS Pilani Dubai Campus & GSTF (Global Science and Technology Forum) during 10-11 March 2014. Over 25 delegates from UAE and India presented their work at the conference. S. Rajeshwari, received the best paper award.
- INTERNATIONAL CONFERENCE IN BIOTECHNOLOGY AND BIOENGINEERING-2014 (ICBB2014), jointly organized by Department of Biotechnology BITS Pilani Dubai Campus, Microbiologist Society and Babasaheb Ambedkar University, Aurangabad, India during 29-30th October 2014. Over 82 delegates from UAE, India, UK and Bangladesh presented their work in their respective field at the conference.



Following participants received the Best Paper Award: Gayathri Ganesh, Salma Sheriff, S Rajeshwari, Srishti Singh, Nirupama Dixit, K Aruna, Shruti Samant, Seema Sambarani, Jitendra Panwar

31. Code of ethics of research followed by the Department.

The department follows the Code of Ethics specified by the Institute.

32. a) Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage*	
		Male	Female	Male	Female
BE (Hons) Biotechnology 2010-2011	733	3	6	100	100
2011-2012	792	2	13	100	100
2012-2013	887	2	15	100	100
2013-2014	953	2	12	100	100
2014-2015	1098	9	14	100	100
ME Biotechnology 2010-2011	83	0	0	NA	NA
2011-2012	87	1	4	100	100
2012-2013	104	1	2	100	100
2013-2014	90	0	0	NA	NA
2014-2015	97	0	0	NA	NA
Ph.D. Biotechnology 2010-2011	NA	NA	NA	NA	NA
2011-2012	16	0	1	In progress	In progress
2012-2013	36	0	1	In progress	In progress
2013-2014	39	1	1	In progress	In progress
2014-2015	26	0	0	NA	NA

*BITS follows a credit based system and cafeteria approach in offering of courses. Students not performing well are monitored by ACB (Academic Counselling Board), HDCC (Higher Degree Counselling Cell) and ACC (Academic Counselling Cell). Their pace is slowed down. Normally not more than 3% students (including all programmes, B.E., B.Pharm, M.Sc, M.Pharm and M.E. etc.) at a given point of time are under the purview of ACB.



33. b) Diversity of students 34.

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
ME Biotechnology	25%	0	0	75%
Ph.D. Biotechnology	25%	0	0	75%

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

18 Students from Biotechnology Department (2010-2015) have cleared GRE and TOFEL for HD admissions in western countries.

35. Student progression

Student progression	Percentage against enrolled
UG to PG	43 out of 112 = 38.39%
PG to M.Phil.	Nil
PG to Ph.D.	1/4 = 25%
Ph.D. to Post-Doctoral	Nil
Employed <ul style="list-style-type: none"> • Campus selection • Other than campus recruitment 	3/112 = 2.68% 66/112 = 58.92%
Entrepreneurs	NIL

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	0%
from other universities within the State	0%
from universities from other States from universities outside the country	100%

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period: Nil



38. Present details of departmental infrastructural facilities with regard to

- **Library :**

The library is equipped with a number of text and reference books for the Biotechnology program. Multiple copies of the books are available in the central Institute library.

Databases (e-journals) subscribed by Library

- Proquest SciTech e-journals
- e-brary - E-books collection

Print Journals:

- Applied and Environmental Microbiology
- Indian Journal of Environmental protection
- Indian Journal of Microbiology
- International Journal of Applied Environmental Sciences
- International Journal of Biotechnology and Biochemistry
- International Journal of Biotechnology and Bioengineering Research
- Nature Biotechnology (Print+Online)
- Science

- **Internet facilities for staff and students :**

Internet facilities are available for all students in the institute library, Computer labs and hostels. The campus has an excellent wifi facility. Staff have access to internet in their respective chambers. Moreover, all labs are equipped with internet facility.

- **Students' laboratories :**

The Department of Biotechnology houses 6 major laboratories with the state-of-the-art equipments and facilities. These laboratories house the facilities for the General biology laboratory, Microbiology Laboratory, Genetic Engineering techniques, Industrial Microbiology and Bioprocess Engineering, Downstream Processing, Instrumental Methods of Analysis, Experiments in Biotechnology, Animal Tissue culture, Plant Tissue culture and Experimental Techniques.

- **Research laboratories:**

The same three student laboratories are used for Research.

39. List of doctoral, post-doctoral students and Research Associates

- from the host institution/university :

Doctoral Students: Ms. S. Rajeshwari,

- from other institutions/universities

Doctoral Students: Ms. Kiran Menon, Mr. Khalil Ur Rehman, Ms. Anyaa Mittal

40. Number of post graduate students getting financial assistance from the university:Nil



41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.

The Dubai government's initiative of setting up DUBIOTECH in the region, plus market need as reflected from newspapers encouraged BITS Pilani Dubai Campus to start a new program in BE (Hons) Biotechnology.

42. Does the department obtain feedback from

a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes. The faculty feedback is used to introduce new learning objectives up to a certain percentage per course. This ensures the knowledge provided and the curriculum is up to date with the market needs. The teaching and learning methodologies are also improvised with latest videos, visual aids and powerpoint presentations.

b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes. Feedback is obtained from students on regular basis through setting up class committees for every course. The feedback used by the faculty to improvise teaching and delivery methods as well as assessment methods. Head of the department closely monitors the feedback on monthly basis, while the Instructions division monitors the students feedback on semester basis. The student feedback is considered as one of the criteria to review the faculty performance. Similarly feedback on curriculum is used to introduce new learning objectives up to a certain percentage. This ensures the knowledge provided and the curriculum is up to date.

c. alumni and employers on the programmes offered and how does the department utilize the feedback?

Yes. Feedback from alumni and employers is also utilised in improvising the learning objectives so as to introduce the students to the latest technologies developed and bridging the gap between the educational institute and industry requirements.

43. List the distinguished alumni of the department (maximum 10)

- i. Sawarkar Sarthak Sanjay: Research Associate at Reprogenetics, Greater New York City Area
- ii. Tarandeep Kaur Ahuja: Staff Research Associate II, UCSF Clinical and Translational Science Institute (CTSI), San Francisco Bay Area, USA
- iii. Samrudhi Rakesh Sharma: Manufacturing at Fujirebio Diagnostics, Inc., Bethlehem, Pennsylvania, USA
- iv. Balasubramani Madhumitha: Chemist/Molecular Biologist at Holistic international testing services, United Arab Emirates



v. Arpita Neogi: Genetic Counselor, Yale-New Haven Hospital, Connecticut, USA

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Special Lectures organized by the departments under student enrichment programme:

- i. Fermented food and Design By Dr. Baboo Nair, Professor Emeritus LJJ Sweden on 8th May 2011
- ii. Oatly and oat based Non dairy milk by Dr. Olof Book, Head of Research and Development in Lund Sweden on 8th May 2011
- iii. Fermentation Technology and career opportunities in Industrial Biotechnology by Dr Gowthaman, Scientist, Department of Biotechnology, CLRI, Chennai on 8th February 2011.
- iv. Cytokines and Natural products in angiogenesis and wound healing and the role of natural products in chemoprevention of cancer by Dr. R.K. Maheshwari, Professor of Pathology, USUHS Bethesda, Maryland on 22nd-27th February 2011.
- v. Viral Pathogenesis, Viral Vaccines and vaccine development by Dr. Anuj Sharma, USUHS Bethesda, Maryland on 9th October 2011
- vi. Overview of 30 years of INDO-USUHS programs by Dr. R.K. Maheshwari, Professor of Pathology, USUHS Bethesda, Maryland on 16th December 2012
- vii. Development of second generation viral vaccines by Dr. R.K. Maheshwari, Professor of Pathology, USUHS Bethesda, Maryland on 17th December 2012.
- viii. Antimalarials, coinfections and Environmental Agents increase disease severity by Dr. R.K. Maheshwari, Professor of Pathology, USUHS Bethesda, Maryland on 18th December 2012.
- ix. Micro RNA as diagnostic biomarkers in Traumatic brain injury by Dr. R.K. Maheshwari, Professor of Pathology, USUHS Bethesda, Maryland on 19th December 2012.
- x. Role of angiogenesis in wound healing and cancer by Dr. R.K. Maheshwari, Professor of Pathology, USUHS Bethesda, Maryland on 20th December 2012.
- xi. Antiviral interferon mechanism against enveloped viruses including HIV by Dr. R.K. Maheshwari, Professor of Pathology, USUHS Bethesda, Maryland on 21st December 2012.
- xii. Grants and paper writing by Dr. R.K. Maheshwari, Professor of Pathology, USUHS Bethesda, Maryland on 21st December 2012.
- xiii. Lecture series on Circulating Micro RNAs as novel biomarkers; Circulating Micro RNAs as biomarkers for TBI and PTSD; MicroRNA based lab techniques; Animal studies and other molecular techniques by Mr. Raghavendar Chandran, BITS-USUHS Graduate Student (Goa Campus), Department of Pathology, USUHS Bethesda, Maryland on 10-11th February 2013.
- xiv. Lecture series for Post graduate students on Advances in plant Biotechnology by Dr. Khaled Masmoudi, Senior Molecular Biology Scientist, International Centre for Biosaline Agriculture during February-March 2013.
- xv. Importance of Cord Blood Stem Cells by Dr. Fatma Al Hashimi, Head of Education



and Development Unit, Dubai Cord Blood Research Center, Latifa Hospital, Dubai on 21st May 2013.

- xvi. NUTRITION MADE EASY by Mrs. Medha Juvekar, Nutritionist and Dietician at Deenanath Mangeshkar Hospital, Pune on 27th October 2014.
- xvii. Lecture series on Applications Of Tissue Culture On Crop Improvement And Conservation Of Genetic Diversity In Tropical Plants and Biotechnology And Induced Mutations In Crop Improvement by Dr. Mohan Jain, Adjunct Professor - Department of Agricultural Sciences, University of Helsinki, Finland 2nd and 5th April 2015.
- xviii. Molecular Insights On Human Diseases: Malaria And Autism Spectrum Disorder by Dr. Vidya Rajesh, Associate Professor and Associate Dean ARD, BITS Pilani Hyderabad Campus on 12th April 2015.

45. List the teaching methods adopted by the faculty for different programmes.

Faculty use visual aids like explanatory videos, powerpoint presentations, computer software, simulation tools like COMSOL for enhanced learning.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

The Head of the department closely monitors the student feedback on faculty and curriculum by interacting regularly with the class committees formed for every course. Any improvisation required as per the feedback is immediately acted upon to ensure learning objectives are met. Yearly faculty review by the department and the cross campus committee ensures the faculty performance is monitored and the learning outcomes are met. Faculty appraisal which is partially based on the student feedback enhances the quality of delivery. Periodic monitoring of course completion by instructions division ensures all the learning objectives of the course are completed.

47. Highlight the participation of students and faculty in extension activities.

The following visits were organized by the Department of Biotechnology for the students as extension activities:

- i. Visit to Dubai Cord Blood Research Center, Latifa Hospital, Dubai on 7th July 2013.
- ii. Visit to Marmum Dairy, Al Ain, UAE by the 3rd Year Students in March 2013
- iii. Visit for the 3rd year and 4th Year students to DUBIOTECH, Dubai for career prospects on 6th May 2014.
- iv. Visit to food Industry, IFFCO, Al Ain, UAE by the 3rd year Biotechnology students on 23rd April 2015.
- v. Visit to Barakat Foods, by 3rd and 4th Year Biotechnology students in March 2015
- vi. Regular visits by students of Biotechnology to International Centre for Biosaline Agriculture, Dubai, UAE

48. Give details of “beyond syllabus scholarly activities” of the department.

The students of the Biotechnology Department are encouraged to participate in



Competitions, conferences, symposia, workshops. Following is the list of student participation in such scholarly activities:

Competitions:

- Gayathri Ganesh presented a paper on, "Copper Resistant Bacteria and Fungi and Synthesis of Copper Nanoparticles " at Under Graduate Student Research Competition, Abu Dhabi University, held on 21 May 2015.
- Prarthana Clare, Hydari Masuma, Akshay Deshpande, Adonis D'mello, Presented a paper on 'Design and Development of compact tubular Photobioreactor for mass production of Microalgae using treated waste water' at Undergraduate Student Research Competition Abu Dhabi University, held on 21 May 2015.
- Srishti Singh presented a paper on 'Mulltmarker Approach in Detection of Cardiovascular Diseases' at the Undergraduate Student Research Competition Abu Dhabi University, held on 21 May 2015.
- Ms. Gayathri Ganesh presented a paper on 'Isolation Of Copper Resistant Bacteria And Fungi For Synthesis of Copper Nanoparticles 'at at the Student Paper Presentation Contest held in conjunction with ICNGCCT 2015 organized by Zelus Events, on 22nd & 23rd April 2015, Dubai
- Jalaluddin Shariff and Mohamed Atyab, "Addictive tendencies of children and young adults due to development of social media and its Psychological impact" at Under Graduate Student Research Competition, Abu Dhabi University, held on 22 May 2014 .
- Prarthana Clare, Hydari Masuma, Aswathy PJ, Gunjan, Presented a paper on 'Characterisation of heat tolerant micro-algal strains' at The Second United Arab Emirates Undergraduate Student Research Competition: 22nd May 2014.
- Sridevi Thyagrajan, Prarthna Clare, Akshay Deshpande, Sathvik Balaji, Ishita Roy, Presented a poster on 'Optimisation of methods for extraction of lipids from Micro-algae for biodiesel production' at 5th Engineering Student Renewable Energy Competition 3rd May 2014.
- Jyotsna Kumar, Manisha Ramaseshan, Arjun Thomas and Surya R Chockalingam (2012) Biomass based renewable energy resources and energy conservation strategies in UAE, 3rd Engineering Students Renewable Energy Competition, 5th May 2012, UAE University, Al Ain, UAE. (Best Idea Prize).
- Sana Qadri & Samrudhi Sharma won second place for poster on (2011) Optimization of Process Parameters for Cyanobacteria Growth and its Potential Importance in Industry, 3rd Engineering Students Renewable Energy Competition, May 2011, UAE University, Al Ain, UAE.

Conferences: The students are encouraged to participate in National And International conferences. Details are listed in 24.



49. **State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. NO**

50. **Briefly highlight the contributions of the department in generating new knowledge, basic or applied.**

The Faculty of Biotechnology have been working in collaboration with ICBA. The work resulted in finding and understanding the presence of Rhizobia, which are known as biofertilizers. Establishing the presence of Rhizobia in the desert soils was the first report in the Middle East region and the two publications from this work have been well received by agriculturists in the middle east (10 citations)and highlighted by media in news papers of UAE.

1. Madhumitha Balasubramani, Jyotsna Lakshmi Kumar, Nanduri Kameswara Rao, Neeru Sood, Trupti Gokhale, Somasundaram Rajeswari, Makram Belhaj Fraj and Sanjeet Mishra,(2014) "Stress-Tolerance of Sinorhizobium spp. Nodulating Sesbania and Cowpea in Desert Soils" *Journal of Pure and Applied Microbiology*, 8(1): 323-331.
2. Samrudhi R. Sharma, N. Kameswara Rao, Trupti S. Gokhale, Shoaib Ismail (2013) Isolation and characterization of salt-tolerant rhizobia native to the desert soils of United Arab Emirates. *Emirates Journal of Food and Agriculture*, 25 (2): 102-108.

51. **Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.**

<p>Strengths:</p> <ul style="list-style-type: none"> i. State of art equipment in Laboratories ii. Faculty with diverse expertise iii. Diverse research thrust areas iv. dedicated students v. Being interdisciplinary program, we receive excellent support from other departments 	<p>Weakness:</p> <ul style="list-style-type: none"> i. Opportunities for external research funding are low ii. Availability of PhD students is low iii. Few Biotechnology companies, hence possibility of raising funds through consultancy projects is negligible iv. Low faculty strength v. Low FD and HD student strength
<p>Opportunities:</p> <ul style="list-style-type: none"> i. More Biotechnology companies being setup in DUBIOTECH, chances for consultancy can be explored ii. Only Institute offering BE (Hons) Biotechnology in UAE, can attract better students. iii. Explore research collaboration with government institutes and agencies iv. Explore external funding for research outside UAE v. Recruit more faculty with expertise in latest fields 	<p>Challenges:</p> <ul style="list-style-type: none"> i. Increase the student strength in FD and HD programmes ii. Explore external funding for research outside UAE iii. Collaboration with UAE Government institutes and agencies iv. Better placements opportunities for FD and HD students



52. Future plans of the department.

- i. Increase the FD and HD student strength
- ii. Obtain Research funding through projects and consultancy
- iii. Recruit new faculty with expertise in latest fields
- iv. Increase Research output in terms of publications, patents, etc.
- v. Increase the placement opportunities for FD and HD students.

53. Any other information regarding your department which you would like to include.

The faculty of Biotechnology department are active in research and hence are well recognized in the field. They have been judging student competitions and have also been invited to deliver special lectures at conferences.

1. Dr. Trupti Gokhale was invited to deliver a counseling talk on 'Introduction to Biotechnology' at the Higher Education Summit organized by The Young Vision on 13th -14th January 2015.
2. Dr. Trupti Gokhale gave a virtual lecture on "Development of Biosensors" at a National Seminar on 'Biotechnology for Better Tomorrow' on 26th February 2015 at Gogate-Jogalakar College, Ratnagiri, India
3. Dr, Neeru Sood gave a virtual lecture on " Sustainable Agriculture - approaches/techniques and challenges" at a One Day International Conference For Students On Modern Aspects Of Microbial Science organized by Department of Microbiology, Shri Shivaji College of Arts, Science and Commerce, Akola, India in joint venture with Microbiologist Society, India on 2nd January 2015.
4. Dr. Neeru Sood delivered a talk on "Genetic Engineering for Sustainable Agriculture: Techniques, Merits and Challenges, during 3rd Global Sustainable Biotech Congress 2014, 1-5th December 2014, Jalgaon, India.
5. Dr. Neeru Sood was honored to be on the International Advisory board for the 3rd Global Sustainable Biotech Congress 2014, 1-5th December 2014, Jalgaon, India.
6. Dr. Neeru Sood and Dr. Trupti Gokhale were invited as judge for the 3rd 'International Conference on Renewable Energy: Generation and Applications' (ICREGA'14), 2-5 March 2014 at UAE University, Al Ain, UAE.
7. Dr. Trupti Gokhale was honoured to be on the advisory board for International Conference on Biotechnology for Better tomorrow BTBT-2013, Mauritius 2013.
8. Dr. Neeru Sood, Dr. S. Ramachandran, Dr. DJ Shariff and Dr. Trupti Gokhale were honoured to be on the advisory board for ICCCTAM-12, Dubai, UAE, 8-9th December 2012.



Dubai Campus: Evaluative Report of the Department CHEMICAL ENGINEERING

1 Name of the Department Chemical Engineering

2 Year of establishment of the Department 2005

3 Is the Department part of a School/Faculty of the university?

Departments function as independent entities in the university and are not part of any school or faculty.

4 Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc

BE Hons	Chemical Engineering
PhD	Chemical Engineering

5 Interdisciplinary programmes and departments involved Nil

6 Courses in collaboration with other universities, industries, foreign institutions, etc.

Note: some of our structure courses like Practice School and thesis dissertation are done by our students in industries and universities outside BITS.

7 Details of programmes discontinued, if any, with reasons Nil

8 Examination System: Semester and Choice Based Credit System

9 Participation of the department in the courses offered by other departments

[In teaching courses of (ET C362) Environmental Pollution Control (MSc Tech), Biostatistics & Biomodeling (BIO G532), MBA C427 E-Business and Internet Marketing [MBA]]

10 Number of teaching posts sanctioned, filled and actual (Professors/AssociateProfessors/Asst. Professors/others).

	Sanctioned	Filled (includes offer letters given)	Actual number
Professor	Note:**	0	0
Associate Professors		2	2
Asst Professors		2	2
Others		0	0

Note**:The faculty positions for the University is broadly governed by Growth plan which also covers designation-wise breakup with a larger vision. Keeping in mind the fluidity of movement of faculty and proposed student to faculty ratio in each campus for first degree, higher degree as well as Ph.D. programmes, individual department needs are not fixed. Besides, as we are in expansion plan which calls for new programmes, courses being introduced, the demand on faculty in terms of numbers, for each department, is broadly governed by all the above factors and hence it is not possible to have a fixed



number of faculty for each department. Recruitment of faculty, therefore, varies, based on departmental needs.

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Dr B B Gulyani	PhD	Associate Professor	Chemical Engineering	18	Nil
Dr B G Prakash Kumar	Ph.D	Assistant Professor	Chemical Engineering	17	1 Guiding (co-guide)
Dr Nidhi Bhandari	PhD	Associate Professor	Chemical Engineering	12	Nil
Dr Nishant Pandya	PhD	Assistant Professor	Chemical Engineering	14	Nil

12. List of faculty senior visiting fellow, adjunct faculty, emeritus professors: NIL

13. Percentage of classes taken by temporary faculty – programme-wise information: Nil

14. Programme-wise Student Teacher Ratio

2010-11 Students (12+22+13+15); Faculty: 6, $62 / 6 = 10.33$
 2011-12 Students (22+13+15+17); Faculty: 6, $67 / 6 = 11.16$
 2012-13 Students (13+15+17+30); Faculty: 6, $75 / 6 = 12.5$
 2013-14 Students (15+17+30+26); Faculty: 6, $88 / 6 = 14.6$
 2014-15 Students (17+30+26+44); Faculty: 6, $117 / 6 = 19.5$
 2015-16 Students (30+26+44+44); Faculty: 7, $144 / 7 = 20.57$

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual : one

16. Research thrust areas as recognized by major funding agencies :

- Waste water treatment
- Energy engineering and Renewable Energies
- Process System Engineering



17. Number of faculty with ongoing/completed projects in the last five years from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Completed projects: Nil

Ongoing: NIL

18. Inter-institutional collaborative projects and associated grants received Nil

a) National collaboration

b) International collaboration

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received. Nil

20. Research facility / centre with Nil

- state recognition
- national recognition
- international recognition

21. Special research laboratories sponsored by / created by industry or corporate bodies Nil

22. Publications:

Sl No.	Details	Specify number here (total)
1	Number of papers published in peer reviewed journals (national / international)	4
2	Monographs	Nil
3	Chapters in Books	Nil
4	Edited Books	Nil
5	Books with ISBN with details of publishers	Nil
6	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	4
7	Citation Index – range / average	1 – 74 Avg: 9.5
8	SNIP	Avg: 0.541
9	SJR	Avg: 0.29
10	Impact Factor – range / average	0.36-0.759 Avg: 0.56
11	h-index	Avg: 2.5
	Number of publications in peer reviewed conference	10

Details of the publications as per the number give above (Give details in the last five years

SL No	Authors	Title of the Publications	Details of the Journal	National/ International	Year
1	Bharat B Gulyani, Arshia Fathima, and J Alamelu Mangai	An Approach for Predicting River Water Quality using Data Mining Technique	Advances in Data Mining: Applications and Theoretical Aspects Volume 9165 of the series Lecture Notes in	International	2015



			Computer Science pp 233-243 DOI: 10.1007/978-3-319-20910-4_17		
2	Arshia Fathima, J. Alamelu Mangai & Bharat B. Gulyani	An ensemble method for predicting biochemical oxygen demand in river water using data mining techniques	International Journal of River Basin Management	International	2014
3	Mohammed Al Hasan Khan, Shreyas Jailkhani, & Prakash Kumar B. G.	Applications of Cloud Computing In Remote Oil and Gas Operations	IEEE Explorer, DOI:10.1109/ICCCTAM.2012.6 488070	International	2012
4	Veena Valsamma Daniel, Gulyani B. B., & Prakash Kumar B.G.	Usage of date stones as adsorbents: A review	Journal of Dispersion Science and Technology Vol.33, pp.1321-1331	International	2012

Details of the publications in peer reviewed conference (Give details in the last five years)

SL No	Authors	Title of the Publications	Details of the conference	National/ International	Year
1	J Alamelu Mangai, Bharat B Gulyani	A Predictive Data Mining Model for Customer Response in Bank Telemarketing	ICEBM 2015, Department of Management, BITS Pilani, Pilani Campus	International	2015
2	Bharat B. Gulyani, Anuj Jain, Shalendra Kumar	Optimal Synthesis Of Multipass Heat Exchanger Without Resorting To Correction Factor	ICMCMSE 2011 : International Conference on Mathematical and Computational Methods in Science and Engineering (Paris), June 24-26, 2011.	International	2011
3	N. Sood, T. Ahuja, B. B. Gulyani, T. Gokhale	Use of algal biomass for decolourization and degradation of textile dyes	Ist International Conference on Algal Biomass, Biofuels and Bioproducts, P2-56.17-	International	2011



			20 July, 2011. Westin St. Louis, St. Louis, USA		
4	Radhika Narain; Subramanian Ramachandran; B. G. Prakash Kumar	Optimization Of Inclination And Mixing Conditions For Tubular Photobioreactor For Mass Production Of Microalgae	Current Trends in Biotechnology, held at Manipal University- Dubai Campus, March 18- 19, 2015	National	2015
5	Irshad Ahmed, Aswathy, Hydari Masuma, Prakash Kumar B G, Salma Sheriff, Ramachandran S	Development Of Tubular Photobioreactor For Sustainable Production Of Microalgae	International Conference on Biotechnology & Bioengineering (ICBB-2014), BITS, Pilani, Dubai Campus (U.A.E), during 29-30 Oct 2014	International	2014
6	Salma Sheriff, Gunjan Khera, Irshad Ahmed, Shariff DJ, Prakash Kumar B G, Ramachandran S	Microalgal Biodiversity In Arid Regions And Its Biotechnological	International Conference on Biotechnology & Bioengineering (ICBB-2014), BITS, Pilani, Dubai Campus (U.A.E), during 29-30 Oct 2014.	International	2014
7	N. Subramanian, K. Saravanan, Prakash Kumar B G	Hydrodynamic Aspects Of Circulating Fluidized Bed For Drying,	International Conference on Biotechnology & Bioengineering (ICBB-2014), BITS, Pilani, Dubai Campus (U.A.E), during 29-30 Oct 2014.	International	2014
8	Dalmia, K. Menon, Pushkala Muralidharan*, Prakash Kumar B.G, N. Sood,	Economic Analysis of Energy Production from Waste and Agricultural Sources	International Congress on Materials and Renewable Energy (MRE 2013), 1-3 July 2013, Athens, GREECE	International	2013
9	Ankit Sachdeva, Veena V.D, Meyyappan, N, Prakash Kumar B.G*	Reliability of Solar Energy System'	International Conference on Harnessing Technology (ICHT), Feb 2011, Caledonian College of Engineering, Muscat, Oman.	International	2011



10	Tanmay C, Veena V D, Prakash Kumar B.G.*,	Eco-friendly technique to recycle heavy metals from industrial sludge'	First UAEU chemistry symposium on Chemistry and the Environment, Oct 2010, United Arab Emirates University, Al-Ain, UAE.	National	2010
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23. **Details of patents and income generated Nil**

24. **Areas of consultancy and income generated Nil**

25. **Faculty selected nationally / internationally to visit other laboratories / institutions industries in India and abroad**

- Prakash Kumar B G visited Salalah College of Technology, Salalah, Oman, on May 14th, 2015.
- Prakash Kumar B G carried out industry interaction in Hitech Resin Industries, LLC, Dubai, June-Aug 2015.

26. **Faculty serving in National committees b) International committees c) Editorial Boards d) any other (please specify)**

- Bharat B Gulyani has been Advisor, Students Chapter of American Institute of Chemical Engineers at BPDC.
- Bharat B Gulyani acted as Member, Technical Committees, 2012 International Conference on Environment, Energy and Biotechnology (ICEEB 2012), 2012
- Bharat B Gulyani acted as Member, Technical Committees, 2nd International Conference on Chemistry and Chemical Process (ICCCP 2012), 2012
- Bharat B Gulyani acted as Member, Technical Committees, 2nd International Conference on Food Engineering and Biotechnology (ICFEB 2012)
- Was nominated Senior Member of APCBEES (Asia-Pacific Chemical, Biological & Environmental Engineering Society) (2011)
- Bharat B Gulyani acted as Reviewer for ICCBE-2014.
- Bharat B Gulyani acted as Reviewer at PSE2015/ ESCAPE25.
- Prakash Kumar B G delivered an invited talk entitled "Current Developments in Mass Production of Microalgae for Industrial Applications", at symposium on current perspectives and challenges in chemical engineering and technologies, May 14th, 2015, Salalah College of Technology, Salalah, Oman.
- Prakash Kumar B G acted as an international advisory committee member for International Conference on Green Technologies for Environmental Pollution Control and Prevention, 27-29 Sept 2014, National Institute of Technology Tiruchirapalli, India.
- Prakash Kumar B G acted as an organizing member for International conference on "Biotechnology Bioengineering" (ICBB--2014) during October 29-30, 2014, BPDC, Dubai.



- Bharat B. Gulyani acted as an organizing member for International conference on “Biotechnology Bioengineering” (ICBB--2014) during October 29-30, 2014, BPDC, Dubai.
- Prakash Kumar B G acted as reviewer for the journals of: Chemical Engineering Journal, Carbohydrate Polymers, and Journal of Environmental Chemical Engineering.

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

- Prakash Kumar B G participated in Industry Day workshop on 10th April 2015 at the BITS Pilani, Hyderabad campus, India.
- Prakash Kumar B G participated in Inter Disciplinary Research workshop on 14th and 15th November 2014 in BITS Pilani, Goa Campus, India.
- Prakash Kumar B G participated in the workshop on 'Improving Classroom Effectiveness' held at BITS Pilani, Dubai Campus during 24th December, 2013.
- Prakash Kumar B G participated in the three day workshop on 'MEMs Modelling with COMSOL' held at BITS PILANI, Dubai Campus during 4-6 December, 2011.
- Bharat B. Gulyani participated in the three day workshop on 'MEMs Modelling with COMSOL' held at BITS PILANI, Dubai Campus during 4-6 December, 2011.

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects
Chemical engg students will do at least 1 project. 100%
- percentage of students doing projects in collaboration with other universities /industry / institute
95% Chemical Engg students doing practice school I & II in the industries

29. Awards / recognitions received at the national and international level by Faculty

- Optimization Of Inclination And Mixing Conditions For Tubular Photobioreactor For Mass Production Of Microalgae, Radhika Narain; Subramanian Ramachandran; B. G. Prakash Kumar, participated in “Current Trends in Biotechnology”, held at Manipal University-Dubai Campus, March 18- 19, 2015, Won best poster award.
- Aparajita Dasgupta, Atullya Prakash, Janhavi Shanker Velandy, Shweta Prem, Aishwarya Garg & Prakash Kumar B.G*., “Exploiting Solar Energy Through Ways of Artificial Photosynthesis” Participated in 4th Engineering Student Renewable Energy Competition (ESREC'2013) held at UAE University, Al Ain, UAE, during May 4th, 2013 (selected up to finals)

Doctoral / post doctoral fellows/ Students: NIL



30. Seminars/ Conferences/Workshops organized and the source of funding (national/ international) with details of outstanding participants, if any.

- Dr B G Prakash Kumar organized one day workshop on “Modeling In Chemical Engineering Using Comsol” by Mr. Ahmed Gamal, Elnady Engineering and Agencies, Egypt, on 18th Sept, 2014. Funded by Departmental Associations (Chemical Engineering Students Association)

31. Code of ethics of research followed by the Department.

The department follows the Code of Ethics specified by the Institute.

32. a) Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
Chemical Engineering (FD)	2010-11	9	6	100%*	100%*
	2011-12	13	4		
	2012-13	15	15		
	2013-14	13	13		
	2014-15	26	18		

*BITS follows a credit based system and cafeteria approach in offering of courses. Students not performing well are monitored by ACB (Academic Counselling Board), HDCC (Higher Degree Counselling Cell) and ACC (Academic Counselling Cell). Their pace is slowed down. Normally not more than 3% students (including all programmes, B.E., B.Pharm, M.Sc, M.Pharm and M.E. etc.) at a given point of time are under the purview of ACB.

33. b) Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
Chemical Engineering (HD)	NA	NA	NA	NA

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

Around 30% of the students clear GRE/ GMAT/CAT exams every year and they get admission to reputed foreign universities including University Of California, Masdar University, Abudhabi, UAE, Carnegie Mellon University, etc.



35. Student progression

Student progression	Percentage against enrolled
UG to PG	35 %
PG to M.Phil.	NA
PG to Ph.D.	1 %
Ph.D. to Post-Doctoral	
Employed	
Campus selection	20%
Other than campus recruitment	20%

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	0%
from other universities within the State	0%
from universities from other States	0%
from universities outside the country	100%

37. **Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period :** Nil

38. Present details of departmental infrastructural facilities with regard to

- Library Centralised Library facility is available, with various online database (Proquest SciTech e-journals, EBSCO Engineering Source, e-brary - E-books collection, IEEE Xplore Digital Library)
- Internet facilities for staff and students : WIFI internet to all faculty, staff and students.
- Students' laboratories
- Chemical Engineering Lab I (20 experiments), Chemical Engineering Lab II (20 experiments)
- Research laboratories Nil

39. List of doctoral, post-doctoral students and Research Associates Nil

- from the host institution/university
- from other institutions/universities

40. **Number of post graduate students getting financial assistance from the university.** NA

41. **Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.** Nil



42. Does the department obtain feedback from

- **faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?**

The department does obtain feedback from faculty usually through regular department meetings. Faculty are involved in the curriculum review as well as teaching-learning evaluation. Chemical Engineering curriculum review carried out on 2010 and Sept 2015 with cross campus in presence of external academia as well as industrial experts.

- **students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?**

Yes, through student class committee meetings, where 2 students from each course will be involved. The feasible outcomes from the meetings will be implemented in the course operations. Faculty are also provided feedback for the courses, tutorials and labs they conduct. This feedback is collected and maintained by the ID division.

- i. **alumni and employers on the programmes offered and how does the department utilize the feedback?**

Department utilize the feedback through BITSAA alumni meetings as well as from the respective imperative teams as also the PS companies in which the students work.

43. List the distinguished alumni of the department (maximum 10)

- Atullya Prakash (2011A1PS005U), Dodsal Engg. Construction Pte. Limited, Dubai.
- AISHWARYA GARG (2011A1PS007U), Zomato, Dubai.
- Prateek Khara (2010A1PS189U), Business Development Engineering, Beacon ES, Dubai, UAE.
- Arshia Fathima (2009A1A7053U), M.S. Chemical Engineering in University Of California. Berkeley
- Taha Talib Rehman (2009A1PS299U), working as Business Executive – PU & Coatings, Dia 33 LLC, Dubai, UAE
- Awari Ibrahim Olayinka (2008A1PS103U), Support Analyst at Entero Corporation, oil and energy, Calgary, Alberta, Canada.
- Ankit Sachdeva (2008A1PS061U), Al Asab General Contracting Est., UAE
- Tanmay Chaturvedi (2007A1PS403U), Perusing Phd In Masdar University, Abudhabi, UAE
- Shruti Srinivas Kulkarni (2006A1PS312U), Lipotech Engineering, Kuala Lumpur, Malaysia.
- Vivek Vinodan (2006A1PS387U), MS In Chemical Engineering, Carnegie Mellon University, Pittsburgh, Pennsylvania



44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

- Interactive session on 'Comparative study of polysaccharide-drug nanoparticles for oral drug delivery, Dr Sonal Mazumder, Assistant Professor, Chemical Engineering Dept., BITS PILANI, Rajasthan, 19th March, 2015.
- Interactive session using Telepresence "Introduction to Petroleum Refining", Dr Srikanta Dinda, Assistant Professor, Department of Chemical Engineering, BITS Pilani, Hyderabad Campus, 4th May, 2015
- Interactive session using Telepresence "Significance of ozone for degradation studies" by, Dr K.N. Ponnani, Department of Chemical Engineering, BITS Pilani, Goa Campus, 6th May, 2015.
- 'Career Planning for Job Opportunities' Interactive Career Talk by Dr. S. V. Dharwadkar, Jawaharlal Nehru Engineering College (JNEC), 23rd April'14.
- 'Research Domains: Solid State, Structural Chemistry' Interactive Session by Dr. Pance Naumov, New York University Abu Dhabi (NYUAD), Physical Chemistry & Photochemistry, 22nd April'14.
- 'MSD's VISION 2020' Interactive Session by Amith Raman, Business Operations, Merck Sharpe & Dohme (MSD) Gulf, DHCC, 26th March, 2014
- 'Importance of Risk Management and HSE in Chemical Industries' by Mr. Mohammed Awad, HSSE Advisor from Petrofac International Ltd., on 16th Oct, 2014
- 'Multidisciplinary Approach To Create Innovation In Science And Engineering' by Prof Suresh K Bhargava, Deputy Pro Vice Chancellor (Int), College of Science, Engineering and Health, Director - Centre of Adv. Materials & Indus. Chemistry, School of App. Sciences, RMIT University, Melbourne, Australia, on 23th Nov, 2014
- B G Prakash Kumar organized one day workshop on "Modeling In Chemical Engineering Using Comsol" by Mr. Ahmed Gamal, Elnady Engineering and Agencies, Egypt, on 18th Sept, 2014. Funded by Departmental Associations (Chemical Engineering Students Association)
- Factory Visit usually carried out once in a semester.

45. List the teaching methods adopted by the faculty for different programmes.

Teaching methods for UG: Faculty use a combination of basic black/white board and AV media such as powerpoint presentations for instruction. There is emphasis on making the learning process as interactive as possible through in-class participation, group-based problem solving

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

For each course, the hand out is provided by the concerned faculty to all students. The course objectives, outcomes and evaluation schemes are provided in detail. The same is evaluated through feedback from students.

47. Highlight the participation of students and faculty in extension activities.



- Shreyas Jaikhani, Prateek Khera, Mohammed Al Hasan Mahmudul Hassan & **Prakash Kumar B.G***, “Production Of Electricity Using Energy Storing Salts” Participated in 4th Engineering Student Renewable Energy Competition (ESREC’2013) held at UAE University, Al Ain, UAE, during May 4th, 2013
- Aparajita Dasgupta, Atullya Prakash, Janhavi Shanker Velandy, Shweta Prem, Aishwarya Garg & **Prakash Kumar B.G***, “Exploiting Solar Energy Through Ways of Artificial Photosynthesis” Participated in 4th Engineering Student Renewable Energy Competition (ESREC’2013) held at UAE University, Al Ain, UAE, during May 4th, 2013 (selected up to finals)
- Arshia Fathima, Dey Shramana Subrata Kumar, Ankit Sachdeva, Gaurav Sehgal, Faizan Abbas Thakur, & **Prakash Kumar B.G***, ‘Low temperature Distillation Using Sand Beds as a Source of Stored Thermal Energy”, Participated in 3rd Engineering Student Renewable Energy Competition (ESREC’2012) held at UAE University, Al Ain, UAE, during May 5th, 2012
- Ankit Sachdeva, Gaurav Sehgal, Faizan Abbas Thakur, Arjunraj Subbaraj and **Prakash Kumar B.G***, ‘Utilization of Renewable energies for Greener U.A.E.” Participated in 2nd Engineering Student Renewable Energy Competition (ESREC’2011) held at UAE University, Al Ain, UAE, during May 7th, 2011

48. Give details of “beyond syllabus scholarly activities” of the department.

- Students participate in various competitions such as Technofest & Enginuity BPDC, Student Renewable Energy Competition (ESREC), UAE University, Al Ain, graduate students research competition (UGSRC), Abudhabi, UAE, etc
- BPDC has various students clubs / associations such as, Chemical Engineering Students Association (ChESA), American Institute of Chemical Engineers (AIChE), art, photography, environment, literature, etc.
- Students also register other discipline projects as well as other discipline courses.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. No

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

- Various softwares are available in the institute for students to work on for their projects as well as in the various research groups to enrich their knowledge
- Institute provides grant to students for attending conferences to upgrade their knowledge.



51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

<p><u>Strengths</u></p> <ul style="list-style-type: none"> • Dedicated faculty, smart students • Management support • Well placed systems and policies for teaching/learning • Curriculum flexibility for the students 	<p><u>Weaknesses</u></p> <ul style="list-style-type: none"> • Limited resources (human, time) • No PG programs • No PhD students for effective research • Research laboratories
<p><u>Opportunity</u></p> <ul style="list-style-type: none"> • Developing collaborative relationships with other Higher Education institutes in UAE for research • Developing closer ties with industry via industry engagement programs and practice schools • Cross campus collaborations 	<p><u>Challenges</u></p> <ul style="list-style-type: none"> • Ineligibility for government funding in UAE or even India • Local and international accreditations • Less placements in core industries • Research funding.

52. Future plans of the department.

The future plans includes Research, Consultancy, Interaction with Industry, Involvement of Industry expert in the teaching-learning process, Students' project based on industry-defined problems, offering courses for industry professionals under WILP, exploring the possibility of started a higher degree program.

53. Any other information regarding your department which you would like to include.

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount (Lakhs)	Duration
1	Submitted a proposal to Hitech Industries, FZE, on Waste water treatment.	B G Prakash Kumar	Hitech Industries FZE, Jebali Ali, Dubai, UAE	Proposed amount 40,000 AED (yet to sanction)	6 months



Dubai Campus: Evaluative Report of the Department

COMPUTER SCIENCE

- 1. Name of the Department :** Computer Science
- 2. Year of establishment of the Department :** 2000
- 3. Is the Department part of a School/Faculty of the university?**
Departments function as independent entities in the university and are not part of any school or faculty.
- 4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.).**

UG: **B.E (Hons.) Computer Science**, PG: **M.E (Software Systems)**, Ph.D.: **Computer Science**
- 5. Interdisciplinary programmes and departments involved :** Nil
- 6. Courses in collaboration with other universities, industries, foreign institutions, etc.:**
Collaboration with industries:
Note: some of our structure courses like Practice School and thesis dissertation are done by our students in industries and universities outside BITS.
- 7. Details of programmes discontinued, if any, with reasons :** Nil
- 8. Examination System:** Semester based Choice Based Credit System
- 9. Participation of the department in the courses offered by other departments:** Enterprise Resource Planning for MBA program, Internet Security and Cyber Laws for MBA program, Management Information Systems for MBA program, Software Project Management for MBA program.

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others). (Refer Support document for calculation)

	Sanctioned	Filled (includes offer letters given)	Actual number
Professors	Note**:		2
Associate Professors			-
Asst. Professors			4
Others (Senior Lecturers, Lecturer)			5

Note**:
The faculty positions for the University is broadly governed by Growth plan which also covers designation-wise breakup with a larger vision. Keeping in mind the fluidity of movement of faculty and proposed



student to faculty ratio in each campus for first degree, higher degree as well as Ph.D. programmes, individual department needs are not fixed. Besides, as we are in expansion plan which calls for new programmes, courses being introduced, the demand on faculty in terms of numbers, for each department, is broadly governed by all the above factors and hence it is not possible to have a fixed number of faculty for each department. Recruitment of faculty, therefore, varies, based on departmental needs.

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Dr. S. Vadivel	Ph.D	Professor	Web Services technology, Mobile based cloud computing, Microprocessor systems, BIO metrics and related signal processing and Big data.	19 Years Teaching, 7 Years Industry	1 guided + 2 guiding
Dr. B. Vijaykumar	Ph.D	Professor	Distributed Data Systems, Software Engineering, Web Data Mining, Multimedia Systems	24 years Teaching, 5 years ind.	2 guided + 2 guiding
Dr.V. Santhosh Kumar	Ph.D	Asst. Professor	High Performance Computing, Data Warehousing, Data Mining, Mobile IP	16 years Teaching, 2 years Industry	1 guided + 2 guiding
Dr. Madijagan M	Ph.D.	Asst. Professor	Component Based Software Engg., Cloud Computing	20 years	2 guiding
Dr. Sujala D. Shetty	Ph.D.	Asst. Professor	Web Services & Security, Big Data	19 Years	1 guiding
Dr. Siddaling Urolagin	Ph.D, PDF	Asst. Professor	Pattern Recognition	10 Years	-
Dr. S. Jeyalatha	Ph.D.	Sr. Lecturer	Web Mining	15 years	-
Dr. Alamelumangai J.	Ph.D	Sr. Lecturer	Data Mining	15 years	-
Ms. Susila S.	M.E. (Ph.D)	Sr. Lecturer	Web Services Technology	10 Years g	-
Ms. Susanna Henry	M.E, (Ph.D)	Sr. Lecturer	Mobile IP	10 Years T	-
Mr. Nandkuamar	M.E (Ph. D)	Lecturer	Cloud Computing	8 Years	-

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors: Nil

13. Percentage of classes taken by temporary faculty – programme-wise information: Nil



14. Programme-wise Student Teacher Ratio

UG: B.E. (Hons.) Computer Science

Year	No. of Students (CS)	No of Faculty	Student Teacher ratio
2010-2011	461(157+165+61+78)	10	46.1
2011-2012	387(165+61+78+83)	10	38.7
2012-2013	322(61+78+83+100)	10	32.2
2013-2014	373(78+83+100+112)	10	37.3
2014-2015	435(83+100+112+140)	10	43.5

PG: M.E. (Software Systems)

Year	No. of Students	No of Faculty	Student Teacher ratio
2010-2011	06	10	0.6
2011-2012	14 (06+08)	10	1.4
2012-2013	19 (08+11)	10	1.9
2013-2014	19 (11+08)	10	1.9
2014-2015	21 (08+13)	10	2.1

Ph D: Computer Science

Year	No. of Students	No of Faculty	Student Teacher ratio
2010-2011	2	5	0.4
2011-2012	4 (2+2)	5	0.8
2012-2013	5 (2+2+1)	5	1
2013-2014	10 (2+2+1+5)	5	2
2014-2015	11 (2+2+1+5+1)	5	2.2

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual .: Actual 4

16. Research thrust areas as recognized by major funding agencies

- 1.All Machine Learning & Data Mining
2. Computer Architecture, Embedded Systems & Robotics
3. Databases & Data Warehousing
4. High Performance & Distributed Computing
5. Image Processing & Multimedia
6. Networking & Mobile Computing
7. Algorithms Theoretical Computer Science

17. Number of faculty with ongoing/completed projects in the last five years from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Completed projects: NIL Ongoing Projects: NIL

18. Inter-institutional collaborative projects and associated grants received :



a) National collaboration

b) International collaboration : Nil.

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.;
total grants received. : Nil.

20. Research facility / centre with

- state recognition
- National recognition
- international recognition

21. Special research laboratories sponsored by / created by industry or corporate bodies

a) Dr. Madijagan is the Lead faculty for research and training collaborations with DELL, CISCO, Middle East, since I semester 2014-15. CISCO has setup a Networking Lab at BPDC to work in the following areas: Software Defined Networks & Application Centric Infrastructure. Training for Certification Courses for DELL and CISCO are being planned in the near future.

CISCO Sponsored Network Lab: The Cisco sponsored networking research lab is equipped with the required network components such as routers, switches, firewall, wireless controllers and access points to build the network from the base level to high level of networking. The Cisco lab has all the hard copy and soft copy material to help the students to learn and start the practical training on Cisco hardware devices. This Cisco lab will lead the students to achieve the Cisco certifications and software defined Network projects.

b) Prof. S. Vadivel is the Lead faculty for research collaboration with ESRI Sharjah, to work in the following areas from I sem 2014-15:

- Hadoop based distributed processing for ARCGIS server and ArcGIS desktop: Dr S. Vadivel, Dr. Sujala D Shetty.
- Image search based on meta data and feature selection: Dr. Jagadish Nayak and Dr. B. Vijayakumar

c) Prof. S. Vadivel is the Lead Faculty for the MSDN academic alliance with Microsoft at Gulf for another 5 years, w.e.f. 2012. Through this alliance the students and faculties in BITS Pilani, Dubai Campus are entitled to use the latest Microsoft software packages which can be used as tools for developing software applications in emerging areas like cloud computing, mobile computing and web applications development .The availability of above software packages will definitely go a long way in enhancing the software facilities available in the laboratories.



22. Publications:

SI No.	Details	Specify number here
I	Number of papers published in peer reviewed journals (national / international)	31
ii	Monographs	Nil
iii	Chapters in Books	3
iv	Edited Books	Nil
v	Books with ISBN with details of publishers	Nil
vi	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	28
vii	Citation Index – range / average	8-28 / 14.5
viii	SNIP	0.6610
ix	SJR	0.3525
x	Impact Factor – range / average	0.835-5.88/2.172
xi	h-index	4.33
xii	Number of papers published in peer reviewed conferences (national / international)	53

Details of the publications as per the number give above (Give details in the last five years)

SL No	Authors	Title of the Publications	Details of the Journal	National/International	Year
1	Lekha R. Nair, Dr. Sujala D. Shetty	"Streaming Twitter Data Analysis Using Spark For Effective Job Search"	Journal Of Theoretical And Applied Information Technology (E-Issn 1817-3195 / Issn 1992-8645).	International	2015
2	Sana Zakir Hussain, Sujala D. Shetty	Spatial Data Analysis on the Cloud	International Journal Of Geomatics And Geosciences, Volume 6 Issue 1,2015.	International	2015
3	Lekha R. Nair, Sujala D. Shetty	"Research in Big Data and Analytics: An Overview"	IJCA December 2014 Edition Digital Library	International	2014
4	Dhvaja Shikare, Sujala D. Shetty	Supercloud - Need, Issues and Challenges	International Journal of Engineering Research & Technology, Volume 3, Issue. 05, May 2014	International	2014
5	Sujala D. Shetty, Dr. S. Vadivel	."Interoperability Issues seen in Web Services",	IJCSNS International Journal of Computer Science and Network Security, VOL.9 No 8, August 2009	International	2009
6	Sujala D Shetty, Sahil Rajput, S. Vadivel	"Design and Security Analysis of Web Application based and	IJCSNS International Journal of Computer Science and Network Security, VOL.10 No. 3,	International	2010



		Web Services based Patient Management System(PMS)”	March 2010		
7	S. Jeyalatha, B. Vijayakumar, Ehtesham A. Hazarika	Design of an Interface for Page Rank Calculation using Web Link Attributes Information	Informatica Economica	International	2010
8	S. Jeyalatha, B. Vijayakumar, Anamika Datta	Interactive Web Data Extraction and Retrieval System using MySQL and PHP in an Academic Environment	International Journal of Advanced Computing	International	2010
9	S. Jeyalatha, B. Vijayakumar, Munnawar Firoz	Design and Implementation of a Tool for Web Data Extraction and Storage using Java and Uniform Interface	International Journal of Computer Applications	International	2011
10	S. Jeyalatha, K. Divya	Distorted Fingerprint Verification System	Informatica Economica	International	2011
11	Bharat B Gulyani, J Alamelu Mangaiand Arshia Fathima	An Approach for Predicting River Water Quality using Data Mining Technique	Advances in Data Mining: Applications and Theoretical Aspects, Petra Perner, Springer Lecture Notes in Computer Science, Vol 9165, pp 233-243.	International	2015
12	J. Alamelu Mangai, V. Santhosh Kumar and Karthik Ramesh	Web Page Classification using MDAWKNN	Encyclopedia of Business Analytics and Optimization, John Wang, Pennsylvania, IGI Global Publishers, pp. 2685-2695	International	2014
13	Arshia Fathima, J. Alamelu Mangai and Bharat B. Gulyai	An Ensemble for Predicting BOD in River Water Using Data Mining Techniques	Int. J. of River Basin Management, Taylor and Francis, Vol. 12, No. 4, pp. 357-366.	International	2014
14	J. Alamelu Mangai, V. Santhosh Kumar and Balamurugan, S.	A Novel Approach for Effective Web Page Classification”	Intl J of Data Mining, Modeling and Management, Inderscience Publishers, Vol.5, No. 3, pp. 233-245.	International	2013



15	J. Alamelu Mangai, and V. Santhosh Kumar	Towards Improving Automatic Web Page Classification in the discrete domain	Intl J of Data Analysis and Information Science, Vol. 4, No. 2, pp.81-91.	International	2012
16	J. Alamelu Mangai, V. Santhosh Kumar and Balamurugan, S.	A Novel Feature Selection Framework for Automatic Web Page Classification	Intl J of Automation and Computing, Springer Verlag, Vol. 9, No. 4, 442 – 448, 2012	International	2012
17	J. Alamelu Mangai, V. Santhosh Kumar and Kothari. D. S.	A Novel Approach for Automatic Web Page Classification Using Feature Intervals	Intl J of Computer science Issues, Vol. 9, No. 2, pp. 282-287, 2012.	International	2012
18	J. Alamelu Mangai, V. Santhosh Kumar	A Novel Approach for Web Page Classification using Optimum features	Intl. J. of Computer Science and Network Security, Vol. 11, No. 5, pp. 252 – 257, 2011.	International	2011
19	Anand Kumar, Vijayakumar & R K Mittal	Research Topics in Cloud Computing	Encyclopedia of Cloud Computing, Wiley Publishers (http://www.amazon.com/Encyclopedia-Cloud-Computing-Wiley-IEEE/dp/1118821971)	International	Due January 2016
20	Nilaykumar Kiran Sangani, Vijayakumar B	Cyber Security Scenarios and Control for Small and Medium Enterprises	Informatica Economica, Vol. 16, Iss.2, 2012 ISSN 1453-1305	International	2012
21	Aksheta Mehta, Vijayakumar B	Implementation of a Prototype Client-Server Model for a Generic Database Application over a Network	UACEE Int. Journal of Computer Science and its Applications, Vol. 2, Iss. 3, 2012 ISSN 2250-3765	International	2012
22	Muthaiyan Madijagan, Garg Pragma	Prototype of Intrusion Detection Model using UML 5.0 and Forward Engineering	Informatica Economica	Intl	2011
23	Madijagan Muthaiyan, Vijayakumar Balakrishnan, Sri hari Haran Seenivasan	Component Approach to Software Development for Distributed Multi-Database Systems	Informatica Economica	Intl	2010



24	M Madijagan, Anuradha,	Design and Develop an Android Application for Virtual e-Medic System for Self Screening of Breast Cancer, ISSN 2278-1315, SJIF=3.274, GIF=0.405	World Academy of Informatics and Management Science	Intl	2013
25	Malavikakarthik vasudevan, M Madijagan, Tina Fransis	HeartSafe- An Smartphone Application Framework for a Heart Rate monitor	IJACSci (International Journal Advanced Computer Science, Vol. 5, No. 04, April, 2015, ISSN: 2251-6379.	Intl	2015
26	Susila and Vadivel	Web service selection through Quality of Service Agent web service	International Journal of Software and Web Sciences (IJSWS), ISSN: 2279-0071, ISSN (Print): 2279-0063 (September-November, 2013, Issue 6, Volume 1). Pp 18-23	International	2013
27	Susila and Vadivel	A novel approach to distributed data mining by composing web services	Journal of Communication and Computer, David Publishing Company, Jan 2012	International	2012
28	Susila and Vadivel	Web Service Selection based on QoS Attributes using Entropy Discretization Method	International Journal of Computer Applications 30(2):47-53, September 2011. Published by Foundation of Computer Science, New York, USA	International	2011
29	Susila and Vadivel	Agent based discovery of web service to enhance the quality of web service selection	International Journal of Computer Science and Network Security (IJCSNS), Feb 2011, Vol.11, No.2, pp 159-163	International	2011
30	Susanna S Henry, V. Santhosh Kumar	Mobile Devices on IP Internetworks	International Journal of Computer Science Issues, Vol. 9, Issue 3, No 1, page no: 496-504, ISSN: 1694-0814	International	2012
31	Susanna S Henry, V. Santhosh Kumar	Current Status of Mobile Internet Protocol version 4 And its Security Issues.	International Journal of Computer Science Issues, Vol. 9, Issue 2, No 2, page no: 244-252, ISSN: 1694-0814	International	2012



Details of Conference Publications:

SL No	Authors	Title of the Publications	Details of the Conference	National/International	Year
1	Susanna S Henry, Vijay Kumar, V. Santhosh Kumar, Gurwinder Singh	Protocol Verification of Translation in Mobile Internet Protocol version 4 and 6	2015 8th International Conference on Advanced Computer Theory and Engineering (ICACTE 2015)	International	2015
2	Susanna S Henry, V. Santhosh Kumar	On Reachability Analysis in MIPv4-MIPv6 coexistence phase.	2013 International Conference on Current Trends in Information Technology (CTIT).	International	2013
3	Susanna S Henry, V. Santhosh Kumar	A Review on Protocol Verification in Mobile Internet Protocol Version 4 and 6.	Proceedings of the 2nd Conference on Technology Management (MCTM - 2011)	International	2011
4	Dev Dua, Sujala D. Shetty, Lekha R. Nair	Applying Scalable Machine Learning Techniques on Big Data Using a Computational Cluster	The 16th International Conference on Internet Computing and Big Data, July 27-30, 2015, Las Vegas, USA	International	2015
5	Dev Dua, Sujala D. Shetty, Lekha R. Nair	Development of a distributed cryptographic system employing parallelized CTR mode encryption	10th International Conference on Internet and Web Applications and Services, 21 -26 June 2015 / Belgium, Brussels	International	2015
6	Lekha R. Nair, Sujala D. Shetty	Security in Big Data: Issues and Challenges	International Conference on Secure Knowledge Management SKM 2014, Conference organized by University at Buffalo, State University of New York, BITS Pilani, Hyderabad Campus, Abu Dhabi Polytechnic, Abu Dhabi, 8-9 December 2014, BITS Pilani, Dubai Campus	International	2014
7	Dr. Sujala D. Shetty, Kanika Mehta, Prof. Dr. S. Vadivel	A Study on Security in Cloud Computing	6 th Annual International Conference on Business and Society in a Global Economy, held between 17 th and 20 th of December 2012 in Athens , Greece.	International	2012



8	Dr. Sujala D. Shetty, Dr.Vadivel, Nirav Gandhi	“A Cloud enabled online quiz application deployed on Google Cloud.”	ICCTAM-12, 8-10, December 2012,BITS Pilani, Dubai Campus,Dubai.	International	2012
9	Sujala D Shetty, Dr S Vadivel, Sakshi Vagella,	WEKA Based Desktop Data Mining as Web Service	WASET, ICCESSE\`10, April 28-30, 2010, Rome, Italy	International	2010
10	Dr.Sujala Shetty, Shikhar Sethi,Dr. S.Vadivel,	Development of REST Web Service to help organizations promote customer involvement in online corporate social responsibility	ICCTAM-12, 8-10,BITS,Pilani-dubai campus,Dubai,December 2012	International	2012
11	Siva Manaswini Malladi, Dr.Vadivel,	Designing and Deploying a Hospital Management Application in Google Cloud and Performance Study of the application	ICCTAM-12, 8-10,BITS,Pilani-dubai campus,Dubai,December 2012	International	2012
12	Susila and S.vadivel	A novel approach to add semantics to web services”, International Conference on Recent Advances in Applied & Biomedical Informatics and Computational Engineering in Systems Applications”,	Proceedings of the International Conference on Recent Advances in Applied & Biomedical Informatics and Computational Engineering in Systems Applications. Florence, Italy Pages 59-64. Online at http://www.wseas.us/books/2011/Florence August 23-25,2011 paper id(1111201)	International	2011
13	Mohit Athani and Dr.S.vadivel,”	Facial Detection and Recognition on iPhones using Intel OpenCV Library”	MobiCONA 2012 - 2nd Annual International Conference on Mobile Communications, Networking and Applications, 2012,singapore	International	2012
14	Sandeep Ganapa and Dr.S.Vadivel	Integrating Facebook Platform Features into an Android Application	, MobiCONA 2012 - 2nd Annual International Conference on Mobile Communications, Networking and Applications,18th June to 19th june 2012,Singapore	International	2012
15	S.Vadivel and sujala shetty	WEKA based desktop data mining as web service	International Conference on Computer, Electrical, and Systems Sciences and engineering”, Rome,Italy, April 28-30,2010	International	2010



16	Pratik Sen and Dr.S.vadivel	Introduction to fast indexing method for images in database	International Conference on Digital Image Processing,ICDIP 2015 Apr 9, 2015 - Apr 10, 2015 , Los Angeles, USA	International	2015
17	Tina Francis, Muthiyar Madijagan, Vijay Kumar	Privacy Issues and Techniques in E-Health Systems	ACM SIGMIS-CPR '15, Pages: 113-115, ACM SIGMIS Conference on Computers and People Research, ISBN: 978-1-4503-3557-7	International	2015
18	Madijagan, M S Thakur,	Selection of Sensor Architecture and Design of Sensor Framework for Blade Server and Data Centre Cooling System	International Conference on Artificial Intelligence, Energy and Manufacturing Engineering (ICAEME'2015) Jan. 7-8, 2015 Dubai (UAE)	International	2015
19	Madijagan, Nilay,	Social Media Security Strategy Architecture for Online Reputation Management	International Conference on Innovative Technologies (IN-TECH) 2014, Budapest.	International	2014
20	M. Madijagan, Ankur	Proactive Autonomous Defense Shield (PADS) FOR Infrastructure as a Service (IaaS)	World Congress on Engineering (WCE) 2014 London.	International	2014
21	M Madijagan, Anuradha	Design and Develop an Android Application for Virtual e-Medic System for Self Screening of Breast Cancer	Academy of Informatics and Management Science ISSN 2278-1315, World	International	2013
22	M. Madijagan, Nilay, Tejas	Advantages of components in Security & Privacy Architecture as a Service for Small and Medium Enterprises	World Congress on Engineering 2013, London, Imperial College, 3-5 July, 2013.	International	2013
24	M Madijagan, T Vithani, B Vijayakumar,	Cloud Base Mobile Learning System Architecture	International Conference on Innovative Technologies, IN_TECH 2013, Budapest, 10-12-09-2013, pages:101-104	International	2013
25	A. Zilpelwar, K. Thukral and M Madiagan	A fully autonomus cloud enabled robotic urban search and rescue(USAR) system architecture, challenges and Applications” pages:85-88, 2013,	http://www.in-tech.info/download/intech_proceedings_2013.pdf IN_TECH 2013, Budapest, 10-12-09-2013	International	2013



26	M. Madijagan, Niyati Parameswaran, M.Bharati	Qmulus – A Cloud Driven GPS Based Tracking System for Real-Time Traffic Routing,	World Academy of Science, Engineering and Technology, Switzerland, 14-16 January 2013.	International	2013
27	M. Madijagan, Manas Jog	Cloud Computing: Exploring security design approaches in Infrastructure as a Service	International Conference for Cloud Computing Technologies, Application and Management 2012 (ICCCTAM-12), IEEE Explorer;8-10 Dec. 2012	International	2012
28	M. Madijagan, Nilay, Tejas, P Velumurugan	Security & Privacy Architecture as a Service for Small and Medium Enterprises	International Conference for Cloud Computing Technologies, Application and Management 2012 (ICCCTAM-12), IEEE Explorer;8-10 December 2012	International	2012
29	M. Madijagan, Appandiarajan, Zafar Ali Khan	ERP on cloud-Implementation strategies and challenges	International Conference for Cloud Computing Technologies, Application and Management 2012 (ICCCTAM-12), IEEE Explorer;8-10 December 2012	International	2012
30	M. Madijagan, Deepti Prakash, Neha Goel	Virtual e-Medi : A cloud based Medical Aid	World Academy of Science, Engineering and Technology, Paris, pISSN 2010-376X, eISSN 2010-3778, November 2012, Issue 71, pp: 2141-2145	International	2012
31	Nand Kumar, R K Mittal	Cloud Computing Setup for a Campus Environment	International Conference for Cloud Computing Technologies, Application and Management 2012 (ICCCTAM-12), IEEE Explorer; pp. 91-94, December 2012	International	2012
32	Adithya Mehta, B. Vijayakumar	Implementation of Content Management System for Institution LINUX USERS GROUP using JOOMLA under UBUNTU LINUX	IN-TECH 2012 ISBN 978-953-6326-77-8, pp. 167-170.	International	2012
33	V Varunkumar, B. Vijayakumar	Design and Implementation of Search Algorithm for DNA Sequence Database	IN-TECH 2012 ISBN 978-953-6326-77-8, pp. 221-224.	International	2012



34	Dev Dua, Vijayakumar B	Study and Design of an Efficient and Sustainable Framework for E-Waste Management	Proc. Of National Conference on Emerging Technologies - 2013", 26th May 2013, BIT Offshore Campus, RAK, UAE	National	2013
35	VVarun-kumar, B. Vijaya-kumar	Design of a Generic Database Model for Organizing Biological Information	Proc. Of Int. Conference on Innovative Technologies, IN-TECH – 2013, 10-12 Sep. 2013, Budapest, Hungary, pp. 439-441.	International	2013
36	Milu Mary Philip, B, Vijayakumar	Software Architectural Design for Image Retrieval System involving Data Streams and User Interactivity	The World Congress on Engineering and Computer Science 2014, San Francisco, USA, 22-24 October, 2014, IAENG Conference Proceedings	International	2014
37	Yashasvi Vedula, Student Member, IEEE, B. Vijayakumar	Leveraging Smartphone Technology to Enhance Emergency Response Services	International Conference on Telecommunications and Computing, TELFOR, Serbia, Nov. 2014.	International	2014
38	Nithya.K, B. Vijayakumar	Architectural Design for Allocation, Storage and Retrieval of Distributed Multimedia Data	Proceedings of the International MultiConference of Engineers and Computer Scientists 2015, IMECS 2015, March 18 - 20, 2015, Hong Kong, pp. 184-188.	International	2015
39	Gaurav Madan, Yashasvi Vedula, Anubha Varshney, Ranoo Sharma, B Vijayakumar	eAttendance System for Academic Institutions	Proceedings of the International Multi Conference of Engineers and Computer Scientists 2015, IMECS 2015, March 18 - 20, 2015, Hong Kong, pp. 382-386.	International	2015
40	J. Alamelu Mangai and Bharat B Gulyani	A Predictive Data Mining Model for Customer Response in Bank Telemarketing"	Intl. Conference on Evidence Based Management (ICEBM 2015), BITS Pilani, India, March 20-21	International	2015
41	Satej Wagle, J. Alamelu Mangai, and V.Santhosh Kumar	An Improved Medical Image Classification Model Using Data Mining Techniques	7th IEEE GCC Conference and Exhibition, Qatar, Nov 17-20,	International	2013



42	J.Alamelu Mangai, V.Santhosh Kumar Satej Wagle,	An Improved K Nearest Neighbor Classifier Using Interestingness Measures for Medical Image Mining	Int. Conf. on Health and Medical Informatics, Singapore, Sep 12-13	International	2013
43	J. Alamelu Mangai, V.Santhosh Kumar and Satej Wagle	A Novel Web Page Classification Model Using an Improved k Nearest Neighbor Algorithm	3rd Int. Conf. on Intelligent Computational Systems, Singapore, Apr 29 - 30	International	2013
44	J. Alamelu Mangai, V. Santhosh Kumar and Jagadish Nayak	A Novel Approach for Classifying Medical Images Using Data Mining Techniques	2nd Intl Conf on Data Mining and Its Applications, UAE, Mar 13-14	International	2013
45	J. Alamelu Mangai, V. Santhosh Kumar and Dipti Kothari	A Supervised Discretization Algorithm for Web Page Classification	8th Int. IEEE Conf. on Innovations in Information Technology, UAE, Mar 18-20	International	2012
46	Jeyalatha S., Vijayakumar B., Zainab A. Shikari	Design Considerations for a Data Warehouse in an Academic Environment	International Conference on Computer Science, World Academy of Science, Engineering and Technology (WASET), Paris, France	International	2010
47	Jeyalatha S., Vijayakumar B., Sahil Dhingra	Design and Implementation of Data Warehouse Maintenance Operations in an Academic Environment using Java	International Conference on Computing, New Delhi, India	International	2010
48	Jeyalatha S., Vijayakumar B., Sachin K. Thomas	Design and Implementation of a Web Extraction Tool for Hypertext Documents	Proceedings of the 2nd Conference on Technology Management (MCTM-2011), Dubai, U.A.E	International	2011
49	Jeyalatha S., Vijayakumar B., Gurpreet Singh Wadhwa	Design and Implementation of Web Based Application for Relational Data Maintenance in an University Environment	Proceedings of the 2nd Conference on Technology Management (CTIT 11), Dubai, U.A.E	International	2011
50	Jeyalatha S., Vijayakumar B.	Design and Implementation of a Web Structure Mining Algorithm using Breadth	Proceedings of the 6th International Conference on Internet Technology and Secured Transactions (ICITST	International	2011



		First Search Strategy for Academic Search Application	2011), Abu Dhabi, U.A.E		
51	Divya K., Jeyalatha S.	Key Technologies in Cloud Computing	Proceedings of the International Conference on Cloud Computing Technology and Management (ICCCTAM-12), Dubai, U.A.E	International	2012
52	Ronak Sumbaly., Jeyalatha S	Analysis of Sequential Pattern Mining Using Design of Prefix-Span Algorithm	National Conference on Emerging Technologies, Ras Al Khaimah, U.A.E	National	2013
53	Ganesh Kumar S., Jeyalatha S	Study of Application of Metaheuristic Optimization Techniques in Search-Based Software Testing	National Conference on Emerging Technologies, Ras Al Khaimah, U.A.E	National	2013

23. Details of patents and income generated : Nil

24. Areas of consultancy and income generated : Nil

25. Faculty selected nationally / internationally to visit other laboratories / institutions industries in India and abroad

Dr M Madijagan, Dr B Vijayakumar, Dr Anandkumar and Dr Santhosh Kumar visited DELL Emerging Markets Limited Research Labs at Dubai during August 2014.

Dr M Madijagan visited CISCO Solutions Centre at Dubai, during December 2014.

26. Faculty serving in National committees b) International committees c) Editorial Boards d) any other (please specify)

- i. Dr S. Vadivel has been in the judging committee for Software Development Trade Show at Wollong University, Dubai since 2010.
- ii. Dr. Sujala Shetty, Dr. Jeyalatha and Dr. J Alamelumangai have been in the Gulf Programming Contest Committee during 2010 - 2015.
- iii. ICCCTAM 2012 - International Conference on Cloud Computing Technologies, Applications and Management, December 2012: All 10 CS Department Faculty Members were actively involved in various committees of the international conference. Dr. B. Vijayakumar has been the Technical Program Chair.
- iv. SKM 2014 - International Conference on Secure Knowledge Management, December 2014: All 10 CS Department Faculty Members were actively involved in various committees of the international conference. Dr. S. Vadivel has been



the Local Arrangements and Organzing Chair.

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

- i. Dr. M. Madiajagan attended Orientation for 1 day, related to Tele-presence System at CISCO Solutions Centre, Dubai during I Semester 2014-15.
- ii. Dr. M. Madiajagan attended Orientation for 1 day , related to DELL Software Defined Networking, at DELL Solutions centre Dubai during I Semester 2014-15.
- iii. Dr. M. Madiajagan attended 3 days workshop on Teaching and Learning at BITS GOA campus during July 2015, 18-20.
- iv. All 10 CS faculty members attended a Training Program for WebEx during 2-5, April 2012 conducted by Ms Navnintara Kamath, from CISCO.
- v. Dr Vadivel and Dr. Santhosh Kumar attended a workshop conducted by Microsoft on HTML5 and Windows Azure Cloud Computing during 15-17, March 2012..
- vi. Dr.Vadivel and Dr.Sujala Shetty attended a workshop conducted by Microsoft on Mobile Programming on Windows in Internet City, Dubai during 24-25 March 2012.
- vii. Ms. Susanna Henry, Senior Lecturer, CS, BPDC has spent one month at BITS Hyderabad Campus during June-July,summer 2014. She enhanced her teaching, research and laboratory skills by way of extensive training given by Prof. Chittaranjan Hota and Dr. Chandrashekar at BITS Hyderabad Campus.
- viii. Ms Susanna S Henry attended 40 hours iOS Training for Mobile App development during June-July 2015 at Dubai.
- ix. Ms Susanna S Henry attended 7 days Conference -Workshop on Debian Operating Systems at Heidelberg, Germany during 15 Aug-22 Aug 2015.
- x. Dr. Santhoshkumar, Ms. Susanna S Henry and Mr. Nandkumar attended 1 day MOOC workshop on 10th July held at BITS, Pilani Hyderabad Campus.
- xi. Dr. Sujala D Shetty attended one day workshop on Effective Teaching conducted in BITS, Pilani, Dubai Campus in 2014.
- xii. Dr. Sujala attended workshop on Interdisciplinary Research held in BITS Goa in November 2014.
- xiii. Mr. Nandkumar,Lecturer, CS, BPDC has spent one month at BITS Pilani, Pilani Campus during June-July, summer 2014 and attended 2 weeks orientation on MOOC. He also carried out research related discussions related to Cloud Computing, with Prof Rahul Banerjee.



28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects

Year	No. of CS Students who have done in-house projects	percentage of students who have done in-house projects
2010-2011	157	100
2011-2012	165	100
2012-2013	61	100
2013-2014	78	100
2014-2015	83	100

- percentage of students doing projects in collaboration with other universities /industry

Year	No. of CS Students	No. of CS Students who have done Practice School projects	percentage of students who have done Practice School projects
2010-2011	157	138	87.90
2011-2012	165	148	89.70
2012-2013	61	61	100
2013-2014	78	74	94.87
2014-2015	83	72	86.75

29. Awards / recognitions received at the national and international level by Faculty / Doctoral / post doctoral fellows /Students

- The annual inter university "Crossfire" Debating Championship was held at Skyline University College, Sharjah, on the 18th of February 2015. 8 Universities from across the UAE participated in the Debating Championship. Varun Sharma, a third year B.E Computer Science student and Mohamed Atyab, a final year B.E Mechanical Engineering student represented BPDC at the event. Mohamed Atyab won the Runner Up - Best Speaker (Against the motion) award at the competition.
- CS Students from BPDC participated at The Microsoft Hackathon competition on 28th March 2015 at the Microsoft Office, Internet City. The students were awarded Nokia Lumia 1520 for their performance in the event. The student details are given as follows:
 - Alok Rajiv – 2nd year, Naman Kamra – 1st year, Pradheepan Raghavan – 2nd year
 - Rishav Jalan – 2nd year, Saugaat Allabadi – 1st year, Shaurya Sood – 1st year
 - Ritwik D'Souza – 1st year.
 - 'LOXLEY' team comprising of four students from Bits Pilani, Dubai Campus have emerged victorious in the final round of Business Case Study Challenge held by Middlesex University on 23 Feb. 2015, to take home a whopping cash prize of Dhs. 10,000 and a magnificent trophy. The students are Mihika Shivkumar (year II), Varun Sharma (year III CS), Matthew Abraham (Year III) and Sean D'Rosario (Year IV).



- The Harvard Business Review case study for this year's competition was titled: Emirates Airline: Connecting the Unconnected. 31 teams comprising of 119 students from 18 universities across the country competed at the Middlesex University Business Case Study Challenge. The teams had to undergo three grueling rounds consisting of written presentations, oral presentations and Q&A sessions spread over a period of one month. Of the 31 teams three teams reached the final round. The teams were judged by experts from the industry and academia. Panel members included senior managers from Emirates group, Al Futtaim Logistics and Du among others. Emirates Airlines is the main sponsor for this event. Our engineering students have proved that they possess business skills too. (photograph attached)
- On the 1st of May 2015, two students from the Computer Science Department of BITS Pilani Dubai Campus, Alok Rajiv and Lakshay Arora participated in a 48 hour hackathon competition at The Cribb, Al Quoq organized by Turn8.
- Their idea "iBOX" a physical cloud storage, was chosen as the best idea in the competition and they would be receiving a seed capital of AED 100,000/- for the same.
- Concept - It is a physical cloud storage. It aims to solve problems for people who have space problems at their homes and businesses. The idea of managed storage is integrated with technology which makes it more efficient and feasible, first of its kind in the country.
- **Contact:** Contact them through the application and they will deliver the storage boxes.
Pack and Tag: Take photos and tag your things as you pack. You can keep track of everything you store with the app.
Check-In: When you are ready, "Check-In" your items to ibox. They will pick them up and store it securely.
Check-out: Browse your inventory on the app through the photos stored. When you need something, schedule Check-Out and they will bring it to your door.
- Business strategists and experts mentored the team to pitch the idea to Venture Capitalists and Angel Investors. The idea was selected by a panel of experienced investors to win the competition and incubate and accelerate the business with a funding of 100,000 AED along with shared office infrastructure and mentorship from top-investors.
- Dr. Alamelu Mangai, Sr. Lecturer of CS dept. has guided her project student Ms. Shajitha Seyed Ismail of III year CS and their project entitled "Automated Detection of Diabetic Retinopathy using Image Processing Technique" has **won the first place in the Third U.A.E Under Graduate Students Research Competition - UGSRC - 2015 - Step up Shabab**, that was held on 21st May 2015 at Abu Dhabi University.
- The competition was held under the patronage of H.E. Sheikh Hamdan Bin Mubarak Al Nahyan, the minister of Higher Education and Scientific Research in coincidence with the UAE's classification of the year 2015 as the "**Year of Innovation**". The competition included about 348 research submissions in different disciplines from around 1000 students across U.A.E.
- BITS has sent 15 students this year for UGSRC [Shajitha, Raunak, Aishwarya Iyer and Nabnita, Ayanava Sarkar are the CS students and 10 more students from different streams]. The categories in the competition include CS, EEE, MECH, Maths, Physics,



Chemistry, IT, Education. All of our students were in placed in Top Ten in all the categories.

- DEWA Mobile Application Master Competition, June 2015:
- A team of 7 CS students Prateek Marathe, Sahil Shakir, Rohit Ravishankar, Zoheb Hynus, Isra Abbasi, Rahul Kumar, Jubin Daniel James participated from BITS DUBAI CAMPUS in DEWA app master competition and secured the second position.
- A team of 6 CS students Ankita Srivastava, Himadri Pathak, Varshali kumar, Subu Avudai, Likitha Satish and Ankit Bansal participated from BITS DUBAI CAMPUS in DEWA app master competition and secured the third position.
- DECODE DUBAI: 48 hour HACKATHON COMPETITION, June 2015
- A team of 5 final year students all from CS Department Dinesh Balani, Mihir Rai, Dev Dua, Vijit Katta and Mohammed Muzzamil participated in DECODE DUBAI and developed an application that will motivate people to save electricity. This team won the first prize. The organizers will be incubating our students for 5 months to polish their idea and they will be further participating in World finale Of "Smart City App hack" to be held in Barcelona, Spain in month of November 2015.
- 8. Won prize in software trade show conducted by University of Wollongong
- Our IVth year CS student Mohit athwani 2008 A7TS098U has won the third prize in Software development tradeshow 2012 held in woolongong university on 28th May 2012.
- Three teams from our college have participated in the above event as given below:
- 1. Mohit athwani 2008A7TS098U "Facial Detection and Recognition on iPhone with blink gestures"- (Under the guidance of Dr. Vadivel)
- Aditya mehta 2008A7PS022U, "Let Us order"- (Under the guidance of DR. D. V. Prasad, Dr. Vijaya kumar, Dr. vadivel)
- 3. Thomas binu 2008A7PS556U, Prashant Nair 2008A7PS450U, "Automation of a University Internship Program", (Under the guidance of Dr. Madhia jegan).
- Totally 17 teams from various reputed universities all over UAE have participated in the above tradeshow. There were 2 technical experts from Microsoft Gulf and one from TCOM IT dept who judged all the projects. As per Dr. Catherine Todd, the organizer of the above event in Wollongong university, the competition among top3 teams have been very close, and Mohit was able to win the 3rd prize.
- Aditya mehta's, "Let Us order" application caught the eye of a BBC(arabic) producer, who came to cover the event, recorded the demo along with 2 other demos from other universities. The recorded demos will be sent to his office in London for approval to broadcast on a TV show called "4tech" on BBC (Arabic) in near future.
- Our university students, won the prize for the college worth of \$10,000-00 US dollars in the Nokia university application challenge held in UAE on 27th May 2012.
- Dr. S. Vadivel acted as convener and guided a team of students towards participation of Nokia Challenge mobile computing held in UAE. The students won the prize for the college worth of \$10,000-00 US dollars in the Nokia university application challenge held in UAE on 27th May. They were given 2 days intensive training on Nokia platforms for developing applications by eminent developers from Nokia corporation



and given 7 weeks time to develop innovative applications. Our students rose to the occasion and were able to contribute 11 innovative applications out of total 19 application from the entire UAE universities. Then after further short listing the top 10 applications done by the their top technical team it is found that there were 4 applications from our university in the short listed list.

- "Pocket Masjid"-submitted by Shamliya Shukkur 2009A7PS265U
- "My Metro"-submitted by Dhvani Chotalia 2009A7PS086U and Roopal Chouhan 2009A7PS235U
- "Jobless"- submitted by Deepa Devanand 2009A7PS078U
- "Rage Comics"-submitted by Aditya Shankar 2011A7PS244U and Siddhart Swamy 2011A4PS150U
- Ours is the only university from where so many applications find their place in the top 10 of submitted applications. Hence the above prize of \$10,000-00 US dollars has been awarded to our university at a function held in Armani hotel ballroom (Burj khalifa)in Dubai.
- The team Geeks from BPDC participated in Software Development Trade Show at UOWD, Dubai in May, 2011 and won the first prize. The students were Mohit Athwani and Radhakrishna Sanka. The application developed by them enables Radio stations to stre am content on Iphones / I pads.
- 11., Dr. Madijagan, Faculty i/c ACM Chapter, BPDC won prize (Black Berry Bold 9780) by answering Open Question at ACM organized conference CTIT -2011 at HCT, Dubai.
- Dr. Sujala D. Shetty reviewed four papers for the 12th IEEE India International Conference INDICON2015, to be held between 17th to 20th December 2015 in Jamia Millia Islamia, New Delhi, India
- Dr. Sujala D. Shetty reviewed three papers for the 7th IEEE-GCC Conference and Exhibition 2013. Held between 17th and 20th of November 2013 at Doha, Qatar.
- Dr. Sujala D. Shetty was selected to be the judge at the Interschool Science Exhibition conducted by DPS, Dubai in June 2015.
- Nilay Kumar Kiran Sangani got the best paper award for Science Technology Transfer under the area: Computer Science, among all the 70+ papers presented from all the areas in the Int. Conference on Innovative Technologies, IN-TECH – 2013, 10-12 Sep. 2013, Budapest, Hungary. Paper Title: Social Media Security Strategy Architecture for Online Reputation Management, Co Authors: Dr. B. Vijayakumar and Dr. M. Madijagan
- Joseph George is currently a Ph.D. scholar at Computer Science Department, BPDC since 2014. He is the Head of Information Technology at Rashid Centre for Diabetes and Research (RCDR), Ministry of Health UAE. Joseph George delivered the key note speech on "Innovative Strategies for improving patient care" at Healthcare Innovation Congress, on 10-11 May 2015, at Crown Plaza Hotel, Dubai, UAE.



30. Seminars/ Conferences/Workshops organized and the source of funding (national/international) with details of outstanding participants, if any.

a) The International Conference on Secure Knowledge Management in Big-Data era (SKM 2014) was held at BITS Pilani, Dubai Campus on 8th and 9th December, 2014. It was organized by University at Buffalo, New York, Birla Institute of Technology & Science, Pilani, and Abu Dhabi Polytechnic, Abu Dhabi. The conference on Secure Knowledge Management brought together researchers and practitioners from academia, industry and government to raise the awareness and share recent advances in knowledge management. The conference also provided a venue to discuss and develop the next set of challenges in knowledge management that needs to be tackled by the community. The research papers submitted were put through an intensive blind review process and out of 19 papers only 8 papers were selected for presentation on the basis of reviews and comments. Each paper was reviewed by three Program Committee members.

Dr. Marc Dacier Principal Scientist in Cybersecurity, Qatar Computing Research Institute (QCRI), has delivered a keynote address on “BGP Hijack : myth or reality”. Dr. Dacier explained what a BGP hijack is, why it can be a very serious and real threat and, to what extent we believe these attacks exist in the wild or not.

Prof. Divyakant Agrawal, California university delivered a keynote address on “Database, Scalability, Elasticity and Autonomy in the Cloud” .Prof. Agrawal discussed about the recent advances that have been made to strike a middle-ground between the two radically different data management architectures: traditional database management systems where the data is treated as a "whole" versus modern key-value stores where data is treated as a collection of independent "granules". He also highlighted the data security and privacy challenges in the context of the cloud.

The conference witnessed numerous invited talks from international speakers from New York University at Abu Dhabi on topics like mobile security and privacy challenges, the role of phone numbers in understanding cyber-crime schemes, better privacy protection offered by Android or iOS, design of human centered systems, privacy preserving computation, exact mining from inexact and hidden data, and telephone honeypots. Dr. Rahul Banerjee, BITS Pilani gave a talk on “Body Area Networks”.

Prof. Chittaranjan Hota and Prof. Jamal Nazzal Al-Karaki acted as the Program Committee Chairs. Prof. S. Vadivel has acted as the local organizing chair for the SKM 2014 conference. Various committees have been formed within Dept of CS to oversee the progress of SKM 2014. All the committees were adequately supported by the student volunteers led by Ms. Aswarya R Iyer. Dr. V. Santhos kumar and Dr. B. Vijayakumar acted as members of the program committee. The web portal management has been done by Mr. Nandkumar. The ICT team headed by Dr. M. Madijagan provided appropriate support for the conference. The sponsor committee headed by Dr. Sujala Shetty has overseen the getting the sponsorships from leading industry people around UAE. The event management committee headed by Ms. Susanna has been instrumental in managing the various events



for SKM 2014. The finance committee headed by Dr. Alamelu Mangai and Dr. Jeyalatha has managed the finances for the conference. The certificate committee headed by Prof. B. Vijayakumar managed the printing of certificates.

b) International Conference on Cloud Computing Technologies, Applications and management: ICCCTAM - 2012, 8-10, Dec. 2012.

ICCCTAM-2012 had over 80 paper submissions from far and near: Iran, Kazakhstan, Japan, China, South Korea, Malaysia, Egypt, Algeria, Mauritius, Bangladesh, Saudi Arabia, Pakistan, UK, UAE and India. The conference was technically sponsored by IEEE UAE Section. After a rigorous review process that included eminent external and international expert reviewers and a blind review process, 52 papers were accepted for presentation. We had 46 delegates come to the conference and numerous other dignitaries who attended the conference. There were about 4 authors who could not make it to the conference because of visa issues. Over 60 percent of the papers presented were by authors from outside BITS Pilani, Dubai Campus. The paper submission, review, registration and publication processes were fully automated using in-house developed conference portal.

The conference was sponsored by the Platinum Sponsor L&T; Silver Sponsors GWT, Murano Lighting and Zajil Telecom; and other sponsors i.e., Ibtessamah Tourism, Procal, ePromis, AHI Carrier, ETA Ascon Star and VProV.

The Conference commenced with an inauguration ceremony that included lamp lighting, inaugural speeches and varied cultural program. The Chief Guest, Dr. Ayoub Kazim's (Managing Director- Education Cluster of TECOM Business Parks) presence during the inauguration added glitter to day 1 of the proceedings. Ms Al Thani (IEEE UAE Section Chair) gave us advance information on IEEE activities in the UAE. Dr Bastaki (Chairman, Emirates Science Club and Honorary Chairman, IEEE UAE Section) laid the foundation with his keynote address on Cloud Computing and Applications where he highlighted the role of ICT in the Cloud, Cloud Statistics and legal issues and UAE's own Ankabut that is Cloud centered. Dr Osman Ahmed (VP and Head, Center of Excellence Smart Buildings MASDAR City, Siemens, Abu Dhabi, UAE) gave us a unique perspective of the Cloud from his passion – to view all matters from processes and systems existing in nature. Dr Ahmed Dabbagh (Technology and Services Development Manager, Ankabut, UAE) presented the ANKABUT project and system as a local illustration of an educational cloud in the UAE. Prof Peter Varman (Professor, Electrical and Computer Engineering, Rice University, Houston, TX, USA and Scholar-in

We would like to mention that the organizing committee comprising of nine of our dynamic faculty had successfully conducted the conference. There were additionally ten other committees that worked tirelessly to ensure the success of the conference: these committees comprised about 90 percent of the faculty on the BITS Pilani, Dubai Campus from across departments.



There were over 70 student volunteers who contributed not only in terms of effort and time but brought in the much needed enthusiasm and creativity. The creativity of the students has been publicly on display be it their website or conception and implementation of the Hackathon or the cultural program on day 1. One cannot forget the students whose hard work and creativity ensure that the Proceedings saw daylight on time.

31. Code of ethics of research followed by the Department.

The department follows the Code of Ethics specified by the University

32. a) Student profile programme-wise:

Name of the Programme B.E (Hons.) Computer Science (refer to question no. 4)	Applications received	Selected		*Pass percentage	
		Male	Female	Male	Female
2010-11	733	48	30	100	100
2011-12	792	56	27	100	100
2012-13	887	60	40	100	100
2013-14	953	77	35	100	100
2014-15	1098	88	52	100	100

Name of the Programme M.E (Software Systems) (refer to question no. 4)	Applications received	Selected		*Pass percentage	
		Male	Female	Male	Female
2010-11	8	4	2	100	100
2011-12	10	6	2	100	100
2012-13	14	9	2	100	100
2013-14	12	3	5	Currently Pursuing	
2014-15	16	7	6	Currently Pursuing	

Ph. D (Computer Science)				
2010-11	Nil	Nil	Nil	currently pursuing
2011-12	3	1	1	
2012-13	2		1	
2013-14	7	2	3	
2014-15	2	Nil	1	



*BITS follows a credit based system and cafeteria approach in offering of courses. Students not performing well are monitored by ACB (Academic Counselling Board), HDCC (Higher Degree Counselling Cell) and ACC (Academic Counselling Cell). Their pace is slowed down. Normally not more than 3% students (including all programmes, B.E., B.Pharm, M.Sc, M.Pharm and M.E. etc.) at a given point of time are under the purview of ACB.

33. b) Diversity of students

Name of the Programme B.E (Hons.) Computer Science (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students From universities outside the State	% of Students From Other Countries (UAE)
2010-11				100
2011-12				100
2012-13				100
2013-14				100
2014-15				100

Name of the Programme M.E. (Software Systems) (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students From universities outside the State	% of students From Other Countries (UAE)
2010-11				100
2011-12				100
2012-13				100
2013-14				100
2014-15				100



Name of the Programme Ph. D (Software Systems) (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students From Other Countries (UAE)
2010-11				100
2011-12				100
2012-13				100
2013-14				100
2014-15				100

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

In every Batch, 20 to 30% of the students go for Masters Programs like M.S, M.E and M.B.A. in USA, CANADA, UK, AUSTRLIA, INDIA, UAE and Singapore. They clear competitive exams like GRE, TOEFEL, GMAT, CAT and other exams.

The remaining students take up jobs in UAE, India, GCC countries and Western countries. After 1 to 2 years of work experience, they pursue Masters Program Computer science / Management.

35. Student progression

Student progression	Percentage against enrolled
UG to PG	20 to 30% in every Batch
PG to M.Phil.	Not applicable
PG to Ph.D.	10% of the students
Ph.D. to Post-Doctoral Employed	Not available 2010-11: 27.77% 2011-12: 15.05% 2012-13: 50.85% 2013-14: 65% 2014-15: 55.81%
☐ Campus selection	
☐ Other than campus recruitment	Unable to answer.
Entrepreneurs	Less than 5%

36. Diversity of staff



Percentage of faculty who are graduates	
of the same university	18.18%
from other universities within the State	Nil
from universities from other States from universities outside the country	81.82%

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period : 4

38. Present details of departmental infrastructural facilities with regard to

- Library: Common for all disciplines
- Internet facilities for staff and students: Common for all disciplines
- Students' laboratories: Room No 332, Software Systems Lab., Room No 108: Microprocessors and Advanced Computing Laboratory. Room No: 333 Computer programming Laboratory
- Research laboratories: CISCO Networking Lab.

39. List of doctoral, post-doctoral students and Research Associates

- from the host institution/university
 - 2008PHXF030U SUSILA S
 - 2009PHXF430U SUSANNA SAJONI HENRY
 - 2011PHXF001U NAND KUMAR
 - 2011PHXF002U TINA FRANCIS
 - 2012PHXF003U MILU MARY PHILIP
 - 2013PHXF005U PRASEETHA V.M
 - 2013PHXF007U NITHYA
 - 2013PHXF008U LEKHA R NAIR
 - 2013PHXF011U K. SASI KUMAR
 - 2013PHXF015U JOSEPH GEORGE
 - 2014PHXF004U SASHTIPRIYA VADIVELU
 - 2015PHXF002U ALJO JOSE
- from other institutions/universities : Nil

40. Number of post graduate students getting financial assistance from the university.

4 students(Lab Instructors), each getting a 50% waiver on tuition fees.

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.

The new curriculum design exercise has been carried out in Year 2011, after discussions



and inputs from all BITS campuses. The approvals for offering the programs have been obtained from Knowledge and Human Development Authority (KHDA), Dubai, UAE.

42. Does the department obtain feedback from

- a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?**

Informal feedback is collected from faculty during meetings and the department faculty take necessary steps for improvement in content and in form of assignments.

- b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?**

Feedback is collected from students formally as well as informally every semester. A Class Committee comprising of student representatives and faculty members is formed at the beginning of every semester. 2 to 3 class Committee meetings are conducted during the semester to discuss the teaching and learning process in all courses. The points raised in class committee meetings are addressed quickly and follow up actions are taken by the faculty members. Faculty are also provided feedback for the courses, tutorials and labs they conduct every semester. This feedback is collected and maintained by the ID division, where students fill up hard copies of feedback forms.

- c. alumni and employers on the programmes offered and how does the department utilize the feedback?**

The informal feedback from alumni and employers are duly taken into consideration and accordingly the department plans for workshops / short term courses / invited talks and presentations from the professionals in computer science.

43. List the distinguished alumni of the department (maximum 10)

- Shifa Mohammed, Senior Software Engineer, e-bay USA
- Muralidharan Vadivel, Principal Consultant, Intel Security Solutions, Dubai
- Bahula Gupta , Software Engineer, CISCO Systems, USA
- Sahil Rajput , Senior Developer, Oracle,USA
- Prerit Goel, Director & Head, Supply and Trading, Gulf Petrochem, Dubai, UAE.
- Sivagurunathan, M.D., VIRTUALIZE Services IT, Dubai, UAE.
- Navneet Ramanan, Business Manager, AERIZO, IT Product Support and Services, Duabi, UAE.
- Saurab Saran Lal, Senior Software Engineer at Emirates Airlines Group,



- Dubai
- Nilay Kumar Kiran Sangani, IT Security Planning Analyst, Abu Dhabi
- Company for Onshore Petroleum Operations Ltd (ADCO), UAE.
- Shamlia Shukkur, Developer Program Manager, Microsoft, Dubai.

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

1. Prof. Ramesh Karri, from New York University delivered a talk on "Inter Disciplinary Studies in Security and Privacy: Opportunities for Practice School at Cyber Security Research Centre at New York University Abu Dhabi", on 08/03/2015.
2. Dr. Swapan Purkait, NETTECH, KOLKATA, delivered a talk on "NETWORK MANAGEMENT " on 19/03/2015.
3. Mr. Somnath Mitra, Program Manager, IBM, New Delhi, delivered a talk on "Web 3.0 Technology", on 5/4/2015.
4. Dr.Sasikumar Punnekkat, Director, BITS Pilani, K K Birla Goa Campus, delivered the talk on "Dependable Software Engineering and Embedded Systems" using the Tele-presence Class Room facilities on 13th April 2015, Monday at 3.45 pm-5 pm.
5. Professor Ashok Deshpande, PhD (Engg & Technology) (Founding Chair: Berkeley Initiative in Soft Computing (BISC) - UC Berkeley CA., Former Deputy Director: National Environmental Engineering Research Institute 5(NEERI)/CSIR India), delivered the talk on "Fuzzy logic is Not Fuzzy!" on 6 Sep 2015, at Auditorium from 10.15-11.15 am.
6. Prof. B. Chandra, Dept.. of Mathematics, IIT Delhi delivered a talk on "RECENT TRENDS IN DATA MINING", on 12 Oct. 2014.
7. Prof. SANTHI THILAGAM, Dept. of CSE, NIT Suratkal, Karnataka delivered a talk on "Distributed Data Management", on 16 Oct. 2014.
8. Professor SUNDAR BALASUBRAMANIAM, Professor of CSIS, BITS Pilani, delivered a talk on "A Distributed Computing Framework for High Performance Data Mining", on 06, Nov. 2014.
9. Mr.Sushant Panda, SYUM LABS, delivered a talk on ""BUSINESS ANALYTICS and BI" on 6/11/2014.
10. ESRI is the world leader in Geographical information systems. The ESRI team led by Mr. Satish Menon had delivered a talk on "Geographical Information Systems" on 4th Dec 2014 at BPDC.
11. Prem Chand Kurup, CEO, Paramount Computer Systems delivered a talk on "Internet Security" for CS students on 1/3/2011.
12. Ramani, Head, Consulting Services, Paramount Computer Systems delivered a talk on "Regulating and Governing the Internet, Cyber Regulations" on 27/4/11.

45. List the teaching methods adopted by the faculty for different programmes.



Classroom teaching, Presentations, Tutorials, Seminars, Flip mode for the MOOC based courses.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Continuous evaluations based on Tests, Quizzes, Assignments, Presentations, Demonstrations and Comprehensive exams.

47. Highlight the participation of students and faculty in extension activities.

Every Year, 3 CS student teams participate in Gulf Programming Contest held in March last week and at least one of our teams is placed in top ten positions, in a total of around 40 teams from various Gulf universities. Our Faculty Members Dr. Sujala D Shetty (Coordinator), Dr. S. Jeyalatha and Dr. J. Alamelu Mangai gave extensive coaching to our CS teams during 2011-2015. Our student teams also participate in the annual IEEE Extreme Programming Competition (24 hour contest) every year and are placed in reasonably positions at world level.

Our Faculty Members Dr. M. Madijagan and Dr. S. Jeyalatha are part of the Work Integrated Learning Program team and are offering the course "Software Engineering" using WebeX mode of operation to 148 students.

48. Give details of “beyond syllabus scholarly activities” of the department.

A) ACM Student Chapter

Faculty Advisor: Ms. Susanna S Henry

The BITS, Pilani-Dubai ACM Student Chapter is active since 2011. During the academic year 2014-15, the blogging event "Paradox Blogging" has been conducted. In the month of October, "Codesprint", a coding event to test the teamwork and programming skills were conducted. "Code Relay", another event with a similar theme was conducted in the month of November as a part of the TECHNOFEST. The chapter also organized a quizzing event for the computer geeks within the university and called it "Les Quizerables".

Introductory sessions for "Ethical Hacking" has been organized in the first half of the academic year. In the second half, the team conducted debugging events like "Decrypt" during the annual inter-university technical festival ENGINUITY. Also, a new event was added to the activities calendar, called "Pair Programming", in which a team of two members have to work together and find codes to maximum questions in least time. The team was successful in bringing together the like-minded geeks to bring out the best among them.

B. Microsoft Tech Club

FACULTY IN-CHARGE - *Dr. S. Vadivel* PRESIDENT – *Dev Dua* VP & WEB LEAD – *Rahul Kumar*
TECH LEAD – *Rishav Jalan, Nitya Mohini Harve* CURRENT MEMBER STRENGTH = 216



The Microsoft Tech Club is run by Microsoft Student Partners, and students of the Microsoft Student Community. This club is active since 2011. The Microsoft Student Partners Program is for students who realize the best tech careers come to those who chase their dreams. MSPs are involved in building apps, training others and social media. They are social, friendly students who enjoy creating global connections.

Hackathon at Microsoft Office(Internet City): 7 Microsoft Tech Club students participated in hackathon at Microsoft and were awarded Nokia Lumia 1520 each for their performance in the event.28th March 2015. 7 people attended.

Droidcon sponsored by Microsoft: 7 Microsoft Tech Club students attended the Droidcon conference worth 300\$ per attendee for free and along with free transportation.

14th April-16th April March 2015

7 people attended.

Sessions(6):

- Session 1 : Discussion with tech club members and understanding what they want to learn.
- 8th February 2015. 50 people attended.
- Session 2 : Session on AppStudio App Deveopment without coding 8th March 2015 70 people attended.
- Session 3: App Development Hackathon #1. Helping all users build their first app. 11th March 2015 25 people attended.
- Session 4: App Development Hackathon #2. Helping all publish the apps they made to windows store. 22nd March 2015 15 people attended.
- Session 5 : Session on Game Development with Unity 12th March 2015
- 30 people attended.
- Session 6 : Continuation of first session on Game Development with Unity 19th March 201520 people attended.

Events in Enginuity(2):

CodeBlitz: In association with IEEE. Code debugging competition.16th March 201521 teams participated.

Frynapse: Virtual scavenger hunt competition.17th March 201569 teams participated.

C. Linux Users Group

Faculty Advisor: Dr. B. Vijayakumar. The Linux Users group actively organized and collaborated events with other clubs and associations. The registrations were free and open to all BPDC students. Series of Presentations were held during 2011-2015 covering the topics UBUNTU LINUX Installation and Configuration & Software Tools under LINUX. Our Core members took active part in Organizing Committee for TECHNOFEST 2014 and ENGINUITY 2015.



49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.

Our B.E. (Hons.) programme, M.E.(Software Systems) programme and Ph D programme are approved by Knowledge and Human Development Authority (KHDA), Dubai.

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

Our students have exhibited their knowledge and skills during the annual events Technofest, Engenuity, Gulf Programming Contest and IEEE extreme during 2011-15.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

<p>Strengths</p> <ul style="list-style-type: none"> • Dedicated CS Teaching Faculty • CS Students and Faculty regularly publish research papers in reputed journals and conferences. • Excellent support from Lab Instructors and Research Scholars. • No of UG student admissions for CS branch are good and consistent. • Nearly 20% to 30% of the CS undergraduate students pursue Master programs in premier institutions across the world. • CS Faculty takes initiatives to enhance placement opportunities for students by arranging / offering invited talks and workshops. <ul style="list-style-type: none"> • Good support for IT Infrastructure funding. 	<p>Opportunities</p> <ol style="list-style-type: none"> 1. Introduce popular, specialized Masters program in emerging technology like Information Security. 2. Intra/Inter disciplinary Research on emerging technologies and applications. 3. Increase in number of full time PhD scholars will lead to improved research output. 4. Increase in number of Masters Program students will enhance productivity and value addition in information technology sector in the UAE. 5. Enhance Lab Infrastructure. 6. Enhance lab infrastructure by establishing specialization labs
<p>Weakness</p> <ol style="list-style-type: none"> 1. Limited number of Computer Science specific PS stations and Placements in the UAE. 2. Lack of Research funding from funding agencies around the UAE. 3. Enrollment in PG program is low. 	<p>Threats</p> <ol style="list-style-type: none"> 1. The presence of foreign universities in Dubai offering UG and PG programs in computer science. 2. Increase in number of Indian universities offering UG programs in Computer science at Dubai.

52. Future plans of the department.

Excel in Teaching and Research, Increase student placements, Make students more ready for job market by arranging professional training and workshops, enhance research and explore avenues for consultancy work.



53. Any other information regarding your department which you would like to include.

Submitted Project Proposals

SL No	Project Name	Principal/Co Investigator	Funding Agency	Requested Amount	Duration
1	VIDEO PROCESSING and CODEC REQUIREMENTS for IETF WebRTC	Dr. B. Vijaykumar (Coinvestigator)	DEITY (Dept. of Electronics and Information Technology, India)	Proposal Submitted on 3rd Feb 2015 for INR 77,48,851.44 (US\$ 129,238.78)	3Yrs
2	Explore New Ways to Measure Delivery and Use of Digital Financial Services (under Grand Challenges Explorations)	Dr. B. Vijaykumar (PI)	MELINDA GATES Foundation	Proposal Submitted on 13th May 2015 for US\$ 100,000	2yrs
3	Web portal interface for ERP project, Web portal with content management, Custom GIS, Mobile based game application for ICBA awareness	Dr. B. Vijayakumar, Dr. S. Vadivel, Dr. V. Santhoshkumar, Mr. Nandkumar, Dr. M. Madijagan, Dr. Sujala D Shetty and Dr. R. Jagadish Nayak (EEE)	International Centre for Biosaline Agriculture (ICBA) Dubai	AED 95,000	1yr
4	Measuring Climatic change Impact with special reference to Health Infrastructure and Socio Economy	Dr Sujala D. Shetty (Coinvestigator)	Ministry of Environment, Forest, and climate change.	INR 141.83 lakhs	3 yrs



Dubai Campus: Evaluative Report of the Department ELECTRICAL AND ELECTRONICS ENGINEERING

1. **Name of the Department :** Electrical and Electronics Engineering
2. **Year of establishment of the Department :**2000
3. **Is the Department part of a School/Faculty of the university?**
Departments function as independent entities in the university and are not part of any school or faculty.
4. **Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.).**

On-Campus	B. E. (Hons.)	Electrical and Electronics
		Electronics and Communication
		Electronics and Instrumentation
	M.E	Microelectronics
	PhD	

5. **Interdisciplinary programmes and departments involved:**Nil
6. **Courses in collaboration with other universities, industries, foreign institutions, etc.**
Note: some of our structure courses like Practice School and thesis dissertation are done by our students in industries and universities outside BITS.
7. **Details of programmes discontinued, if any, with reasons :** Nil
8. **Examination System:**Semester and Choice Based Credit System
9. **Participation of the department in the courses offered by other departments:** Nil
10. **Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others).**

	Sanctioned	Filled (offers given)	Actual number
Professor	Note**	3	3
Associate Professors		2	2
Asst. Professors		7	7
Others		1	1

Note**:The faculty positions for the University is broadly governed by Growth plan which also covers designation-wise breakup with a larger vision. Keeping in mind the fluidity of movement of faculty and proposed student to faculty ratio in each campus for first degree, higher degree as well as Ph.D. programmes, individual department needs are not fixed. Besides, as we are in expansion plan which calls for new programmes, courses being introduced, the demand on faculty in terms of numbers, for each department, is broadly governed by all the above factors and hence it is not possible to have a fixed number of faculty for each department. Recruitment of faculty, therefore, varies, based on departmental needs.



11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./M.Phil. students guided for the last 4 years
T.G Thomas	PhD	Professor	Communication Systems, Speech Processing for the hearing impaired	32	Nil
A B Chattopadhyay	PhD	Professor	Electrical Machines, Power Systems , Power Electronics and Drives, Control and Applied Mathematics	35	Guided - 1 Guiding - 3
R Anand Kumar	PhD	Professor	VLSI/MEMS/Sensors	32	Guided - 0 Guiding - 3
R Mary Lourde	PhD	Associate Professor	Digital Signal Processing, VLSI,Power Electronics &Drives	31	Guided - 0 Guiding - 1
Jagadish Nayak	PhD	Associate Professor	Signal and Image Processing	22	Guided - 0 Guiding - 1
Abdul Rajak A. R	PhD	Assistant Professor	Microwave Engineering, Mobile Communication	25	Nil
V Kalaichelvi	PhD	Assistant Professor	Process Control &Instrumentation,Neural Networks,Fuzzy Logic,Control systems	23	Nil
R. Gomathi Bhavani	PhD	Assistant Professor	Lighting Control and Renewable Energy	19	Nil
R Swarnalatha	PhD	Assistant Professor	Biomedical Instrumentation and Process Control Instrumentation	18	Nil
Vilas Haridas Gaidhane	PhD	Assistant Professor	Image Processing, Control System	15	Nil
M. Raja	PhD	Assistant Professor	Signal Processing for Wireless Communications	2	Nil
Shazia Hasan	PhD	Assistant Professor	Signal Processing Applications	10	Nil
Sunil Thomas	M.Tech	Lecturer	Electrical Machines, Power Electronics and Drives	7	Nil

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Dr. Eesa Mohammed Bastaki

13. Percentage of classes taken by temporary faculty – programme-wise information Nil



14. Programme-wise Student Teacher Ratio

	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
EEE	17:1	15:1	12:1	15:1	13:1
ECE	14:1	31:1	23:1	25:1	21:1
EIE	6:1	5:1	3:1	10:1	3:1
M.E	1:1	1:1	1:1	2:1	1:1
PhD	NIL	NIL	1:1	1:1	1:1

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual

Academic support staff (technical): 7 (Actual) Administrative staff: NIL

16. Research thrust areas as recognized by major funding agencies

- (a) Instrumentation and Control
- (b) Communication Engineering and Networks.
- (c) RF, Microwave, Antenna Design and Wireless Systems.
- (d) Power Systems and Electrical Engineering, Renewable Energy and Smart Grids.
- (e) Power Electronics and Drives .
- (f) Embedded Systems
- (g) Micro /Nano Electronics
- (h) Electronic Materials, Devices and Technology
- (i) Digital Signal Processing

17. Number of faculty with ongoing/completed projects in the last five years from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Completed projects: NIL

Ongoing Projects: NIL

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount (Lakhs)	Duration
	NIL				

18. Inter-institutional collaborative projects and associated grants received

- a) National collaboration: NIL
- b) International collaboration: NIL

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.;total grants received. NIL

20. Research facility / centre with

- state recognition : NIL
- national recognition : NIL
- international recognition : NIL



21. Special research laboratories sponsored by / created by industry or corporate bodies :
NIL

22. Publications:

SI No.	Details	Specify number here
	Number of papers published in peer reviewed journals (national / international)	National =2/International: 38
	Monographs	NIL
	Chapters in Books	4
	Edited Books	2
	Books with ISBN with details of publishers	ISBN: 9780070590915,0070647701
	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	81
	Citation Index – range / average	9-70/38.5
	SNIP	0.476
	SJR	0.226
	Impact Factor – range / average	0.102-2.13/0.642
	h-index	2-12/3.09
	Number of papers published in peer reviewed conferences (national / international)	National= 1/International: 40

Details of the publications(Journals) as per the number give above (Give details in the last five years

SL No	Authors	Title of the Publications	Details of the Journal	National/International	Year
1	AthiraNath and Kalaichelvi V.,	An Intelligent Technique for Image Compression	International Journal of Recent Development in Engineering and Technology	International	2014
2	Sampath, S. Kalaichelvi, V	'Assessment of Mortgage Applications Using FuzzyLogic	International ScienceIndex, Economics and Business sciences	International	2014
3	MugdhaPolimera and Kalaichelvi V.,	Stability and Robustness Analysis of a LASER Guided Missile System Using PID Controller	Applied Mechanics and Materials	International	2014
4	R.Karthikeyan,R.K. Ganesh Ram and V.Kalaichelvi	Modeling and Control Techniques for Microstructure Developmen	Applied Mechanics and Materials	International	2014



5	Kalaichelvi V., Ganesh Ram R.K.and Karthikeyan R,	Biomass Boiler Drum Water Level control system using Neural Networks	Applied Mechanics and Materials	International	2014
6	V.Kalaichelvi, R.Karthikeyan &D.Sivakumar	Analysis of gas Metal Arc Welding Process using GA tuned fuzzy rule based system	Journal of Intelligent and Fuzzy systems	International	2014
7	V.Kalaichelvi, Shamir Alio	Application of Neural Networks in Character Recognition	International Journal of Computer Applications	International	2012
8	V.Kalaichelvi, R.Karthikeyan, D.Sivakumar & V.Srinivasan	Tool Wear Classification Using Fuzzy Logic for Machining of Al/SiC Composite Material	Modeling and Numerical Simulation of Material Science	International	2012
9	V.kalaichelvi and Srijan bhatnagar	Application of Fuzzy Logic Controller for a Pressure Process	International Journal of Computer Science and Engineering	International	2011
10	V.kalaichelvi, Tyrone dsouza	Application of fuzzy logic control to three tank system	Journal of Emerging Technology in Mechanical Science and Engineering	National	2010
11	V.kalaichelvi, D.sivakumar, R.karthikeyan V.srinivasan	An intelligent system approach for prediction of weld bead geometry in a welding process	Journal of Emerging Technology in Mechanical Science and Engineering	National	2010
12	Harish S. Nair, Anand Kumar, Osman Ahmed	Neural Network Modeling, Simulation and Prediction of Innovation Growth in United Arab Emirates (UAE)	Complex Adaptive Systems 2014, Philadelphia, PA, USA, November 3-5, 2014, in Procedia Computer Science, Elsevier, Volume 36, 2014, pages 269–275	International	2014
13	Pranav Ravikumar, Arunabha Bera, Vijay K. Mehra, and Anand Kumar	CO-OFDM DSP Channel Estimation	World Academy of Science, Engineering and Technology, Dubai, UAE, 5-6 March 2013	International	2013
14	R. Gomathi Bhavani and M. A. Khan	Intelligent Controllers for Integrated Lighting Schemes: Model Based Approach combining Simulator and Learning,	International Journal of Simulation: Systems, Science and Technology (UK Simulation Society), Vol. 11, No. 4, 2010, pp.33-	International	2010



15	R. Gomathi Bhavani and M. A. Khan	Advanced Lighting Simulation Tools for Daylighting Purpose: Powerful features and Related Issues.	Trends in Applied Sciences Research, Vol. 6, No. 4, 2011, pp.345-363.	International	2011
16	Vilas H. Gaidhane, Y. V. Hote, V. Singh	Image focus measure based on polynomial coefficients and spectral radius	Signal, Image and Video Processing (Springer)	International	2015
17	Revathy.G, Dr. Abdul Razak,	A survey on FINFETs: Technology, Pros, Cons and Improvement Prospects	International Journal of Advanced Technology in Engineering and Science, Vol. 02, Issue 10, pp. 229- 237,Oct 2014	International	2014
18	Revathy.G, Dr. Abdul Razak,	Comparison of Routing Algorithms on VLSI Floor Planning",	International Journal of Advanced Technology in Engineering and Science, Vol. 02, Issue 10, pp.248- 259, Oct 2014	International	2014
19	Abdul Rajak A.R etal	VLSI implemendation of PN sequence by Novel method	International journal of Academic Research in Engineering and Science,Vol 2 ,March 2013,pp 32-38	International	2013
20	Abdul Rajak A.R etal	,Efficient way of identification of mobile location "	Springer Lecure series in Electrical Engineering Vol 1,July 2013	International	2013
21	Swarnalatha R, Prasad DV	A Novel Technique for Extraction of FECG using Multi Stage Adaptive Filtering	Journal of Applied Science. 2010; 10(4): 319-324.	International	2010
22	Swarnalatha R, Prasad DV	Maternal ECG Cancellation in Abdominal Signal using ANFIS and Wavelets	Journal of Applied Sciences. 2010; 10(11): 868-877.	International	2010



23	Swarnalatha R, Prasad DV	Fetal ECG Extraction using Combination of Wavelet and Hybrid Algorithm based ANFIS.	Int.Journal of Healthcare Technology and management.2010; 11(3): 133-150.	International	2010
24	Swarnalatha R, Prasad DV	WAF Extraction Methods of Fetal Electrocardiogram	Int.Journal of Biomedical Engineering and Technology. 2011; 6(3): 217 - 231.	International	2011
25	Bulbul Bhaskar and Swarnalatha R	Smart Home Automation System Using AVR Microcontroller,	International Journal of Advanced Technology in Engineering and Science ,2015 Vol. 04, No. 02, pp.234-242	International	2015
26	Dipti Razdan and A.B. Chattopadhyay	"Some Aspects of Analysis of a Micromirror	Research Journal of Applied Sciences, Engineering and Technology 10(6): June, 2015 , ISSN: 2040-7459; e-ISSN: 2040-7467	International	2015
27	A.B.Chattopadhyay and Sunil Thomas	An Insight into the time-domain phenomenon during the Transition Zone from Induction Motor to Synchronous Motor Mode for a Current Source Inverter fed Synchronous Motor Drive System.	Research Journal of Applied Sciences, Engineering and Technology, 8(13): 1510-1521.	International	2014
28	Adhir Baran Chattopadhyay , Sunil Thomas, Ali Akbar Eski and Ruchira Chatterjee	State Space Analysis of a Solar Power Array Taking a Higher Degree of Non-Linearity into Account	Journal of Mechanics of Continua and Mathematical Sciences , published by "Institute of Mechanics of Continua and Mathematical Sciences" ---- J.Mech.Cont.&Math.Sci., Vol.-8,No.-2, Jan 14), Pages 1291-1310 .	International	2014



29	A.B. Chattopadhyay and Sunil Thomas	Modeling and Simulation of Current Source Inverter fed Synchronous Motor in Complex Frequency Domain taking the Transition Zone from Induction Motor to Synchronous Motor Mode into Account,	Research Journal of Applied Sciences, Engineering and Technology(Maxwell Scientific Organization) , Vol.7 , No.8 , February, 2014 , pp.1489-1499 , ISSN:2040-7459; e-ISSN: 2040-7467.	International	2014
30	Adhir Baran Chattopadhyay and Sunil Thomas	A twenty years survey on general modeling of synchronous motor and its stability studies: Part II - literature review and case study" A.	A.M.S.E Journal, France Advances in Modelling; Automatic Control(theory and applications);Vol.68,Issue-2,2013	International	2013
31	Sunil Thomas and Adhir Baran Chattopadhyay	A twenty years survey on general modeling of synchronous motor and its stability studies: Part I - partial literature review"	A.M.S.E Journal, France Advances in Modelling; Automatic Control(theory and applications);Vol.68,Issue-2,2013	International	2013
32	A.B.Chattopadhyay , R.M.Valliapan, Upanshu Garg, Raghav Ram, Aditya Jain and Ruchira Chatterjee	HARMONIC ANALYSIS OF AN A.C CHOPPER FED SINGLE PHASE INDUTION MOTOR	M.S.E Journal(Modelling, Measurement and Control), France; 2012 , Vol. 85 No.1	International	2012
33	A.B. Chattopadhyay, Sunil Thomas and Ruchira Chatterjee	"Analysis of Steady State Stability of a CSI Fed Synchronous Motor Drive System with Damper Windings Included	Trends in Applied Sciences Research, 2011, Volume 6, Issue 9, pages: 992-1005.DOI: 10.3923/tasr.2011.992.1005	International	2011
34	A.B. Chattopadhyay, A. Choudhury and A. Nargund	State Variable Model of a Solar Power System",	Trends in Applied Sciences Research, 2011, Volume 6, Issue 6, pages: 563-579. DOI: 10.3923/tasr.2011.563.579	International	2011
35	R. Mary Lourde, Waris Sami Misbah	Fuzzy Logic in a Low Speed Cruise Controlled Automobile"	International Journal of Computer Science and Information Security (IJCSIS	International	2010



			- ISSN 1947 5500) Vol. 8 No. 4, July 2010		
36	Mary Lourde R., Dushyant Khosla	"Fingerprint Identification in Biometric Security Systems	International Journal of Computer and Electrical Engineering (IJCEE), vol 2, no 5, October, 2010.	International	2010
37	J. Alamelu Mangai, Jagadish Nayak and V. Santhosh Kumar,	A Novel Approach for Classifying Medical Images Using Data Mining Techniques"	International Journal of Computer Science and Electronics Engineering (IJCSEE) Volume 1, Issue 2 (2013)	International	2013
38	Joseph George, Jagadish Nayak ,	Steganography on Medical Images to Record Investigation Results	World Academy of Informatics and Management Sciences, Vol 2 Issue 5, August- September 2013	International	2013
39	Prashant Vaidyanathan, Nitish Malhotra, Jagadish Nayak ,	A new encryption technique for the secured transmission and storage of text information with medical images	Engineering Review, Scientific Journals of Croatia, Vol No. 32(1), Page No. 57-63, March 2012	International	2012
40	Rajendra Acharya Udyavara, Wenwei Yu, Kuanyi Zhu, Jagadish Nayak , Teik-Cheng Lim and Joey Yiptong Chan,	dentification of Cataract and Post-cataract Surgery Optical images using Artificial Intelligence Techniques	Journal of Medical Systems, Springer Netherlands, Vol No. 34(4), Page No. 619- 628, Aug 2010.	International	2010

Details of the publications (Conferences) as per the number give above (Give details in the last five years

SL No	Authors	Title of the Publications	Details of the Conference	National/International	Year
1	Arvind Desikan.,V.Kalaic helvi	Design for a Semi-Active Preview Suspension system using Fuzzy- Logic control and Image Processing Techniques	he 5th Annual IEEE International Conference on FIBER Technology in Automation, Control and Intelligent Systems	International	2015



2	A RangapriyaParthasarathy , Kalaichelvi .V SwaminathanSundaram	A Novel Fuzzy Logic Model for Multiple Gas Sensor Array	IEEE International Conference on Communication and Signal Processing	International	2015
3	Ganesh Ram R K., Akshan Paresh Mehta.,Karthikeyan R., KalaichelviV	Design Optimization Of Wind Turbine Using Fluid Structural Interaction Analysis & Genetic Algorithm	SME Gas India Turbine Conference.,Dec 15-17.	International	2014
4	Akshan Paresh Mehta.,Ganesh Ram R K ., KalaichelviV.,and Karthikeyan R.,	“Neural Predictive Controller For Hydraulic Power Transmission in Wind Turbine	SME Gas India Turbine Conference .,Dec 15-17.,India Habitat Centre,New Delhi.	International	2014
5	R.K.Ganesh Ram., Lenvin Dsouza., V.Kalaichelvi . and R.Karthikeyan	Fuzzy Logic approach for Temperature Control in BioReactor	Annual International Conference on Advances in Biotechnology	International	2014
6	Swathika R., Ganesh Ram R.K .,Kalaichelvi V.,Karthikeyan R	Application of Fuzzy Logic for Charging Control of Lead-Acid battery in Stand-alone Solar Photovoltaic System	IEEE International Conference on Green Computing,Communication and conservation of Energy	International	2014
7	R.VarunDas,V.Kalaichelvi,R.Karthikeyan.,”	Application of Fuzzy Logic Control Strategy for Temperature Control in Friction Stir Welding	SME Gas turbine India Conference	International	2014
8	V. Kalaichelvi, R. Karthikeyan, D. Sivakumar and V. Srinivasan	Fuzzy Modeling of Flow Stress in Hot Deformation Process	International Conference on Advances in Engineering and Technology	International	2014
8	Rajarshi Sinha, Angad Oberoi, Harsh Tungala, Anand Kumar	Neural Network Modeling, Simulation and Prediction of Innovation Growth in United Arab Emirates (UAE)	3rd Digital Avionics Systems Conference, Colorado Springs, CO, USA, Pages IC6-1 to IC6-7, 9 Oct, 2014	International	2014



9	Rajarshi Sinha, Angad Oberoi, Harsh Tungala, Rohan Kapur, Anand Kumar	Dynamically Adjusting Network Architecture for Congestion Optimization in Terminal Airspace	4th IEEE International Conference on Nanotechnology (IEEE-NANO2014), Toronto, ON, Canada, Pages 196-200, August 18-21, 2014.	International	2014
10	Priya B. Parappat, Anand Kumar, R.K. Mittal, Suhel A. Khan	An Optimized Piezoresistive Microcantilever Arsenic(III) Sensor with CMOS-Compatible Active Readout: Towards In-Situ Subsurface	8th International Conference on Circuits, Systems, Communications and Computers, Santorini Island, Greece, July 17-21, 2014	International	2014
11	TejasVithani and Anand Kumar	A Comprehensive Mobile Application Development and Testing Lifecycle	IT Professional Conference, Maryland, May 22 2014	International	2014
12	TejasVithani and Anand Kumar	Modeling the Mobile Application Development Lifecycle	proceedings of the International MultiConference of Engineers and Computer Scientists 2014 Vol I, IMECS 2014, March 12 - 14, 2014, Hong Kong	International	2014
13	NavyaYelloji, NavnithRavindran, Anand Kumar, ArunBera, Vijay Mehra	Modelling PM-BPSK Signals for Coherent Optical Transmission over Single-Mode Fiber	7th European Modelling Symposium, EMS2013, Manchester, U.K., 20 - 22 November 2013	International	2013
14	Nilay Acharya, Jithu Raju, Anand Kumar, Mihai Tache, ValeriuBeiu	Monte Carlo Analysis of the Static Noise Margins for CMOS Gates in Predictive Technology Models	IEEE GCC 2013, Doha, Qatar, 17-20 November 2013	International	2013
15	Ashok Vydyanathan, Anand Kumar, R.K. Mittal, Maneesha	Optimization of a pressure transmitter manufacturing line.	IEEE GCC 2013, Doha, Qatar, 17-20 November 2013	International	2013



16	Aditya Maddali and Anand Kumar	Evolving an Organization Structure for Cost Effective Innovation	BCS International IT Conference, AAbu Dhabi, AE, 31 Mar – 1 Apr 2013	International	2013
17	Anand Kumar and R.K. Mittal	An User-Centric Billing Model for Cloud Computing	International Conference on Cloud Computing Technologies, Applications and Management, 10 December 2012	International	2012
18	GauthamBadhrinathan, Anish Agarwal and Anand Kumar	Implementation of Distributed Chess Engine using PaaS	International Conference on Cloud Computing Technologies, Applications and Management, 10 December 2012	International	2012
19	Anand Kumar	Automatic Critical Health Care Service System using Wireless Communication, Positioning and/or RF ID	International Conference on Computer and Communication Technology (ICCCCT 2012), IINIT, Allahabad, 23-25 November 2012	International	2012
20	Ajith Kumar V, Anand Kumar and R.K. Mitta	Parameters to Diffusion of Cloud Computing in India	International Conference on Public Policy and Governance, Indian Institute of Science, Bangalore, 4-6 September 2012	International	2012
21	Deepan Kishore Kumar, Anand Kumar, Ravikant Mittal	An Adaptive Curriculum for Higher Education	DULEARN12 (4th International Conference on Education and New Learning Technologies), Barcelona, Spain, 2nd - 4th of July, 2012	International	2012
22	R. GomathiBhavanian and Maya Mohan	Awareness on Lighting Energy Saving and User Satisfaction in Residential and Office Buildings	International Conference on Biological, Civil and Environmental Engineering, pp. 211-215, Dubai UAE, March 17-18, 2014	International	2014
23	ParthAnandBerde and R. GomathiBhavani	Investigation of Energy savings potential for a University in Dubai	International Conference on National Capacity Building Strategy for Sustainable Development and Poverty Alleviation, Dubai, UAE, May 26-28, 2015.	International	2015
24	NeenuSivanand, Srinivasan S V,	Physical Level IC Implementation for Speed Control of Three Phase	4th International Symposium on Next Generation Electronics (IEEE ISNE 2015),	International	2015



	GomathiBhavani,	Induction Motors	Taipei, Taiwan, May 4-6, 2015.		
25	Srinivasan S V, Dr. Abdul Razak.	Physical Design of IC Chip for FFT using Vedic Mathematics	International Symposium on Fundamentals of Electrical Engineering (ISFEE 2014)	IEEE Intl	2014
26	Srinivasan S V, Dr.AbdulRazak.	Chip-Level Physical Implementation of MPPT algorithm for PV Panel)	International Conference on Advances in Design and Manufacturing (ICAD&M 2014) International Journal of Advanced Manufacturing Technology, Springer's	Intl	2014
27	<u>Nitin Agarwal, D. V. Prasad, R. Swarnalatha</u>	Extraction of Fetal Electrocardiographic Signals Using Neural Network,	6th World Congress of Biomechanics (WCB 2010). Singapore, IFMBE Proceedings Volume 31, 2010, pp 1350-1353	Intl.Conf	2010
28	V.Sekar, B.Karthikeyan, R.Swarnalatha	“Role of Smoothing Parameter in Probabilistic Neural Network and a Heuristic Approach of Optimization”	International Conference on Engineering Science and Technology, 7-8th April 2011, Vol – 1, Page no.464-467.	Intl.Conf	2011
29	<u>D V Prasad, R Swarnalatha,</u> Natasha Giridhar	Prediction of Onset of Epileptic Seizure by Analysis Of Pre-Ictal State of EEG ,	International conference on innovative technologies , IN-TECH 2012.Rijeka.	Intl.Conf	2012
30	Ashwini, K., Swarnalatha, R., Prasad ,D.V., Abdul Razak	Design and Analysis of MEMS Cantilever for Pyroelectric Energy Conversion using COMSOL Multiphysics	IEEE International Conference on Electrical, Computer and Communication Technologies, Coimbatore, Tamil Nadu, India , 5 - 7, March, 2015.	Nat.Conf	2015



31	Sharma, A.; Capoor, G.K.; Chattopadhyay, A.B.	Advanced Aircraft Electrical Systems to enable an All-Electric Aircraft	International Conference on Electrical Systems for Aircraft, Railway, Ship Propulsion and Road Vehicles (ESARS), 2015 (IEEE sponsored), IEEE Xplore Digital Library, Conference Proceeding; pp.1-6; 3-5 March 2015, Aachen, Germany;	International	2015
32	Sunil Thomas and AliakbarEski	Design And Analysis of a Linear Braking Control System for a Separately Excited DC motor under Dynamic Braking	The National Conference on Emerging Technologies (NCET-2013) BIT ICRAK,United Arab Emirates.	International	2013
33	Sunil Thomas and AliakbarEski	Transient Analysis of a DC Series Motor fed through a Chopper subjected to a change in Duty Cycle	The National Conference on Emerging Technologies (NCET-2013) BIT ICRAK,United Arab Emirates.	International	2013
34	Jyotika Singh and T.G. Thomas	Alternative Phase Detectors for Clock Recovery at the Receiver"	International Conference on Future Computing and Communication Systems, Dubai, May 2014	International	2014
35	Arati Ajay, Mary Lourde R	VLSI implementation of an improved multiplier for FFT computation in Bio-medical Applications	International Symposium on VLSI (ISVLSI 2015) at Montpellier, France in July 2015.	International	2015
36	NavnithRavindran, Mary Lourde R	An Optimum VLSI Design of a 16-BIT ALU	International conference on "Information & Communication Technology Research ICTRC 2015" organised by Khalifa University (KUSTAR), Abu Dhabi, UAE, on 18th May 2015.	International	2015
37	SreejaRajendran, Mary Lourde R	Modelling and optimization of a cantilever based DNA sensor"	proceedings of IEEE International Conference on Electrical, Electronics, Signals, Communication and Optimization (EESCO) - 2015, India, 24-25 January 2015.	International	2015



38	<u>JagadishNayak,</u>	Automated Classification of Normal, Cataract and Post-Cataract Optical Eye Images using SVM Classifier	International Conference of Signal and Image Engineering (ICSIE), World Congress on Engineering 2013, London, U.K., 3-5 July, 2013.	International	2013
39	<u>JagadishNayak,</u> Nitish Malhotra and PrashanthVaidya nathan,	A New Encryption Technique for the Secured Transmission and Storage of Text Information with Medical Images”	International Conference on Innovative technologies (IN-TECH 2011), Bratislava, SLOVAKIA, 01 to 03 September 2011, Page No. 253-255.	International	2011
40	Swarnalatha, R. and Prasad, D.V.	Detection of Sleep Bruxism based on EEG Hilbert Huang Transform.	5th International Conference on Biomedical Engineering and Technology (ICBET 2015), Seoul, South Korea, 10-11 March, 2015	International	2015
41	Sivanand, Neenu and R. Mary Loude	MEMs based electrochemical sensors for detection of Bio-molecules	the International Conference on Recent Advances in Nanoscience and Nanotechnology ICRANN-2014, 15-16 Dec 2014, Organised by Special center for Nanoscience, Jawaharlal Nehru University, New Delhi, NB16, pg.No.151	International	2014

23. Details of patents and income generated : NIL

24. Areas of consultancy and income generated

SL No	Project Name	Principal Investigator	Company	Sanctioned Amount (Lakhs)	Used Amount	Duration
1	Repair of Robot	Anand Kumar (Members: R.K. Mittal, A.B. Chattopadhyay, M.S. Thakur)	Lamcy Plaza	about 2 lakhs (AED 13000)	about 1 lakh (AED 6500)	1.5 years
2	Mobile App Dev	Anand Kumar (Members: R.K. Mittal, Santhosh Kumar, M. Madhiajagan)	iGenus	INR 5 lakhs (USD 5000)	INR 4.3 lakhs	2 years



25. **Faculty selected nationally / internationally to visit other laboratories / institutions industries in India and abroad: NIL**

26. **Faculty serving in National committees b) International committees c) Editorial Boards d) any other (please specify)**

(i) Dr Anand Kumar has been requested to serve as an Advisor to Eukti Learning, Bangalore, India starting Aug 2015.

(ii) Dr Anand Kumar is a reviewer for ICT Fund. ICT Fund has been set up by the UAE government to fund ICT projects. He has reviewed 7 proposals as of 8 Sep 2015.

(iii) Dr Anand Kumar has been appointed to represent BITS Pilani, Dubai Campus on the Editorial Board of Research Connect@Dubai newsletter (an initiative of KHDA, Dubai). The Editorial Board also includes representatives from Hult University, Heriot Watt, Middlesex University and Manipal University.

(iv) Dr Anand Kumar represents BITS Pilani, Dubai Campus on the Students Activities Committee of IEEE UAE (starting July 2014).

(v) Dr Anand Kumar has been called on to review papers by IEEE Transactions on Fuzzy Systems.

(vi) Dr. R. Gomathi Bhavani has been serving as Reviewer for the journal IEEE Transactions on Systems, Man, and Cybernetics-Part A: Systems and Humans

(vii) Dr.V.Kalaichelvi has been serving as as Reviewer for the **Journal of Energy and Power Engineering, USA**

(viii) Dr.V.Kalaichelvi has been serving as Editorial board member for the "Journal of Instrumentation Technology and Innovations",STM journals.

(ix) Dr. Vilas Haridas Gaidhane is working as an International Programme Committee Member for IEEE International Conference on Communication, Control and Intelligent System (CCIN 2015)

(x) Dr. Vilas Haridas Gaidhane has been serving as Reviewer for the following International Journals :

- IEEE Transaction on Measurement and Instrumentation
- IEEE Transaction on image Processing
- Expert System with Applications (Elsevier)
- Signal, Image and Video Processing (Springer)
- IETE Technical Review (Taylor & Francis)
- International Journal of Electrical Power and Energy Systems (Elsevier)
- IEE Computer Vision

(xi) Dr. A.R.Abdul Rajak has been serving as Reviewer for the following International



Journals :

- 1.ETRI Journal Editorial Office,Electronics and Telecommunications Research Institute
218 Gajeongno, Yuseong-gu, Daejeon, 305-700, Rep. of Korea
- 2.International Journal of Imaging Systems and Technology
- 3.Journal of Intelligent and Fuzzy Systems
- 4.Int. J. of Computer Applications in Technology,Inderscience

(xii) Dr R Swarnalatha represented BITS Pilani , Dubai campus for IEEE UAE as steering committee member from 2011- 2013.

(xiii) Dr. Mary Lourde R, served as a reviewer and technical committee member for the IEEE International Conference on Power & Energy Systems: Towards Sustainable Energy - PESTSE – 14, India and reviewed two research papers in December 2013.

(xiv) Dr. Mary Lourde, is a reviewer of IEEE Sensors Journal and has reviewed two research papers during the year 2011 and one in 2012.

(xv) Dr. Mary Lourde was appointed as an external examiner of a Ph. D. Thesis for PRIST University, Thanjavur, Tamil Nadu, India and evaluated a Ph.D. Thesis titled “Design analysis and implementation of digital controllers for front end and power converters of srm drives”. 2012

(xvi) Dr. Mary Lourde was appointed as an external examiner of Ph.D. Thesis for Anna University, Chennai, India and reviewed the Ph.D. Thesis titled “New Median Algorithms For Image Denoising And Impulse Noise Removal In Speech Signals With Reduced Jitter”. 2011

(xvii) Dr. R Mary Lourde served as a Technical Programme Committee member and a reviewer for the 2015 IEEE INTERNATIONAL CONFERENCE ON ELECTRICAL, COMPUTER AND COMMUNICATION TECHNOLOGIES, India during 05 - 07, March 2015 - ICECCT and reviewed three research papers in December 2014.

(xviii) Dr. Mary Lourde R., serving as a Program Committee member of IEEE International Symposium on Nanoelectronics and Information Systems iNIS 2015, to be conducted in December 2015, at Indore, India and reviewed five technical research papers for the Symposium during August 2015.

(xix) Dr. Mary Lourde R., served as a Technical Review Committee member for International Conference on Radar Antenna Microwave Electronics and Telecommunication 2015 - ICRAMET 2015, to be conducted in October 2015, and has done peer blind review of four technical research papers for the conference during July - August 2015.

(xx) Dr. Mary Lourde R., serving as an International Program Committee member of



International Conference PESTSE- 2016, India, to be conducted in January 2016.

(xxi) Dr R Swarnalatha served as Technical Review Committee Member for “IEEE International Conference on Electrical, Computer and Communication Technologies” (ICECCT-2015), 05 - 07, March 2015, organized by SVS College of Engineering, Coimbatore, India.

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

(i) Dr. TG Thomas: Participated in **IEEE Teacher In-Service Programme (TISP) Middle East Workshop**, at Dubai in June 2014

(iii) Dr. M. Raja received Post-Doctoral Research Fellowship in **Air Traffic Management Research Institute (ATMRI), Nanyang Technological University (NTU)**, Singapore (Mar. 2014 - Feb. 2015).

(iv) Dr M. Raja received Invited Researcher grand in Communication Theories and Research Group (CTRG), **University of Saskatchewan**, Saskatoon SK, Canada (Dec. 2012 - Jun. 2012).

(v) Dr. M. Raja Recived of ‘**Canadian Commonwealth Scholarship Award-2010**’ for Graduate student exchange program 2010.

(vi) Dr. R. Gomathi Bhavani’s paper, “Present Trends and Future Direction of Lighting Control in Dubai” was chosen to contest for best paper award at IEEE-GCC conference at Bahrain.

(vii) Dr R Swarnalatha participated in workshop on Effective Teaching & Learning at BITS Pilani, Goa Campus, 18-20 July, 2015.

(viii) Dr R Swarnalatha participated in workshop on Introduction to MEMS at BITS Pilani, Dubai Campus, 24-26 April, 2011.

(ix) Dr R Swarnalatha participated in workshop on MEMS Modeling with COMSOL at BITS Pilani, Dubai Campus, 4-6 December, 2011.

(x) Dr R Swarnalatha participated in workshop on Biomedical Instrumentation and Applications at BITS Pilani, Dubai Campus, 11th December, 2014.

(xi) Dr. Mary Lourde R. attended the international conference “Developments in e-Systems Engineering, DeSE -2011” conducted by The British University, Dubai, at Dubai during Dec.6–8, 2011.



(xii) Dr. Mary Lourde R, et.al attended a workshop on “Introduction to MEMS Modeling with COMSOL” conducted at BITS Pilani, Dubai Campus during December 4–6 2011, sponsored by ASME & IEEE Student’s Chapter of the Campus.

(xiii) Dr. Mary Lourde R., attended the international Symposium and presented a research paper titled “ VLSI implementation of an improved multiplier for FFT computation in Bio-medical Applications”, Presented at the International Symposium on VLSI (ISVLSI 2015) at Montpellier, France during 8 – 10, July 2015.

(xiv) Dr. Mary Lourde R., attended the international conference and presented a research paper titled “An Optimum VLSI Design of a 16-BIT ALU” at the International conference on "Information & Communication Technology Research ICTRC 2015" organised by Khalifa University (KUSTAR), Abu Dhabi, UAE, during 17-19th May 2015.

(xv) Preparatory Workshop by Dr. Naji Al Mahdi,(Director, The National Institute for Vocational Education, KHDA) at the *New Sharjah Chamber of Commerce and Industry*, 5-9 pm, 7 March 2015. Attended by Angad Oberoi, Rajarshi Sinha and Dr Anand Kumar.

(xvi) Workshop on *Introduction to Innovation Entrepreneurship* by Dr Keith Jones. Organized by IEEE UAE prior to IEEE UAE AGM. Ayush Chordia attended this workshop.

(xvii) Dr Anandkumar and Dr Jagadish Nayak attended the *Planning and Delivering Flipped Classes using MOOC platforms* workshop in Hyderabad on 10 July 2015.

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects : 100%
- percentage of students doing projects in collaboration with other universities /industry / institute : 1%

29. Awards / recognitions received at the national and international level by

- i. The Text book written by Dr T G Thomas has been used as a reference book by the respected Polytechnic University of Hong Kong for their B.Eng. programmes currently. It is also recommended by Delhi University and Kanpur University for their programmes.
- ii. Two Presentations at Higher Education Summit (13 Jan 2015 and 14 Jan 2015): about 70 students from a variety of schools in Northern Emirates (predominantly non-Indian) at each presentation. The Higher Education Summit was organized by Kaushal



- Bakshish, Director – Marketing & PR, and her team at *The Young Vision*. Initiative of Nahid Afshan and team.
- iii. Angad Oberoi, Rajarshi Sinha were placed in the Top 15 at Al Bayt Mitwahid competition (Submission pertained to business venture around Quinoa production in the UAE): Faculty Mentors: Dr Anand Kumar, Dr Ramachandran. Final Presentation was on 8 April 2015, 4.00-9.00 pm.
 - iv. IEEE AGM, Kempinski, Mall of the Emirates, 21 March 2015. Award received on behalf of Director and BPDC for largest SB membership in IEEE UAE.
 - v. Dr Anandkumar Invited as Coordinator of Judging Panel for Software Engineering Projects as part of IEEE UAE Day 2015 hosted by Petroleum Institute, Abu Dhabi on 16 May 2015. Dr Jagadish Nayak also accompanied as a member of the Judging Panel for Software Engineering Projects.
 - vi. Dr Anandkumar is Appointed by Director to Editorial Board of Research Steering Committee (comprising of BPDC, Heriot Watt, Hult, RIT, Middlesex and Manipal). This is an initiative of KHDA. This Editorial Board has meet on 4 May and 9 June 2015 to plan publication of regular research newsletters (*Research Connect@Dubai*). The first edition is tentatively scheduled for Sep 2015.
 - vii. Chapter entitled *Technology Diffusion: The Case of Cloud Computing in India* published in Developing Country Perspectives on Public Service Delivery, Springer, Editors Anjula Gurtoo, Colin Williams, June 2015 (<http://link.springer.com/book/10.1007%2F978-81-322-2160-9>) (ISBN: 978-81-322-2159-3 (Print) 978-81-322-2160-9 (Online)).
 - viii. Dr Anand Kumar was invited as a panelist in the Industry and University Partnership (IUP) Forum 2014 organized by Knowledge Village, Dubai.
 - ix. For the IEEE UAE Student Day 2015, the project proposed by BITS Pilani, Dubai Campus entitled "Emergency Healthcare Response System" was selected out of multiple proposals as the theme for student submissions.
 - x. Dr Jagadish Nayak Received an award for Science Technology Transfer by World Association for Innovative Technologies. Bratislava , Slovak Republic
 - xi. Dr R Mary Lorde ,as an UAE ICT Fund reviewer, reviewed a research project proposal worth AED 2 million in January 2015 and the report is submitted to the ICT Fund committee

Doctoral / post doctoral fellows :**NIL**

The IFOR team of 2011 led by Saurabh Ladha with team members (Mr. Deepan Kishore Kumar, Mr. Robin Singh, Mr. Pavithra Bhalla, Mr. Anant Mittal, Mr. Aditya Jain, Mr. Anshul Upreti, Mr. Pratik Raju Joshi (former students of BPDC) secured first place in IARC, North Dakota. The competition included University of Michigan, Georgia Tech, University of North Carolina and Embry Riddle. Dr Anand Kumar was invited to be mentor by the student team.



30. Seminars/ Conferences/Workshops organized and the source of funding (national/ international) with details of outstanding participants, if any.

International Conference on Cloud Computing Technologies, Applications, and Management (ICCCTAM-12), 8-10 Dec 2012, BITS Pilani, Dubai Campus.

Bio Medical Instrumentation and Applications, 11-12 Dec 2014, BITS Pilani, Dubai Campus. Dr. Mary Lourde was the convener to organize “Kera Young Science Talent Search KYSTS Award - 2011” for Indian school students in UAE at BPDC and it was a big success.

Dr. Mary Lourde worked as the convener to organize CETA KNOWLEDGE QUEST – 2013 which was conducted in our campus in February 2013 for the School children in the grade VIII – XII of Indian schools in UAE.

Dr. R Mary Lourde was the convener to organize CETA Knowledge Quest –2014 which was conducted successfully at the BPDC in February 2014 for all the School children in UAE in the grade VIII – XII. 238 teams of students and a population of around 1000 people participated in the event at the campus.

31. Code of ethics of research followed by the Department.

The department follows the Code of Ethics specified by the University.

32. a) Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage*	
		Male	Female	Male	Female
B.E(Hons). Electrical and Electronics	4463	2010-11=25	2010-11=13	100	100
		2011-12=30	2011-12=13		
		2012-13=26	2012-13=20		
		2013-14=28	2013-14=19		
		2014-15=30	2014-15=12		
B.E(Hons). Electronics and Communication		2010-11=44	2010-11=34	100	100
		2011-12=45	2011-12=40		
		2012-13=43	2012-13=33		
		2013-14=36	2013-14=29		
		2014-15=27	2014-15=31		
B.E(Hons). Electronics and Instrumentation		2010-11=4	2010-11=4	100	100
		2011-12=5	2011-12=4		
		2012-13=2	2012-13=5		
		2013-14=11	2013-14=2		
		2014-15=3	2014-15=9		
M.E Microelectronics		2010-11=4	2010-11=2	100	100
		2011-12=3	2011-12=0		
		2012-13=10	2012-13=7		
		2013-14=5	2013-14=3		
		2014-15=0	2014-15=0		



		2010-11=0	2010-11=0		
		2011-12=0	2011-12=0		
		2012-13=0	2012-13=1	Thesis	Thesis
		2013-14=1	2013-14=3	Ongoing	Ongoing
PhD		2014-15=1	2014-15= 2		

BITS follows a credit based system and cafeteria approach in offering of courses. Students not performing well are monitored by ACB (Academic Counselling Board), HDCC (Higher Degree Counselling Cell) and ACC (Academic Counselling Cell). Their pace is slowed down. Normally not more than 3% students (including all programmes, B.E., B.Pharm, M.Sc, M.Pharm and M.E. etc.) at a given point of time are under the purview of ACB.

33. Diversity of Students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
B.E(Hons). Electrical and Electronics	0	0	2%	98%
B.E(Hons). Electronics and Communication	0	0	0	100%
B.E(Hons). Electronics and Instrumentation	0	0	0	100%
M.E Microelectronics	0	0	0	100%
PhD	30	0	0	70%

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

Data Not Available

35. Student progression

Student progression	Percentage against enrolled			
UG to PG	11.5			
PG to M.Phil.	Nil			
PG to Ph.D.	11			
Ph.D. to Post-Doctoral	Nil			
Employed • Campus selection • Other than campus recruitment		EEE	ECE	EIE
	2010-2011	4	NA	10
	2011-2012	52	13	30
	2012-2013	38	29	39
	2013-2014	22	17	12
	2014-2015	64	55	75
Entrepreneurs	NIL			



36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	0 %
from other universities within the State	0 %
from universities from other States from universities outside the country	100%

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period : 2 Nos

38. Present details of departmental infrastructural facilities with regard to

- Library : Common facility for the entire campus
- Internet facilities for staff and students :Common facility for the entire campus
- IFOR Laboratory:

Team IFOR (Intelligent Flying Object for Reconnaissance) is a robotics team which is involved in doing R&D in aerial robotics. Team IFOR conducted recruitments for all three of our departments – namely Electrical, Mechanical and Computer Science – in the first semester of the academic year 2014-15 under the guidance of Dr.V.Kalaichelvi. The team is having one research lab called IFOR lab and the team members are Syed Zeeshan Ahmed (Team Leader), Ganesh Ram (Design Lead), Rochal Saxena Shreya Jain, Ayanava Sarkar, Ketul Patel Vikhyat Rawla and faculty In-charge for this team is Dr.V.Kalaichelvi, Asst.Prof/EEE, BITS Pilani, Dubai Campus, Dubai, UAE. IFOR is a former winner at the International Aerial Robotics Competition, 2011, North Dakota.

- **Communication Systems Lab:**

This lab is equipped with modern equipments. It has the facility to conduct experiments in , Analog, digital and wireless communication technologies.

- **Power Electronics Lab:**

This Lab is equipped with power electronic static equipments and electrical drives and PSPICE software.

- **Analog & Digital Electronics Lab:**

This Lab is equipped with Analog circuit kits as well as Digital trainer kits.



- **Signal Processing and Simulation Lab:**

This equipped with Texas Instruments DSP Kits , MATLAB software , Xilinx FPGA kits, PSPICE, ARM Processor kits.

- **Electrical Machines Lab:**

This Lab is equipped with Electrical Motors , Generators , Transformers and Associated Loading equipments.

- **Instrumentation Lab:**

This Lab is equipped with transducers experimental setups, process control experimental setup and Virtual instrumentation components such as LabView etc.

The department also has COMSOL and SYNOPSIS software tools.

- Research laboratories: **Nil**

39. List of doctoral, post-doctoral students and Research Associates

from the host institution/university : Doctoral Students:

- Ms Seba Varghese
- Ms Rama

from other institutions/universities :Doctoral Students:

- Mr Praveen Reddy
- Ms Arivarasi
- Ms Devisree
- Ms Julia
- Mr Velmurugan
- Ms Swathi Sinha
- Mr Syed Faizullah

40. Number of post graduate students getting financial assistance from the university.NIL

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. Nil

42. Does the department obtain feedback from faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, Through organizing departmental meeting and looking at the recent application areas of the concerned topic.

students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?



Yes, Through organizing class committee meeting. The faculty will take appropriate actions based on the feedback. Faculty are also provided feedback for the courses, tutorials and labs they conduct every semester. This feedback is collected and maintained by the ID division.

alumni and employers on the programmes offered and how does the department utilize the feedback?

Yes, through interaction in the departmental meeting and review the feedbacks and then we change the curriculum

43. List the distinguished alumni of the department (maximum 10)

1. Ms. Ruchira Chaterjee(ID # 2009A8238U) is currently working as the CEO of AUXESIS INFOTECH , New Delhi.India
2. Ms . BHUVANESHWARI M(ID #2009AAPS068U) is currently employed in M/S Petrofac , Sharjah, U.A.E as Project Engineer.
3. Mr. Rohit Ratnaparkhi, is currently employed with Larsen & Toubro Pvt. Ltd, Dubai. U.A.E
4. Mr. Kush Suneja, (ID# 2009A3PS145U) , is currently employed with Light Touch PLD, Dubai.
5. Mr. Ali Akbar Eski(ID # 2009A3PS027U), , is currently employed with Nanoleaf, Toronto, Canada as Embedded System Engineer.
6. Mr. Chirag Mehta - Business Analytics at Comity Designs, Inc. at San Fransisco Bay, USA.
7. Ms. Heenal Mehta - Network Engineer at Verisk Analytics in New York, USA.
8. Ms.Shraiya Anand - Associate - Forensic Technology Services, PwC in New York, USA

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Dr Anil Powai lecture on Power System distribution in 6th ept 2014

Mr Gopal Prabhu , delivered lecture on 28th July 2015 for M.B.A students taking Project Management

45. List the teaching methods adopted by the faculty for different programmes.

1. Delivery of Lecture through PPT presentation,
2. Teaching method through softwares
- 3.Design oriented problems for Tutorial sessions
4. Giving software based assignments for students
5. Courses are delivered using flipped MOOC pedagogy: CP and Microprocessor courses were delivered using flipped MOOC mode during II Sem, 2014-2015. Mr Nand Kumar and Dr Jagdish Nayak were respectively the Instructor-In Charge for these courses.
6. Few lectures are delivered for some courses by experts in other campuses as well as



from other universities.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Through the class committee meetings and Student's feedback system. The Department participates in curriculum review meetings across the campuses.

47. Highlight the participation of students and faculty in extension activities.

Activity 1

Team IFOR started off the year with participation in RTEX '14, a robotics Technology exhibition where Team IFOR had acquired a stall to display our drones and interact with potential sponsors. In April, we were also part of GETEX (Gulf Education and Training Exhibition) 2015. We also participated in the exhibition supporting the Drones for Good competition, where we got a chance to converse with several important officials from the drone industry.

Activity 2

The IFOR team also attended a seminar on Smart Drones and Smart Cities at the Waldorf-Astoria, organized by Novatech Labs' Samy Kamkar, world renowned drone technologist, where the team interacted with him about their work and research. Subsequently, Mr Kamkar paid a visit to the IFOR lab on the BPDC campus to discuss the growth and future of IFOR.

Activity 3

Interactive session arranged by Dr.V.Kalaichelvi for IFOR team. Dr.Amit Shukla from the Petroleum Institute in Abu Dhabi also came to IFOR lab to discuss a project venture requiring Team IFOR's expertise in drone technology.

Activity 4

. Mobile Autonomous Robotics Workshop (20-22 November 2014) was organized by AOEE and ASME and helped the students to organize the workshop along with Mechanical Engineering Department.

Activity 5

Dr, R. Gomathi Bhavani took the students enrolled in Computer Based Control Systems course to the factory of Emerson ProcessLLC , Jebel Ali. on 7th April 2015.

Activity 6

The Association of Electronic Engineers (AOEE)



AOEE provides an interactive platform for the students to meet, network & update their knowledge of latest developments in electronics. The faculty in charge of AOEE is Dr R Swarnalatha. Below are the events organized by AOEE.

(1)ROBOTICS WORKSHOP

Held over a three day period from November 20-22, 2014, the Mobile Autonomous Robotics Workshop was jointly organized by the American Society of Mechanical Engineers, BPDC Student Section and The Association of Electronics Engineers and was conducted by Mr. Vaibhav Agarwal, an IIT Delhi alumnus with over seven years of experience in the field of robotics. The workshop drew a huge number of interested students from our campus as well as plenty of other universities, with over a hundred of them turning up in G-07.

(2)THE FAST AND THE CURIOUS – TECHNOFEST

The Fast and The Curious was a fun-filled event comprising 3 rounds organized during Technofest on 7th and 8th of December.

(3)THE FAST AND THE CURIOUS – ENGINUITY

The Fast and The Curious was an event organized during Enginuity on 16 March. A total of 57 teams took part in the competition, with many of them coming from other colleges and universities.

(4)AL KHALEEJ SUGAR SITE VISIT

The Association of Electronic Engineers organized two batches of students visiting Al Khaleej Sugar, Jebal Ali Freezone- on the 4th and 18th of April, 2015. They described themselves as one of the most extremely efficient plants in the region, importing raw sugar primarily from Brazil and some proportion from India.

(5)ARTICLE WRITING COMPETITION

Association of Electronic Engineers organised an Article Writing Competition in the last week of April where students could submit their articles for the online magazine, eUpdate maintained by the association. A good number of entries were received.

(6)PSPICE WORKSHOP

Association of Electronic Engineers organised PSPICE workshop on May 2nd, 2015 in which 30 students participated. The students got hands on experience in PSPICE Software under the expert guidance of Dr. Jagdish Nayak , Assistant Professor, EEE Department. The workshop concluded with a competition where students were required to solve two questions using the software.



(7)eUPDATE

This semester also saw successful completion of two Volumes, Volume II and Volume III of eUpdate, the online magazine maintained by the association with articles varying from the Birth and Death Anniversaries of famous scientists who changed the course of electronics as we know today to the latest research going on in the field of electronics.

(8)AOEE Website

The Association has also developed their own website (<http://eupdate.weebly.com/>) that has been divided into various sections- eUpdate, Gallery, Formats, Tutorials, and an About and Contact Us page. Under eUpdate, readers can view the previous issues of eUpdate from the several past volumes. Formats is aimed to guide students on how to write IEEE Papers, Project reports as well as Practice School reports.

(9)Facebook Page

The Facebook Like page of The Association (<https://www.facebook.com/pages/Association-of-Electronic-Engineers/640182549337170>) was managed by the team actively and posted the links to the eUpdate articles, along with announcing what competitions and workshop and other activities that the Association conducted. This was effective in helping spread the word and popularize the activities of the Association, since a Facebook is a social platform used by nearly all students.

(10)YouTube Channel (BITS Electrified)

The Association has their own Youtube channel

(<https://www.youtube.com/channel/UCPXei3yEOMTzqYqvjiWduA/feed>)

The YouTube channel contains the Digital Design lab experiment videos along with a video recognizing the members and faculty heads of the Association. The future plan of this YouTube Channel is to also include video lectures too for guiding students in their theory subjects.

Activity 7

- Dr. Mary Lourde is the founder member of Association of Electronics Engineers (AOEE) at BPDC,
- Dr. Mary Lourde was instrumental to the following activities by the AOEE, BPDC in the capacity of Faculty advisor during 2013.

1. Playing With Images – The Process Behind



“Playing With Images – The process behind” was an introductory seminar on Image Processing conducted by the Association of Electronic Engineers on 12th March 2013 and presented by Aliakbar Eski a 4th year Student of Electrical & Electronics Engineering.

2. Soldering Workshop & Soldering Competition

The Association of Electronics Engineers held a soldering workshop and competition in succession on – DATE : 14-4-2013

3. The Association of Electronics Engineers (AEE) also organized a completion named CIRCUITRIX at the Technofest 2013.
4. A workshop on the Electronic Design Automation software PSPICE was conducted by the AEE on 15th May 2013, to encourage the students to use the tool.
5. A Hands-On workshop on programming and interfacing the Arduino Microcontroller was held by the Association of Electronics Engineers in March 2013 which was well appreciated by the student community.
6. Freshmen welcome to department was conducted for the batch of 2013 new admissions in September 2013 by the Association of Electronics Engineers.

Activity 8

- i. Dr Anandkumar led a team of faculty and submitted Emirates Energy Award Application on behalf of the Dubai Campus in 2013 and 2015.
- ii. IEEE BPDC SB (Ankita Srivastava) Organized CodeBlitz as part of *Enginuity2015*. Over 60 students participated in this non-competitive event. held on 16 March 2015.
- iii. High School Presentations at DPS Sharjah, Ibnseena School, Dubai, Winchester School, Dubai, Raffles School, Dubai. Presentation to parents/wards on Open Day.
- iv. Invited industry expert (Pramod Sasidharan, Managing Director, TelecomConsult) to give lecture to III Year ECE students registered for Information Theory and Coding and Communication Network courses.
- v. Introduced online discussions in Information Theory and Coding course for students with assessment weightage on platform provided by EuktiLearning, Bangalore.



- vi. Dr Anand Kumar supported MOOC course delivery for CP and Microprocessor courses during II Sem, 2014-2015. Coordinated interactions with Prof Sundar/Shan (Dean, ARP), Dr Vishal Gupta (Pilani Campus) and Dr Anupama (Goa Campus). Prof Sundar/Shan also delivered two lectures on CP in TP Classroom (3 and 10 May 2015). Prof Anupama delivered one lecture for Microprocessor course over TP (12 May 2015).
- vii. Dr Anand Kumar coordinated with 8 BPDC student volunteers for the IEEE Stand at WETEX 2015 (21-23 April 2015).
- viii. Dr Anand Kumar, at the suggestion of Director, co-ordinated guest lecturers for VLSI Architectures students enrolled in M.E. Microelectronics program were coordinated and conducted by the following experts over TP:
 - a. Prof Gurunaryanan, Senior Professor, EEE (Pilani Campus): the lectures were held on 14, 16, 21, 23 and 30 April 2015, 7-9 pm DXB time. Topics on hardware flow chart and memory hierarchy were covered.
 - b. Dr Subash Bose, Senior Scientist, CEERI, Pilani gave a lecture on 15 May 2015 (230-430 pm DXB time) on possible research topics for the students' dissertation. Dr Bose spoke on the present activities of CEERI with flavour of its past. He also spoke in greater detail about the activities of his VLSI group; architectural exploration of VLSI design. Dr Bose concluded with some of his work on Analog Design and the project completed.
- ix. Dr Anandkumar coordinated the selection of Mantra 2015 Awardees for Outstanding Male Leadership, Outstanding Female Leadership, Entrepreneur of the Year, Social Leadership and Innovator of the Year as Convener of the Judging Panel that included Dr Neeru Sood, Dr Srinivasa Rao, Dr Udayakumar, Dr Geetha, Dr Prakash, Dr Sujala Shetty and Siddhant Gupta (Student Coordinator).
- x. By invitation, Dr Anand Kumar is teaching Telecom Network Management for ME Communication Engineering Students on Pilani Campus.
- xi. IEEE BPDC students and Faculty Mentor(Dr Anand Kumar) organized IEEE XTreme Programming 8.0 for BPDC participating teams. 19 teams from BPDC participated in this global 24 hour programming contest. BPDC teams took all but two positions in the top ten ranks in the UAE. This is an annual competition and the best global rank obtained by a BPDC team in recent years is 133.
- xii. IEEE BPDC students participated in the IEEE Student Paper Contest 2015. Internal review of papers was conducted to shortlist the top two papers for regional competition. IEEE faculty Mentor: Dr Anand Kumar



- xiii. The IEEE BPDC Students organized/participated in the following: IQuest - a technical quizzing competition; Career Prospects session by students for freshmen; Talk by Adarsh Venkataraman on procedures for securing off campus thesis; Invited talk by Princeton Review, UAE on preparation for GRE and GMAT and future career options; WETEX 2014 and 2015; Talk on Nanotechnology and Nanomedicine, March 2014.
- xiv. Students have participated in robotics competitions in Technical Festivals at IIT Mumbai and IIT Kanpur.

48. Give details of “beyond syllabus scholarly activities” of the department.

(a) Technical Workshops:

Concept of Reverse osmosis application in Bio-medical area was highlighted in the work on Biomedical Instrumentation held in December 2014, through theoretical discussions and hands on demonstrations.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. NIL

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied. Guest Lectures from Industry/University Experts.

Mr Swaraj Subramanyam, Planning Engineer North Carolina Power Distribution Syatem, delivered a lecture to the students on "Deregulation of Power Systems in February 2013.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

<p>Strengths:</p> <ul style="list-style-type: none"> • Faculty are having highest qualifying Degree (PhD) • Updated Curriculum . • Well equipped Laboratories. • Active participation of Faculty, Staff and Students in research. • Active professional bodies. 	<p>Weaknesses:</p> <ul style="list-style-type: none"> • Slight lacuna in publishing research work in high impact factor journal. • Difficulty in arranging field trips for students, this area of concern is also looked into and we are working on it • Difficulty in arranging hands on technical workshop for students. • Difficulty in getting funds in organizing conferences. • Difficulty in establishing research level laboratory
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Opportunities and Challenges

- To develop a strong industry-institution interaction
- Increase the student placement around 70%
- To do consultancy in Biomedical Engineering in Dubai
- To do consultancy in Power system erection and maintenance.
- To research collaboration with reputed local Universities

52. Future plans of the department.

- To increase the student intake
- To start new masters programme in Power and Control Engineering area
- To publications in reputed conferences and Journals
- To organize an international conference.
- To organize a workshop in Power System applications.

53. Any other information regarding your department which you would like to include.

Nil



Dubai Campus: Evaluative Report of the Department GENERAL SCIENCES

1. **Name of the Department:** Department of General Sciences

2. **Year of establishment of the Department:** 2000.

3. **Is the Department part of a School/Faculty of the university?**

Departments function as independent entities in the university and are not part of any school or faculty.

4. **Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.).** Department of General Sciences extends support to the other departments like

- Chemical Engineering
- Electrical & Electronics Engineering (EEE)
- Mechanical Engineering
- Computer Science
- Electronics & Instrumentation Engineering (EIE)
- Biotechnology
- Electronics & Communication Engineering (ECE)
- Humanities and Social Sciences (HSS)

5. **Interdisciplinary programmes and departments involved**

Department of General Sciences extends support to the other departments

6. **Courses in collaboration with other universities, industries, foreign institutions, etc:**

Note: some of our structured courses like Practice School and Thesis/Dissertation are done by our students in industries and universities outside BITS.

7. **Details of programmes discontinued, if any, with reasons:** NIL

8. **Examination System:** Semester and Choice Based Credit System

9. **Participation of the department in the courses offered by other departments**

EA C416	INTRODUCTION TO NANO SCIENCE
ECON F211	PRINCIPLES OF ECONOMICS
BITS F111	THERMODYNAMICS
ME F211	MECHANICS OF SOLIDS
ME F213/CHE F243	MATERIALS SCIENCE AND ENIGINEERING
CHE F213	CHEMICAL ENGINEERING THERMODYNAMICS



CHE F214	ENGINEERING CHEMISTRY
EEEF212/INSTR F212/ECE F212	ELECTROMAGNETIC THEORY
CS F222	DISCRETE STRUCTURES FOR COMPUTER SCIENCE
EEE F214/INSTR F214/ECE F214	ELECTRONIC DEVICES
EEE F111	ELECTRICAL SCIENCES
ECE F314*	ELECTROMAGNETIC FIELDS & MICROWAVE ENGINEERING
CHE F212*	FLUID MECHANICS
CHE C411/ET C362	ENVIRONMENTAL POLLUTION CONTROL
CHE F421	BIOCHEMICAL ENGINEERING
ME F344	ENGINEERING OPTIMIZATION
BIOT C441	BIOCHEMICAL ENGINEERING
BIOT F215	BIOPHYSICS
CHE F242	NUMERICAL METHOD FOR CHEMICAL ENGINEERS
EEEF111	ELECTRICAL SCIENCES
CHE F419	CHEMICAL PROCESS TECHNOLOGY
EAC422/EEE F426	FIBER OPTICS AND OPTOELECTRONICS
EEE F433	ELECTROMAGNETIC FIELDS & WAVES
CHE F411/ET C362	ENVIRONMENTAL POLLUTION CONTROL
BIOT F341	INDUSTRIAL MICROBIOLOGY & BIOPROCESS ENGINEERING

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others).

	Sanctioned	Filled (includes offer letters given)	Actual number
Professor	Note:**	NIL	6
Associate Professors		NIL	6
Asst. Professors		NIL	5
Others		NIL	NIL

Note**:The faculty positions for the University is broadly governed by Growth plan which also covers designation-wise breakup with a larger vision. Keeping in mind the fluidity of movement of faculty and proposed student to faculty ratio in each campus for first degree, higher degree as well as Ph.D. programmes, individual department needs are not fixed. Besides, as we are in expansion plan which calls for new programmes, courses being introduced, the demand on faculty in terms of numbers, for each department, is broadly governed by all the above factors and hence it is not possible to have a fixed number of faculty for each department. Recruitment of faculty, therefore, varies, based on departmental needs.



11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D/ students guided for last 4 years
Priti Bajpai	PhD	Professor	Approximation Theory	25	NIL
Maneesha	PhD	Associate Professor	Sampling Theory	15	NIL
Tapan Kumar Datta	PhD	Associate Professor	Operations Research	23	NIL
K.Kumar	PhD	Professor	Convective Heat Transfer	27	NIL
A Somasundaram	PhD	Associate Professor	Domination in Graphs	17	NIL
Baskaran S	PhD & MBA	Assistant Professor	Fluid Dynamics	27	NIL
Suhel Ahmad Khan	PhD	Assistant Professor	Nonlinear Functional Analysis and Optimization	7	NIL
Ramadosh Roop Kumar	PhD	Professor	Crystal Growth, Biomaterials and Nanotechnology	35	NIL
S. Karthiyayini	PhD	Professor	Nuclear Physics	21	NIL
K.K.Singh	PhD	Professor	Nuclear Physics/ Nanoscience	17	03 (ongoing)
Kavita S. Jerath	PhD	Associate Professor	X-ray spectroscopy	26	NIL
G.Amarnath	PhD	Assistant Professor	Laser Materials	23	NIL
B. Muralidharan	PhD	Professor	Electro Organic and Polymer Science	28	02
Vijaya Ilango	PhD	Associate Professor	Heterogeneous catalysis	15	NIL
F. Rusal Raj	PhD	Assistant Professor	Bio inorganic Chemistry, Environmental Chemistry and Theoretical chemistry	15	NIL
Geetha Kannan	PhD	Associate Professor	Analytical Chemistry	12	NIL
R.Rajan	PhD	Assistant Professor	Water treatment & Antifouling paint	24	NIL

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors : NIL

13. Percentage of classes taken by temporary faculty – programme-wise information: NIL



14. Programme-wise Student Teacher Ratio

General Sciences extends support to all the other departments in all the years. Ratio is 1:100

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual

- academic support staff (technical): 01 sanctioned & filled
- academic support staff (technical): 03 (actual)

16. Research thrust areas as recognized by major funding agencies :NIL

17. Number of faculty with ongoing/completed projects in the last five years from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Completed projects: NIL Ongoing projects: NIL

18. Inter-institutional collaborative projects and associated grants received

a) National collaboration b) International collaboration: NIL

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received.: NIL

20. Research facility / centre with : NIL

- state recognition
- national recognition
- international recognition

21. Special research laboratories sponsored by / created by industry or corporate bodies NIL

22. Publications:

Sl No.	Details	Specify number here
	Number of papers published in peer reviewed journals (national / international)	International: 53 National :4
	Monographs	Nil
	Chapters in Books	1
	Edited Books	Nil
	Books with ISBN with details of publishers	Nil
	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	10
	Citation Index – range / average	8-259/132.5
	SNIP	0.414
	SJR	0.251
	Impact Factor – range / average	0.77-2.1/1.43
	h-index	5
	No. of Publications in Peer Reviewed Conferences	40

Details of the publications as per the number give above (Give details in the last five years



SL No	Authors	Title of the Publications	Details of the Journal	National/International	Year
1	P.Vivek, R.Roopkumar,P.Mu rugakoothan	Synthesis,growth,optimi zation, bulkSRmethod growth,fabrication of indigenous optocalemnet and anisotropic studies on guanidinium L- monohydrogen tartrate (GuHT) single crystal for nonlinear optical device applications	Journal of Crystal Growth 412 (2015)40-48	International	2015
2	T K Datta	An inventory model with price and quality dependent demand where some items produced are defective	Advances in Operations Research (Hindawi)	International	2013
3	KD Choudhury, B Karmakar, M Das, TK Datta	An inventory model for deteriorating items with stock-dependent demand, time-varying holding cost and shortages	OPSERACH (Springer) Vol 52 (1), 55-74	International	2015
4	Tapan Kumar Datta	Production Rate and Selling Price Determination in an Inventory System with Partially Defective Products	IST Transactions of Applied Mathematics- Modeling and Simulation (IST Press, Canada)	International	2010
5	KD Choudhury, TK Datta	An Inventory Model with Stock-dependent Demand Rate and Dual Storage Facility	Assam University Journal of Science and Technology (Assam University)	National	2010
6	Maneesha & Priti Bajpai	A Study Of Traffic Management At Toll Plaza On Delhi Gurgaon Expressway	American Journal of Mathematics and Sciences	International	2013
7	Priti Bajpai& Maneesha	Measure of Performance of Queuing Models and Behavior of Customers in Real Life Applications	International Journal of Applied Physics and Mathematics	International	2013



8	Maneesha & Priti Bajpai	Multiple Regression Analysis Using ANCOVA in University Model	International Journal of Applied Physics and Mathematics	International	2013
9.	Neena D. · K. B. Garg · P. A. Alvi · D. Kumar · Kavita S. Jerath · M. Abu-Samak · S. Dalela	Study of Band Structure Properties of PnictideLaO(1-x)F(x)FeAs(x=0,0.2) superconducting compound	Journal of Supercon. and Novel Mag. Springer Science + Business Media, New York 2014	International	2014
10	Kavita S. Jerath, N.K.M iller Jothi, S. Karthiyayini and Akshay Sharma	Forecast Analysis of Potential and availability in Renewable Energy	International Journal of Environ. Sc. and Dev. Vol 6, No 5, May 2015	International	2015
11	Shrey Iyengar, Kaarthiyayini Sridhar and Kavita S. Jerath	Analysis of elastic constants of Fe ₂ B from X-Ray Diffraction technique	International Journal of Emerging Technology and Advanced Engineering - Volume 5, Issue 1, January 2015 (ISSN 2250 – 2459).	International	2015
12	Suhel Ahmad Khan and Jia-Wei Chen	Gap Functions and Error Bounds for Generalized Mixed Vector Equilibrium Problems	J. Optim Theory Appl. Volume 166, Issue 3, pp 767-776 Springer Publication	International	2015
13	Suhel Ahmad Khan and Jia-Wei Chen	Gap function and global error bounds for generalized mixed quasi variational inequalities	Applied Math. Computation Volume 260, 1, Pages 71–81 Elsevier Publication (USA)	International	2015



14	Suhel Ahmad Khan	Generalized vector equilibrium problem with pseudomonotone mappings	Journal of the Egyptian Mathematical Society In Press Elsevier Publication (USA)	International	2015
15	Suhel Ahmad Khan	Auxiliary problem and algorithm for a generalized mixed equilibrium problem	Journal of the Egyptian Mathematical Society Volume 23, Issue 1, Pages 155–160 Elsevier Publication (USA)	International	2015
16	Suhel Ahmad Khan, Farhat Suhel & SK Srivastava	AUXILIARY PRINCIPLE TECHNIQUE AND ALGORITHM ASPECT FOR MIXED EQUILIBRIUM PROBLEMS	Journal of Nonlinear Analysis and Optimization: Theory & Applications Volume 5, Issue 2, Pages 61-70 Thailand	International	2015
17	Suhel Ahmad Khan, Farhat Suhel & SK Srivastava	A Wiener-Hopf dynamical system for mixed equilibrium problems	International J. Math. And Mathematical Sci. Volume 2014 Article ID 102578, 8 pages Hindawi Publication, USA	International	2014
18	Suhel Ahmad Khan	System of operator quasi equilibrium problems	International Journal of Analysis Volume 2014, Article ID 848206, 6 pages Hindawi Publication, USA	International	2014
19	Suhel Ahmad Khan and Naeem Ahmad	Existence results for vector mixed quasi-complementarity problems	Journal of Mathematics Volume 2013, Article ID 204348, 6 pages Hindawi Publication, USA	International	2013
20	Suhel Ahmad Khan, B S Lee	Vector implicit quasi complementarity problems	Arab Journal of Mathematical Sciences Volume 19, Issue 1, Pages 49–60 Elsevier Publication (USA)	International	2013
	Suhel Ahmad Khan	Vector Variational-Like Inequalities with Generalized	International J. Analysis Volume 2013, Article ID 762380, 7 pages	International	2013



21		Semimonotone Mappings	Hindawi Publication, USA		
22	Suhel Ahmad Khan	On set-valued mixed vector variational-like inequalities in Banach spaces	Nonlin. Anal. Optim.: Theory & Appl. 3(2) (2012), 255-267 Thailand.	International	2012
23	Suhel ahmad khan, B.S. Lee, Farhat S.	Vector mixed quasi complementarity problems in Banach spaces	Math. Comput. Modelling, 55(2012), 983-988 Elsevier Publication (USA)	International	2012
24	Suhel Ahmad Khan, Q.H. Khan, Farhat S.	Generalized Vector Mixed Variational-Like Inequality Problem without Monotonicity	Thai Journal Math., 10(2012) Number 2: 245-258, Thailand.	International	2012
25	Suhel Ahmad Khan, Q.H. Khan, Farhat S.,	Nonlinear mixed vector variational inequality problems	Nonlin. Functional Anal. Appl. 16(4) 2011, 501-509, Korea.	International	2012
26	Suhel Ahmad Khan	Generalized vector quasi implicit complementarity problems	Journal of Global Optimization, 49(2011) 695-705 Springer Publication (Netherland)	International	2011
27	Suhel Ahmad Khan, Farhat S.	Vector variational-like inequalities with pseudo semi-monotone mappings	Nonlin. Funct. Anal. Appl., 16(2) 2011, 191-200, Korea.	International	2011
28	Suhel Ahmad Khan, Q.H. Khan, Farhat S.,	Vector implicit mixed quasi complementarity problems,	Commun. Appl. Nonlin. Anal. 18(2011) 47-55, International Publications (USA).	International	
29	Suhel Ahmad Khan, F. Farhat S.	Existence of solutions of mixed vector variational-like inequalities	Bulet. Math. Anal. Appl. 3(2011) 102-109, Universiteti i Prishtines, Kosove	International	2011



30	Suhel Ahmad Khan, Farhat S.	On generalized vector variational-like inequality	Int. J. Open Problems Compt. Math., 4(3)2011 Jordan.	International	2011
31	Suhel Ahmad Khan	Generalized vector complementarity-type problems in topological vector spaces	Computer & Math. Appl., 59(11)(2010) 3595-3602 Elsevier Publication (USA)	International	2010
32	KR Kazmi and Suhel Ahmad Khan	Existence and continuity of solutions to simultaneous vector equilibrium problems	Southeast Asian Bulletin of Mathematics, 34 (2010) 281-291	International	2010
33	Vivin Karthik,M.Ebrahim, Geetha	Effect of biomass on wind reduction pattern in BITS Pilani,Dubai Campus	International conference on Biological ,civil and environmental Engineering	International	2014
34	Vivin Karthik,M.Ebrahim, Geetha	Stimulation of above ground biomass in BITS Pilani,Dubai Campus	4TH International conference on environmental energy and biotechnology	International	2015
35	K.KUMAR & ELAVARASI MARINDRA	A study on the Motivational Dynamics and Socio Cultural Background of Women Entrepreneurs in the United Arab Emirates	International Journal of Arts and Entrepreneurship, Vol. 4, Issue 4, 236-257, 2015	INTERNATIONAL	2015
36	V. Devanathan and S. Karthiyayini,	A statistical model for the quark structure of the nucleon	"The Legacy of Alladi Ramakrishnan in the Mathematical Sciences" Eds. Krishnaswami Alladi, J.R. Klauder and C.R. Rao, Springer	International	2010
37	Aakriti Singh, Aashia Fathima, S. Karthiyayini	Theoretical Analysis of Mechanical Properties for Elements at Nano- scale	International journal on Recent development in engineering and Technology, Volume 2	International	2014
38	Shrey Iyengar , Kavita S. Jerath , Karthiyayini Sridharan	Analysis of Elastic constants and Lattice Parameters of Fe2B from X-Ray Diffraction Technique	International Journal of Emerging Technology and Advanced Engineering, Volume 5	International	2015



39	Kavita S. Jerath, Miller Jothi, S. Karthiyayini, Akshay Sharma	Forecast Analysis of Potential and Availability in Renewable Energy	International Journal of Environmental Science and Development, (IJESD), Volume 6	International	2015
40	F. Rusal Raj and M.A. NeelaKantan,	"A Brief Review of Interaction of Schiff base Complexes with DNA-A Perceptive to Anti-Cancer Agents",	Res & Rev: J. Pharm. Sci., (4), 1, 2013.	National	2013.
41	F. Rusal Raj and M.A. NeelaKantan,	"Synthesis, Structural Characterization and Biological Studies of Schiff Base Complexes Bearing Indole Moiety",	J.Mod.Chem.&Chem.Tech h., 3 (1), 2013.	National	2013.
42	Nithin Thomas and F. Rusal Raj,	Applications of Nanocatalysis in Petroleum Industry"	Journal of NanoScience, NanoEngineering & Applications, 3 (2), 2013.	National	2013.
43	F. Rusal Raj,	"Reliability of Cloud Computing in Quantum Chemistry Calculations",	IEEE Xplore, Proceedings of 2012-International of Cloud Computing, Technologies, Applications & Management, 978-1-4673-4416-6/12/\$3\\$.00 ©2012IEEE.	International	2012.
44	Vijaya Ilango and Avika Gupta	Carbon Nanotubes–A Successful Hydrogen Storage Medium	International Journal of Chemical, Molecular, Nuclear, Materials and Metallurgical Engineering Vol:7, No:9, 2013	International	2013
45	Adarsh Venkataraman Ganesan, Hardeep Kumar, S. Swaminathan, K. K. Singh, Reenu Anne Joy, Neeru Sood, Trupti Gokhale, R. K. Mittal	Analysis of MEMS-Based Microneedles for Blood Monitoring.	BioNanoScience, Springer 2014,4(2): 128-135	International	2014



46	Gaurav Chaudhary, Anyaa Mittal, Neeru Sood, K.K. Singh	Design and Simulation of Nano-mechanical Resonator for Virus Detection	IEEE Explore: 10.1109/SAS.2014.6798940, pp.170-174	International	2014
47	Hardeep Kumar, Anuj Kumar, K.K. Singh, Neeru Sood, R.K. Mittal	Design and Simulation of a Micro Hotplate for MEMS based Integrated Gas Sensing System,”	IEEE Explore: 10.1109/SAS.2014.6798942, pp.181-184	International	2014
48	Seba S. Varghesea,b, Sunil Lonkara, K.K. Singh, Sundaram Swaminathanb,*,Ahmed Abdalad	Recent advances in graphene based gas sensors	Sensors and Actuators B 218 (2015) 160–183	International	2015
49	M.Santhi, P.E.Kumar and B.Muralidharan	Removal of Malachite Green Dyes By Adsorption onto Activated Carbon – MnO ₂ – Nanocomposite – Kinetic Study and Equilibrium Isotherm Analyses	IOSR Journal of Applied Chemistry (IOSR-JAC) e-ISSN: 2278-5736.Volume 8, Issue 4 Ver. I. (Apr. 2015), PP 33-41, http://www.iosrjournals.org/ DOI: 10.9790/5736-08413341	International	2015
50	<u>Vijayakumar.S,</u> <u>Morvin Yabesh J.E.,</u> <u>Prabhu .S,</u> <u>Manikandan.R.,</u> <u>Muralidharan B</u>	Quantitative ethnomedicinal study of plants used in the Nelliampathy hills of Kerala, India Journal of Ethnopharmacology.	Journal of Ethnopharmacology [2015, 161:238-254] DOI:10.1016/j.jep.2014.12.006	International	2015
51	<u>P. V. Rajkumar ;</u> <u>K. Ravichandran;</u> <u>K. Karthika;</u> <u>B. Sakthivel ;</u> <u>B. Muralidharan</u>	Enhancement of electrical conductivity of sol–gel doped ZnO films through Zr doping and vacuum annealing.	Materials Technology: Advanced Performance Materials.DOI: http://dx.doi.org/10.1179/1753555715Y.0000000047	International	2015
52	B.Muralidharan and S.Vigeswari	A Study on the Development of Cost Effective Dyeing Method for Dyeing Of 100% Polyester Fabric,	International Journal of Advanced Scientific and Technical Research Issue 4 volume 3, May-June 2014 Available online on http://www.rpublication.com/ijst/index.html ISSN 2249-9954.	International	2014



53	B.Muralidharan and S.Laya,	A New Approach to Dyeing of 80:20 Polyester/Cotton blended fabric using Disperse and Reactive Dyes	ISRN-Material Science, vol. 2011, Article ID 907493, 12 pages, 2011.	International	2011
54	B.Muralidharan, S.Vigeswari and S.Laya,	An Investigation on the Effect of Azeotropic Solvent Mixture Pretreatment of 67:33 PET/CO Blended Fabric and Yarn- Part I	Asian J. Textile,1(3):114-129, 2011, ISSN 1819-3358/ DOI:10.3923/ajt.2011.114.129©2011 Asian Network for Scientific Information	International	2011
55	B.Muralidharan S.Vigeswari and S.Laya,	An Investigation on the Effect of Azeotropic Solvent Mixture Pretreatment of 67:33 PET/CO Blended Fabric and Yarn- Part II	Asian J. Textile,1(4):145-160, 2011ISSN 1819-3358/ DOI:10.3923/ajt.2011.114.129©2011 Asian Network for Scientific Information.	International	2011
56	B.Muralidharan and S.Laya	A study on the Impact of Non-aqueous Solvent Mixtures on the Crystallinity of Polyester/Cotton Composite Fibre	IPCBE Proceedings, ISSN: 2010-4618),	International	2009
57	Balathandapani Muralidharan, Gopalakrishnan Gopu, Saraswathy Laya, Chinnapiyan Vedhi, Paramasivam Manisankar	"A Study on Preparation and Use of Nano PolyPyrrole and Nano Poly (3,4-Ethylenedioxy thiophene)Coated Glassy CarbonElectrode For The Determination of Antihistamine in Pharmaceutical and Urine Sample"	Materials Sciences and Application, 2011, 2, **-** doi:10.4236/msa.2011.28128 Published Online August 2011	International	2011
58	B.Muralidharan G.Gopu, C.Vedhi, and P.Manisankar	Determination of three analgesics in pharmaceutical and urine sample on nano poly(3,4-ethylene dioxythiophene) modified electrode	Ionics DOI: 10.1007/s11581-011-0619-2	International	2011
59	B.Muralidharan G.Gopu, C.Vedhi, and P.Manisankar	Stripping Voltammetric Determination of Analgesics in Their Pharmaceuticals Using Nano-Riboflavin-	International Journal of Electrochemistry Volume 2011, Article ID 269452, 11 pages doi:10.4061/2011/2694	International	2011



		Modified Glassy Carbon Electrode.	52		
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Details of Conference Publications

SL No	Authors	Title of the Paper Presented	Details of the Conference	National/International	Date & Year
1.	Kavita S. Jerath, , Miller Jothi S.Karthiyayini	Presented a paper on Renewable Energy in the Gulf countries. Forecast Analysis of Potential and Availability of Renewable Energy in the Gulf	International conference on Substantial Environmental Technologies (ICSET 2014)	International	August 22nd-23rd 2014
2	S.Baskaran, and Mohammed Sabin	A Statistical Analysis Of Relationship Between Gdp And Residential House Prices In Dubai	UAE Undergraduate Student Research Competition Abu Dhabi University, Abu Dhabi.	International	21-05-2015
3	S.Baskaran, and Jeffin George	A Statistical Study Of Retail Online Transactions And Their Impact On Business Organization In UAE	UAE Undergraduate Student Research Competition Abu Dhabi University, Abu Dhabi.	International	21-05-2015
4	R.Roopkumar, S.R. Chockalingam	Development of bioactive coatings of HA-G-Ti composites for in vivo studies,	Innovations in Biomedical Materials 2012 Conference organised by The American Ceramic Society , Raleigh, NC, USA	International	Sep 10-13, 2012
5	Rajarshi Sinha, R.Roop Kumar, S.Swaminathan	Study & Characterization of Semiconductor Nanowires as Sensing Interfaces for Electrochemical Biosensor Applications	Materials Challenges in Alternative & Renewable Energy 2014 Conference (MCARE2014) Hilton Clearwater Beach Resort, Clearwater, Florida, USA	International	February 16 – 20, 2014
6	" K.K.Singh, S. karthyayini	Longitudinal Structure Function of nucleon Using Thermodynamical Bag Model	International Conference in High Enrgy Physics at Melbourne, Australia, organised by University of Melbourne, 3-11 July 2012	International	2012



7	S.Karthiyayini, K.K.Singh	"Structure function with higher twist contribution in the thermodynamical bag model"	International Conference in High Energy Physics at Melbourne organised by University of Melbourne,3-11 July2012	International	2012
8	Adarsh Venkataraman Ganesan, Hardeep Kumar, Sundaram Swaminathan and K.K. Singh	Design of MEMS based Micro- Hot Plate for integrated poisonous gas sensing system,"	Conference on Computational Modeling, Simulation and Analysis, Dubai	International, ,	Jan. 2013 pp. 1539-1543
9	Adarsh Venkataraman Ganesan, Hardeep Kumar, S. Swaminathan, K.K. Singh, Reenu Anne Joy, Neeru Sood, Trupti Ghokhale and R.K. Mittal,	Design and Simulation of Microneedles for Blood Alcohol Detection,"	International Conference on Emerging Technologies from Micro to Nano,	Goa	Feb. 2013
10	Hardeep Kumar, Adarsh Venkataraman Ganesan, Reenu Anne Joy, Neeru Sood, K.K.Singh, Sundaram Swaminathan, R.K.Mitta	Nano Sensing of H2S- Comparative Study of Different Sensing Methods,"	Proc. International Conference on Emerging Technologies from Micro to Nano	, Goa	Feb. 2013,
11	Reenu Anne Joy, Kiran Menon, Neeru Sood, Trupti Gokhale, Adarsh Venkataraman Ganesan, Hardeep Kumar, Upala Banerjee, ShrutiNiranjanPandit, K.K.Singh, S.Swaminathan and R.K.Mittal	"Microsensors for Water Quality Assessment: A Review," International Conference on Emerging Technologies from Micro to Nano,	Proc. International Conference on Emerging Technologies from Micro to Nano	, Goa	Feb. 2013,
12	Gaurav Chaudhary, Hardeep Kumar, Anyaa Mittal, K.K. Singh, Neeru Sood	"Sensitivity Analysis of BNNT based Nano Bio-Sensor",	4th International Conference on Advances in Biotechnology	BITS Pilani, Dubai Campus UAE	2014



13	Rennu A. Joy, Adarsh V.G., kiran Menon, Seba S. Varghese, S.Swaminathan, K.K.Singh, Trupti Gokhale, Neeru Sood,	"Design and Simulation of a Cantilever based Sensor for Thalassemia scening in the UAE	4th Annual International Conference on Advances in Biotechnology	BITS Pilani, Dubai Campus UAE	2014
14	Seba S. Varghese, Kiran Menon, SreashaDamodar, K.K.Singh, Neeru Sood, S. Swaminathan.	"Graphene: A Promising platform for bio-sensing application	4th Annual International Conference on Advances in Biotechnology	BITS Pilani, Dubai Campus UAE	2014
15	K.K.Singh, Hardeep Kumar, Anuj Kumar, Gaurav Chaudhary	"Modeling and Simulation of micro/nano based integrated Gas Sensor"	5th International Conference on Nanotechnology: Fundamentals and Applications (ICNFA'14), Prague, Czech Republic,	International	Aug. 11-13, 2014
16	Aditya Poonia, Abhimanyu Dabas, Gaurav Chaudhary, Hardeep Kumar, K.K. Singh	Investigations on single- walled CNT based bio- sensor using Finite difference method	5th International Conference on Nanotechnology: Fundamentals and Applications (ICNFA'14), Prague, Czech Republic,	International	Aug. 11-13, 2014
17	Aditya Poonia, Abhimanyu Dabas, Lavanya Aggarwal,	Analysis of CNT based Nano Bio-Sensor for Virus Detection"14th	IEEE International Conference on Nanotechnology, Toronto (Canada),	International	Aug. 11-13, 2014
18	Vinayak dhingra, Hardeep Kumar, K.K.Singh	Lamellar grating Interferometer FTIR spectroscopy and its applications: A review	IEEE Nano 2015 , Rome	International	2015
19	Moudgil, Akshay; Singh, K.K.; Swaminathan, Sundaram	MEMS based Design and Analysis of a Biosensor for Detection of Hepatitis Virus	IEEE Nano 2015 , Rome	International	2015
20	Dr Shashi Bhushan, Dr. Maneesha Bhagchandani & Dr. R.Karan Singh	On Unbiased Jack-Knifed Regression Type Estimator of Finite Population Mean	Souvenir - II National Conference on Statistical Inference, Sampling Techniques & Related Areas, Aligarh Muslim University	National	February 11-12, 2012.



21	Dr Shashi Bhushan, Dr. Maneesha Bhagchandani & Dr. R.Karan Singh	An Efficient Jack-Knifed Regression Type Estimator for Finite Population Mean	National Seminar on New Dimension in Statistics: Concepts & Issues (NDSCI-2012), Banaras Hindu University, Varanasi	National	March 2-4, 2012.
22	Dr.Maneesha	Value addition - Increase production by providing Logistics solutions	International Conference of Logistics, Informatics and Service Science (LISS2014) held at UCL, Berkeley, USA	International	July 2014
23	Dr.Priti Bajpai and Dr.Maneesha	Analysis of Parking Lots While Dubai Prepares For Expo 2020	International Conference of Logistics, Informatics and Service Science (LISS2014) held at UCL, Berkeley, USA	International	July 2014
24	Priti Bajpai and Maneesha Bhagchandani	A Study Of Healthcare Facility for Public Sector Banks Staff and Family	International Conference:Mathematical Science & Applications, Abu Dhabi, UAE	International	December 26-31, 2012
25	Maneesha Bhagchandani and Priti Bajpai	Application Of Queuing Model In Dubai's Busiest Megaplex	International Conference on Mathematical Sciences and Statistics 2013 (ICMSS2013), Kuala Lumpur, Malaysia		February 5-7, 2013
26	Vijaya Ilango and Larina Melissa D'Souza	Effect of silver nanoparticles in waste water treatment	International Conference on Biotechnological Innovations towards Global Development, India	International	Jan 9-10 2013
27	Vijaya Ilango and Avika Gupta	Carbon Nanotubes - a successful Hydrogen Storage medium	ICSEEE 2013 :International Conference on Sustainable Energy and Environmental Engg, Singapore	International	Sep 12-13 2013
28	Muralidharan, B., Laya,S., Venkatachalam,R, Balakrishnan,K.	"A study on extraction and dyeing behavior of eco friendly natural dye from Anisochilus carnosus wall and its antimicrobial activity.	"First UAEU Chemistry Symposium "Chemistry and the Environment". UAE University, Al Ain-UAE.	International	26 th Oct-2010
29	Muralidharan,B., Laya,S., Venkatachalam, R. and Vigneswari, S.,	Energy efficient dyeing method of polyester/ cotton blended fabric by one bath one step	International Conference on Emerging Green Technologies [ICEGT 2011], Periyar	International	27-30 th July 2011.



		dyeing using Azeotropic mixtures.	Maniammai University, Thanjavur, Tamilnadu-India.		
30	Muralidharan, B., Laya,S., Venkatachalam,R, Balakrishnan,K.and Vigneswari, S.,	Energy saving in dyeing of polyester fabric involving solvent pretreatments,	International Conference on Emerging Green Technologies [ICEGT 2011], Periyar Maniammai University, Thanjavur, Tamilnadu-India	International	27-30 th July 2011.
31	Muralidharan, B., Laya,S., Venkatachalam,R,	An investigation on the impact of azeotropic solvent mixture pretreatment on the fibre composite of a natural and synthetic origin	International Conference S-Polymer-2012 Rolduc Polymer Meetings - Sustainability of Polymeric Materials from 20 th -23 rd May 2012 held at Kerkrade, The Netherlands.	International	20-23 rd May 2012
32	Muralidharan, B., Laya,S., Venkatachalam,R	Study on the Physico-chemical modification of Polyethylene Terephthalate fabric	International Conference S-Polymer-2012 Rolduc Polymer Meetings - Sustainability of Polymeric Materials from 20 th -23 rd May 2012 held at Kerkrade, The Netherlands.	International	20-23 rd May 2012
33	Muralidharan, B., Laya,S.,	A study on the Impact of Non-aqueous Solvent Mixtures on the Crystallinity of Polyester/Cotton Composite Fibre.	International Conference on Biotechnology and Environment Management- 2012 held on at Jeju Island, South Korea.	International	29-30 th , June 2012
34	.S. Vigneshwari, S.Laya R.Venkatachalam, J.Ethiraj and B. Muralidharan	An Investigation on the Modification of dyeing behavior of 100 % PET Spun Yarn.	National Conference on Recent Advances in Textile and Electrochemical Sciences (RATES-2013)" held at Alagappa University, Karaikudi, Tamilnadu.India.	National	21-23 rd March 2013
35	¹ S. Vigneswari, ² R.Venkatachalam, ³ J.Ethiraj and ^{*4} B.Muralidharan	Cost effective dyeing process for dyeing of PET/VISCOSE Composite Yarns using Disperse and Reactive dyes	National Conference on Recent Advances in Textile and Electrochemical Sciences (RATES-2013)" held at Alagappa University, Karaikudi, Tamilnadu.India.	National	21-23 rd March 2013



36	S.Laya Vigneshwari, G.Gopu and Muralidharan	S. B.	Effect of Azeotropic Solvent Mixture Pretreatment on the Physicochemical Behavior of Polyester/Cotton Composite Fabric	National Conference on Recent Advances in Textile and Electrochemical Sciences (RATES-2013)" held at Alagappa University, Karaikudi, Tamilnadu.India.	National	21-23 rd March 2013
37	M.Kalaiselvi, V.Sethuraman, V.Ramasamy, Muralidharan*	B.	Water Quality Assessment and Monitoring in and Around Sivaganga District	National Conference on Recent Advances in Textile and Electrochemical Sciences (RATES-2013)" held at Alagappa University, Karaikudi, Tamilnadu.India	National	21-23rd March 2013
38	S. Laya , K.Balakrishnan, R.Venkatachalam, G.Gopu and B. Muralidharan	B.	A Study on the Influence of Tricholoro Ethylene Pre-treatment on the Dyeing and other Physico-Chemical Behaviour of 100% Polyethylene Terephalate fabric	National Conference on Recent Advances in Textile and Electrochemical Sciences (RATES-2013)" held at Alagappa University, Karaikudi, Tamilnadu.India	National	21-23rd March 2013
39	N.K.Manju nath, B. Muralidharan, J.Ethiraj		Preparation & characterization of gas diffusion layer for PEM fuel cell	National Conference On Applied Science and Humanities , Organized by K. S. School of Engineering and Management, Bengaluru - 560062, Karnataka,India	National	5 th May 2015
40	J. Ethiraj, A.Nagarajan, B.Muralidharan		Natural dye obtained from Bougainvllae bracts and its dyeing properties for safer environment.	National Conference On Applied Science and Humanities , Tuesday, 5 May 2015 Organized by K. S. School of Engineering and Management, Bengaluru - 560062, Karnataka,India.	National	5 th May 2015

23. Details of patents and income generated: NIL

24. Areas of consultancy and income generated : NIL

25. Faculty selected nationally / internationally to visit other laboratories / institutions industries in India and abroad : NIL



26. Faculty serving in National committees b) International committees c) Editorial Boards d) any other (please specify) : NIL

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs): NIL

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects

Inter-departmental Projects which General Sciences Faculty guided for students are 48% approx.

- percentage of students doing projects in collaboration with other universities /industry / institute: NIL

29. Awards / recognitions received at the national and international level by : NIL

- Faculty
- Doctoral / post doctoral fellows
- Students

30. Seminars/ Conferences/Workshops organized and the source of funding (national/ international) with details of outstanding participants, if any. NIL

31. Code of ethics of research followed by the Department.

The department follows the Code of Ethics specified by the Institute.

32. a) Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
NA	For FD fill the BITSAT application numbers. HD/Ph.D discipline specific numbers to given.				
	Contact admission office for this data.				

33. b) Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries



We do not capture this data through any formal process

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

We do not capture this data through any formal process.

35. Student progression

Student progression	Percentage against enrolled
UG to PG	Not Maintaining the data
PG to M.Phil.	
PG to Ph.D.	
Ph.D. to Post-Doctoral	
Employed	
Campus selection	
Other than campus recruitment	
Entrepreneurs	

36. Diversity of Staff

Percentage of faculty who are graduates	
of the same university	NIL
from other universities within the State	NIL
from universities from other States from universities outside the country	100%

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period : NIL

38. Present details of departmental infrastructural facilities with regard to

- Library: Text books and Reference books, online resources are available in Centralized Library.
- Internet facilities for staff and students : Campus wide wifi facility available for all.
- Students' laboratories: Physics and Chemistry Labs with state of the art facilities are available for undergraduate students.
- Research laboratories: Not much support is available.

39. List of doctoral, post-doctoral students and Research Associates

- from the host institution/university -NIL
- from other institutions/universities –NIL

40. Number of post graduate students getting financial assistance from the university.NA

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.



Faculty was involved in Curriculum Review and revision of curriculum.

42. Does the department obtain feedback from

a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Periodic meetings amongst the Faculty is organised after Class Committee meeting with the students. The idea is to update and accordingly change the methodology of teaching such that students gain advantage.

b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes. Every semester students give the feedback on the respective staff, curriculum and teaching-learning-evaluation. The compiled feedback is shared with individual faculty and corrective measures are taken. The feedback with regard to curriculum and teaching-learning-evaluation is taken up at department level and if need be, changes are made accordingly.

c. alumni and employers on the programmes offered and how does the department utilize the feedback?

If suggestion is pertaining to introduction of new course, the same is taken up for Senate approval after discussing with the colleagues in other campuses.

43. List the distinguished alumni of the department (maximum 10) : NA

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

- Organized a training session of SPSS for the faculty, staff and the students on 19 October, 2014.
- Prof Suresh Bhargava, Deputy Pro Vice Chancellor (Int)-College of Science, Engineering and Health and Director - Centre of Advanced Materials & Industrial Chemistry, School of Applied Sciences, RMIT University, Melbourne, Australia visited the campus on 23 and 24 November, 2014. Talk on “Multidisciplinary Approach To Create Innovation In Science And Engineering”.

45. List the teaching methods adopted by the faculty for different programmes.

Faculty student interaction in the classrooms is the basic mode of imparting knowledge. Blackboards, white boards and Telepresence classroom is used for the same.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

General Sciences provides the basic foundation and knowledge of pure sciences to the students. Syllabus is revised focussing more on applied aspect.

47. Highlight the participation of students and faculty in extension activities: NA

48. Give details of “beyond syllabus scholarly activities” of the department.: NIL



49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. NIL

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

SPSS – statistical software introduced, training imparted and projects based on SPSS have been undertaken.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

<p>Strengths</p> <ul style="list-style-type: none"> • Offer foundation courses to Engineering Disciplines • Result based work culture • Practice School Internship • Academic Counseling • Trasparency in evaluation • Being an International campus, lot of exposure for international students 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Research collaborations • Under Staffed • No first degree or higher degree programs offered by the dept. • Weak inbuilt infrastructure for research . • No funding and support for research from local government bodies
<p>Opportunities:</p> <ul style="list-style-type: none"> • To develop smart learning system Industry Exchange • To become a leader in gulf region by International collaboration abroad and in India • Introducing higher degree programs Contribution towards research 	<p>Challenges:</p> <ul style="list-style-type: none"> • To improve infra structure for quality research • Publishing research papers in reputed journals • Getting projects • Handling classes with more than 50 students some classes have • more than 100. Attendance takes 15 minutes. • To get research scholars in Pure sciences

52. Future plans of the department.

Working towards offering short term courses for Professionals and improve the Research publications and quality.

53. Any other information regarding your department which you would like to include.

NIL



Dubai Campus: Evaluative Report of the Department HUMANITIES AND SOCIAL SCIENCES

1. **Name of the Department:** Humanities and Social Sciences

2. **Year of establishment of the Department:** 2007

3. **Is the Department part of a School/Faculty of the university?**

Departments function as independent entities in the university and are not part of any school or faculty.

4. **Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.).**

Post Graduation: MBA Programs

5. **Interdisciplinary programmes and departments involved:** Nil

6. **Courses in collaboration with other universities, industries, foreign institutions, etc.**

Note: some of our structure courses like Practice School and thesis dissertation are done by our students in industries and universities outside BITS.

7. **Details of programmes discontinued, if any, with reasons:** Nil

8. **Examination System:** Semester and Choice Based Credit System.

9. **Participation of the department in the courses offered by other departments**

Technical Report Writing, Effective Public Speaking, Linguistics, Introduction to Mass Communication, Phonetics and Spoken English, Reporting & Writing for Media, Professional Ethics, Entrepreneurship, Principles of Management, Principles of Economics, Principles of Marketing for Engineers, Fundamentals of Finance and Accounting, Introductory Psychology and Introduction to Islamic Economy.

10. **Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others).**

	Sanctioned	Filled (includes offer letters given)	Actual number
Professor	Note**		1
Associate Professors			1
Asst. Professors			2
Others			2 (Sr.Lecturer/ Lecturer)

Note**:The faculty positions for the University is broadly governed by Growth plan which also covers designation-wise breakup with a larger vision. Keeping in mind the fluidity of movement of faculty and proposed student to faculty ratio in each campus for first degree, higher degree as well as Ph.D.



programmes, individual department needs are not fixed. Besides, as we are in expansion plan which calls for new programmes, courses being introduced, the demand on faculty in terms of numbers, for each department, is broadly governed by all the above factors and hence it is not possible to have a fixed number of faculty for each department. Recruitment of faculty, therefore, varies, based on departmental needs.

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
A.S.Rao	Ph.D., MBA	Associate Professor	Entrepreneurship, OB	29	1 (Partial) - Withdrawn
Shazi, Shah Jabeen	Ph.D., M.Phil. M.A.	Professor	Linguistics	19 (Full time) 7 (Part time)	1 (guided)
Lajwanti K.	Ph.D.,M.A.	Assistant Professor	English Language,	11	
Mubeenal.	Ph.D.	Assistant Professor	English Language	10	
Aqila R.	Ph.D.	Lecturer	Finance, Marketing	7	
Pushkala M.	MBA	Sr.Lecturer	Finance, Marketing	9	

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Adjunct Faculty in MBA Program: Dr. Anton Ravindran, GSTF

Visiting Faculty in MBA Program:

<u>Semester 2012-13 & Summer term 2012-13</u>	
<u>Course Title</u>	<u>Faculty Name</u>
Marketing research	Dr. Waheed Abdul, IMT Dubai
Quantitative Methods	Prof. Santanu Roy, IMT Dubai
Managerial Economics	Prof. Pranab Pani, IMT Dubai
Management Framework & function	Dr. Raghunathan, BITS Pilani campus
<u>Semester 2013-14</u>	
Legal & Economic Environment of Business	Dr. Genaew Bekele, UD
Project Management	Dr. Hussein Fakhry, UD
Business Structure & Processes	Dr. Marina Arnaut, UD
Business and Society	Dr. Marina Arnaut,UD
Marketing	Dr. Eppan T.,UD
Managerial Communication	Dr. Washika Saheem,UD
Principles of Management	Dr. Washika Saheem & Dr. Yehia Kamal, UD
Principles of Marketing for Engineers	Dr. Rahim Hussain, UD
<u>Semester 2014-15</u>	
Financial & Management Accounting	Dr. George, UD



Organizational Behavior	Dr. Washika Saheem,UD
Semester 2014-15	
Marketing Research	Prof. Ashok Pratap Arora, MDI
Summer Term 2014-15	
Project Management	Dr. Remica Aggarwal,
Quantitative Methods	Prof. Santanu Roy, IMT Dubai

13. Percentage of classes taken by temporary faculty – programme-wise information: Nil

14. Programme-wise Student Teacher Ratio

	Students	Faculty	
<u>MBA</u> :	Total 47 students and 16 faculty - $47/16 = 2.9$		3 : 1 (Student : Faculty)
<u>UG (B.E. (Hons))</u>		3 Faculty members are teaching 'Technical Report Writing' course (Mandatory) for all 1st year students	
		Faculty members are teaching 'Principles of Management' course (Mandatory) for all 2nd year students.	

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual : Nil

16. Research thrust areas as recognized by major funding agencies: Nil

17. Number of faculty with ongoing/completed projects in the last five years from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Completed projects: N.A.

Ongoing projects: Nil

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount (Lakhs)	Duration
	-				

18. Inter-institutional collaborative projects and associated grants received : Nil

a) National collaboration

b) International collaboration



19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.;
total grants received: Nil

20. Research facility / centre with N.A.

- state recognition
- national recognition
- international recognition

21. Special research laboratories sponsored by / created by industry or corporate bodies
N.A.

22. Publications:

SI No.	Details	Specify number here
	Number of papers published in peer reviewed journals (national / international)	18
	Monographs	Nil
	Chapters in Books	Ni
	Edited Books	Nil
	Books with ISBN with details of publishers	
	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	18
	Citation Index – range / average	0
	SNIP	0.498
	SJR	0.3615
	Impact Factor – range / average	0.855 to 0.176 / 0.389
	h-index	0
	No. of peer reviewed Conferences	19

**Details of the publications as per the number give above (Give details in the last five years:
Journal Publications**

S. No.	Author(s)	Title of the Publication	Details of the Journal	National/ International	Year
1	Jabeen, Shazi Shah	'Implementation of Communicative Approach'	English Language Teaching, doi:10.5539/elt.v7n8p68 Vol. 7, No.8,	International	2014
2	Pushkala M. and Madhavi C.	"Emerging Ethical Issues due to Technological Developments in an Era of Globalization"	Asian Journal of Research in Social Sciences and Humanities, Vol. 4, Issue 4; Pp.317-331	International	2014



S. No.	Author(s)	Title of the Publication	Details of the Journal	National/ International	Year
3	Qasim, Z. and Pushkala, M.,	"CSR and impact of CSR practices in companies in UAE", in 'Perspectives of Corporate Social Responsibility and Sustainability: a specific reference to UAE'	Germany: Lambert Academic Publishing, Pp. 123-149	International	2014
4	Rao, A.S.	"Nurturing entrepreneurial women : An empirical study from a Developing country"	Journal of Entrepreneurship in Emerging Economies, Vol. 6 Iss 3; Pp.268-297	International	2014
5	Lajwanti, Kishnani	"Elements of Suspicion and Thrill in Sidney Sheldon's –The Other Side of Midnight "	International Journal of Research on English Language Teaching Studies, February 2015. Vol.3(1); Pp.24-28	International	2015
6	Shazi Shah Jabeen, Zakia Sadique and Mohammed Ayesh Towheed	'Clarity in Communication: An Imperative'	New Frontier - International Journal of Humanities and Social Sciences, Vol. 1, No. 1; Pp. 18-24	International	2015
7	Rao, A.S.	"Impact of Transformational Leadership on Team Performance - empirical study in U.A.E."	Measuring Business Excellence (Accepted - Forthcoming)	International	2015
8	Aqila, R.	Growth of Islamic banking in GCC: Journey and beyond International	Journal of Financial Services Management, IJFSM; Vol 8 No 2	International	2015
9	Panda T. and Yadav P.T.	Study of Shoppers' Attitude towards Private Labels in Dubai	International Journal of Research in Computer Application & Management (IJRCM) ; Vol. 2, Issue No. 6 Pp. 8-14	International	2012
10	Pushkala M. and Madhavi C.	Impact of CSR initiatives on Consumer Behavior	International Journal of Research in Commerce and Management; Vol.4; Issue 3 Pp. 37-41	International	2013
11	Rao, A.S.	Case Study :World is Classroom : The Case of Univexcellence.com	Emerald Insight : Emerald Emerging Markets Case Studies; Vol. 3, No.2; Pp. 1-9	International	2013
12	Aqila, R. & Anomitra B.	An Essay to returns to scale of Banks in UAE.	Asian Journal of Management Science and Education. Vol 4 No1, Pp. 43-50	International	2015



S. No.	Author(s)	Title of the Publication	Details of the Journal	National/International	Year
13	Aqila R. and Zafar A.	Islamic Banks and Conventional Banks in the UAE Before and After Recession	International Journal of Financial Management (IJFM); Vol.1(1), Pp.70-79	International	2012
14	Rao, A.S.	Problem to Opportunity – The Journey of Irshikaahues	International Journal of Innovations in Business; Vol.1, No.2	International	2012
15	Pushkala M. and Aksheta M.	Creating a Web-based Model for Financial Planning and Forecasting	UACEE International Journal of Computer Science and Its Applications; Vol. 2, Issue 3, Pp. 370-374	International	2012.
16	Iqbal, M. and Maneesha	Analysis of Written Business Communication Competency in the Hotel Industry of Dubai	International Journal of Business and Management Studies (Accepted-Forthcoming); Vol.3(3); Pp.43-53	International	2015
17	Aqila R. and Pushkala M.	Conceptual review on Cultural Adversities	International Management Research; Vol.1, Issue 1, Pp. 1-6	International	2011
18	Iqbal, M.	A Study of the Significance of Business Communication in the Hotel Industry of Dubai	OJAS: Expanding the Knowledge Horizon; Vol.3, No.1	International	2013

Conferences

S. No.	Author(s)	Title of the Publication	Details of the Conference	National/International	Year
1	Aqila R. and Dr. Zafar Alam	Comparative Analysis of Islamic Banks and Conventional Banks in the UAE	Proceedings of 12 th International Conference of the Society for Global Business and Economic Development, Montclair University, Singapore; July 21-23, 2011	International	2011
2	Subinay Bedi, Aqila R. and Dr. Lajwanti	Business Intelligence – A Framework	Proceedings of the International Conference on Information and Technology, Manipal University	International	2011
3	Zainab Qasimand Pushkala Muralidharan	Corporate Social Responsibility and Impact of CSR Practices in the United Arab Emirates	Proceedings in International Conference on Technology and Business Management, ZABIST, Dubai; March 28-31, 2011; Pp. 123-149	International	2011
4	Zainab Q., Anjuman A.S. and Pushkala Muralidharan	Merging Organizational Management and Information Technology	Proceedings of the International Conference on Technology and Business	International	2011



S. No.	Author(s)	Title of the Publication	Details of the Conference	National/International	Year
		through Business	Management, ZABIST, Dubai; March 28-31, 2011; Pp. 930-935		
5	Rao , A.S.	Nurturing Entrepreneurial Women : An empirical study from a developing country	Proceedings of the USASBE (United States Association for Small Business and Entrepreneurship); 10-13 Jan 2013; San Francisco	International	2013
6	Iqbal, M.	Communication in the Hospitality Industry	Published in the conference proceedings at 2 nd Interdisciplinary Tourism Research Conference; 24-29 April 2012;Pp.861-872	International	2012
7	Priyanka Teja Yadav and Shazi Shah Jabeen	Role and Impact of Visual Communication in the PowerPoint Presentations	Proceedings of 2 nd Annual International Conference on Language, Literature and Linguistics (L3 2013), Global Science and Technology Forum, Singapore. June 17-18, 2013	International	2013
8	Shazi Shah Jabeen, Anomitra Banerjee, Purab Dilip Bhatia	Strategizing for the Future: Introducing E-Learning in Educational and Corporate Houses	Proceedings of International Conference on Web and Open Access to Learning 2014, organized by Canadian University of Dubai; Nov. 25-27, 2014	International	2014
9	Ria Kottamurickaland Shazi Shah Jabeen	Corporate Social Responsibility Audit: An Exploratory Study	<i>Proceedings of</i> 21st Century Academic Forum Conference at Harvard University, Boston, USA; 8-10 March, 2015	International	2015
10	Shazi Shah Jabeen and Aqila Rafiuddin	Factors Influencing Education Decision Making Process	<i>Proceedings of</i> 21st Century Academic Forum Conference at Harvard University, Boston, USA; 8-10 March, 2015	International	2015
11	Shazi Shah Jabeen and Ajay Jesse Thomas	Effectiveness of Online Language Learning (Forthcoming - Accepted)	World Congress on Engineering and Computer Science 2015 (WCECS 2015), organized by International Association of Engineers (IAENG), San Francisco, USA 21-23 Oct, 2015	International	2015
12	Lajwanti K.	Comparative Study on Anxiety among Sports and Non-sports Personnel in India and UAE	Global Conference on Business Management and Social Sciences organized by Academic Business	International	2015



S. No.	Author(s)	Title of the Publication	Details of the Conference	National/International	Year
			Management Conferences and Abasyn University ; 24-25 Apr.2015, Dubai		
13	Lajwanti K.	Anita Desais- "Cry The Peacock –In Search of her Own Identity	International Conference on Science Technology and Society organized by Christian College Indore published in Conference Proceedings; 21-22 March 2015; Pp. Nos. 541-544	International	2015
14	Lajwanti K.	Challenges in Business Intelligence: A Conceptual Framework	2nd International Conference held at Manipal University , Dubai Campus sponsored by IEEE , MCTM 2011 24th March	International	2011
15	Lajwanti K.	Psychological Barriers of Language Learners Studying Communication Skills for Professional Courses	International Conference on "Managing Business Development in a Globalized World: Strategies for Excellence" 3-4 Feb, 2011 at Dewas, sponsored by AICTE. Paper published in the Conference Magazine of the book titled- Managing Business Development in a Globalized World: Strategies for Excellence, Excel Books Pp. Nos 446-450	International	2011
16	Lajwanti K.	The Role of Women in Arundhati Roy's God of Small Things	International Conference Sponsored by International Sociological Association and Indian Sociological Society, held at Indore Christian College; 12-13 March 2011	International	2011
17	Lajwanti K.	The Irony of the Indian Education System portrayed in the novel of Chetan Bhagat :Five Point Someone	International Conference held at Manipal University Dubai under the theme Social Media and Society; 21 May 2015	International	2015
18	Lajwanti K.	Knowledge Management and its Implications in the 21 st Century	Tenth Conference of AIMS International Conference at IIM Bangalore; 6-9 Jan.2013	International	2013
19	Saru Sreedharan and Pushkala M.	Information and Communication Technology in 3PL organizations	International Conference on Innovation Technology IN-TECH 2012; Rijeke Croatia Sept.26-28, 2012; Pp.251-255	International	2012



23. **Details of patents and income generated** N.A.

24. **Areas of consultancy and income generated** Nil

25. **Faculty selected nationally / internationally to visit other laboratories / institutions industries in India and abroad**

Dr. A. Srinivasa Rao - University of Dubai (Visiting faculty)

26. **Faculty serving in National committees b) International committees c) Editorial Boards d) any other (please specify)**

- Dr. Shazi Shah Jabeen has been appointed as Associate Editor of the *Journal on Education* (JEd). (Print ISSN: 2345-7163, E-periodical: 2345-7171.)
- Dr. Shazi Shah Jabeen has been appointed as Associate Editor of New Frontier, International Journal of Humanities and Social Sciences. (Print ISSN: 2394 - 8221).
- Dr. Shazi Shah Jabeen has been appointed as a member of the Program Committee (PC) of the Annual International Conference on Language, Literature and Linguistics (L3) organized by Global Science and Technology Forum, Singapore.
- Dr. Shazi Shah Jabeen was the Core member of the Organizing Committee of the 2012 International Conference on Cloud Computing Technologies, Applications and Management (ICCCTAM) held at BITS Pilani, Dubai Campus, Dubai, UAE between 8 – 10 December 2012.
- Dr. Shazi Shah Jabeen Edited and formatted the research papers presented in 2012 International Conference on Cloud Computing Technologies, Applications and Management (ICCCTAM) and published in the IEEE journal.
- Dr. Shazi Shah Jabeen reviewed 10 abstracts for the Second European Business and Management Conference held in Brighton, UK in July, 2015. She has been acknowledged as one of the Senior Reviewers by the Organizing Committee of the conference for her contribution.
- Dr. Shazi Shah Jabeen reviewed 9 papers for the 4th Annual International Conference on Language, Literature and Linguistics (L3) 2015, held on 8-9 June, Singapore, organized by Global Science and Technology Forum, Singapore.
- Dr. Shazi Shah Jabeen reviewed the paper entitled “Integration without Assimilation of Immigrants in the UAE: The Immigrant Perspective” for the Journal of Social Affairs, a refereed quarterly journal published by the Sociological



Association of Sharjah.

- Dr. Shazi Shah Jabeen is a member of Coursera Global Translator Community and Coursera Hub Team as Hindi Translator to translate the course Cryptography I (offered by Stanford) from English to Hindi. Also, Reviewer for 2 courses being translated in Hindi on Coursera.
- Dr. A.S. Rao reviewed 14 papers for the 60th ICSB (International Conference on Small Businesses) Conference, held on 6-9 June at Dubai, organized by U.A.E. University. Dr. Rao has been awarded as an Outstanding Reviewer and also Session Chair during the Conference.
- Dr. A.S. Rao has been appointed as Member of the Editorial Board - Journal of Global Entrepreneurship Research, a Springer Open Journal. Reviewed 4 papers as on 5 August 2015.
- Dr. A.S. Rao has reviewed 3 papers as Reviewer in 'Journal of Entrepreneurship in Emerging Economies', Emerald Publishers.
- Dr. A.S. Rao has been appointed as Editorial Advisor to New Frontier, International Journal of Humanities and Social Sciences. (Print ISSN: 2394 - 8221).

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

Faculty development - HSS Department: Research Methodology Workshop held on 4 April 2015 by Prof. AP Arora

- Research Workshop by Dr.Aqila held on 3 May 2015, Topic : A comparative study of Growth and financial performance of Islamic and Conventional banks in GCC countries.
- Dr. Shazi Shah Jabeen attended Smart City Learning Workshop organized by Canadian University of Dubai, Dubai, during 25-27 November 2014.
- Dr. Shazi Shah Jabeen attended the workshop on 'Developing Performance Goals and Standards' conducted by Mr. Kris Ramachandran, Advisor to Chancellor and Mr. Paras Kaushik, Project Officer, Vision 2020:Mission2011 at BITS Pilani, Dubai Campus on 17 April 2011.

28. Student projects

- **percentage of students who have done in-house projects including inter-departmental projects**

119 (roughly 15-20%) students have taken Study projects with 6 Faculty in HSS department.

- **percentage of students doing projects in collaboration with other universities**



/industry / institute: Nil

29. Awards / recognitions received at the national and international level by Faculty

1. Dr. A. Srinivasa Rao, HOD-HSS has been appointed as Faculty Incharge - CIE (Centre for Innovation, Incubation & Entrepreneurship) for BITS Pilani, Dubai campus.
 2. Dr. Shazi Shah Jabeen, Professor - HSS has been appointed as 'Committee Chairman' for 'Research & Industry Engagement Committee' at BITS Pilani, Dubai campus
 3. Dr. Lajwanti Kishnani, Assistant Professor - HSS has been appointed as 'Nucleus Member' at Dubai campus for 'Teaching Learning Centre'(TLC).
- Doctoral / post doctoral fellows : N.A.
 - Students : N.A.

30. Seminars/ Conferences/Workshops organized and the source of funding (national/international) with details of outstanding participants, if any.

Department of Humanities and Social Sciences of BITS Pilani, Dubai Campus conducted a One-day Workshop on the most crucial issue concerning the teaching community that is 'Improving Classroom Effectiveness'. The participation was open not only to the teaching faculty of BITS Pilani, Dubai Campus but also to teachers and trainers from universities, colleges, professional institutes, who would like to improve their classroom effectiveness and are interested in making their classes more interactive and successful. Due to an overwhelming response, the workshop was conducted on two consecutive days, that is, 23 and 24 December 2013. On the first day there was an enthusiastic response of 24 external participants whereas on the second day faculty of BITS Pilani, Dubai Campus participated in the workshop. Prof. Dr. R.K. Mittal, the then Director of BITS Pilani Dubai Campus gave away the certificates of participation to each one of the participants on both days.

The resource person, Prof. Ashraf Rizvi, was the Director of Jaipuria Institute of Management Studies and has been conducting workshops and training programs over several years. The purpose of the workshop was to enhance the participants' awareness of their strengths and limitations in classroom delivery and to assess personal communication style and hone pedagogical skills that result in strategic, effective, persuasive, and motivating classes. This workshop on improving classroom effectiveness was a well structured module including components of role of communication, effective classroom delivery, using voice effectively, body talk, communication styles and academic interaction and applying Pygmalion effect. The workshop also had interactive sessions and simulation activities, which made the day very engaging. The participants found it extremely useful and practical.

The workshop was successful with the consolidated efforts of the team members under the convenership of Dr. Shazi Shah Jabeen, the then Head, Department of Humanities and Social Sciences and the encouragement and support of Prof. Dr. R K Mittal, Ex-Director, BITS Pilani, Dubai Campus.



Workshop on 'Conflict Management in Workplace' conducted at BITS Pilani, Dubai Campus on 15 December 2012 (Dr. Shazi Shah Jabeen was the Resource Person).

31. Code of ethics of research followed by the Department.

The department follows the Code of Ethics specified by the Institute.

32. a) Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
MBA	For FD fill the BITSAT application numbers. HD/Ph.D discipline specific numbers to given. Contact admission office for this data.	34*	13*	100% **	100% **
2010-11		8	2	100% **	
2011-12		7	2	100% **	
2012-13		4;	1	100% **	
2013-14		8	3		
2014-15		7	5		

** BITS follows a credit based system and cafeteria approach in offering of courses. Students not performing well are monitored by HDCC (Higher Degree Counselling Cell) . Their pace is slowed down. Normally not more than 3% students (including all programmes, B.E., B.Pharm, M.Sc, M.Pharm and M.E. etc.) at a given point of time are under the purview of HDCC.

33. b) Diversity of students :

Name of the Programme (refer to question no. 4)	% of Students from the same university	% of students from other Universities within the State	% of students from universities outside the State	% of Students From Other Countries
MBA	Nil			100%

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

We do not capture this data through any formal process.



35. Student progression

Student progression	Percentage against enrolled
UG to PG	-
PG to M.Phil.	-
PG to Ph.D.	-
Ph.D. to Post-Doctoral	-
Employed	
Campus selection	4.1%
Other than campus recruitment	16.6%
Entrepreneurs	2.08%

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	50%
from other universities within the State	
from universities from other States from universities outside the country	50%

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period: Two

38. Present details of departmental infrastructural facilities with regard to

- Library - Yes; MBA & Humanities course related books are available
- Internet facilities for staff and students - Yes; internet facility is available for staff and students.
- Students' laboratories - N.A.
- Research laboratories - N.A.

39. List of doctoral, post-doctoral students and Research Associates

- from the host institution/university
- from other institutions/universities
- One Ph.D. Scholar - admitted in Management area and subsequently withdrawn.

40. Number of post graduate students getting financial assistance from the university: Nil

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. N.A.



42. Does the department obtain feedback from

- **faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?**

Feedback is collected from faculty during department meetings and the same is incorporated in the syllabus.

- **students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?**

Yes, feedback system is in place which includes curriculum as well as teaching-learning evaluation. It is exercised at the end of each semester by the Instruction division.

- **alumni and employers on the programmes offered and how does the department utilize the feedback?**

Though there is no formal feedback system from alumni and employers on the programmes, we do interact with alumni and employers on regular basis and take their inputs for improving pedagogy. They are also invited to share their experiences through guest lectures from time to time.

43. List the distinguished alumni of the department (maximum 10)

Data not available.

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Special Lectures & Invited talks arranged in HSS Department - 2011-2015

SL No	Details	Year
1	Prof. Nirupama Prakash, Professor & Head, Dept. of Humanities & Social Sciences(Ex-Unit Chief, BITS Pilani, Pilani Campus)delivered a talk entitled "Conflict Management" 20 December 2011.	2011
2	My Corporate Journey by Mr. Yogesh Bakshi, General Manager, Al Tajir Glass Company, on Nov 8, 2012. Let's Talk Money – A Key To Personal Finance by Mr. Nilesh Sarkar, Manager - Learning & Development, Bank Muscat on Nov 28, 2012.	2012
3	CEL (Centre for Entrepreneurial Leadership) organized an interactive session on ' Creativity' by Prof. Rajiv Gupta, Professor of Mechanical Engineering (Alumnus of IIT Delhi) on 18 Feb 2013.	2013
4	An interactive session on 'Global Business Challenge 2013', with Ms. Salema Hafiz, Head of Marketing and Communications, MESANA, Chartered Institute of Management Accountants (CIMA) on Feb 21, 2013.	2013
5	Role of Security Exchanges – Personal Finance by Dr. M. Selvam, Professor and Head, Department of Commerce and Financial Studies, Bharathidasan University, Tiruchirappalli on 3 March 2013.	2013
6	Swami Parthasarthy has been invited to the UAE by His Highness Sheikh	2013



	Nahyan bin Mubarak Al Nahyan, the Minister for Higher Education and Scientific Research to deliver a Keynote on the Topic "The Dilemma of Choice". This distinguished guest lecture was co-organized by CEL, BITS Pilani, Dubai Campus and TiE (The Indus Entrepreneurs, Dubai Chapter) on 23 March 2013	
7	A talk on 'ICT Management' was organized by Dr. Anton Ravindran, CEO and Founder of RapidStart, Singapore and President, Global Science and Technology Forum, Singapore on 10 September 2013.	2013
8	Interactive session on 'Collaborative Processes of Institute, Students and alumni for industry readiness' by Dr. Gopal Iyengar, Director, Kirloskar Institute of Advanced Management Studies, Karnataka.	2013
9	CEL (Centre for Entrepreneurial Leadership) organized an interactive session on 'How to Prepare a good Business Plan' by Mr. Binod Shankar, Entrepreneur, U.A.E. on 10 October 2013.	2013
10	A talk and interactive session on 'Entrepreneurship as a Career Option for Young Men and Women by Faisal Farooqui, Founder and CEO of MouthShut.com on 28 November 2013.	2013
11	CEL (Centre for Entrepreneurial Leadership), organized an interactive session on "Entrepreneurship" by Mr. Sameer Sortur, Director of Revenue Growth and Operations @ Innovator 360 Accelerator on 15 Dec 2013.	2013
12	Mr. Y.C. Roy, Learning and Organizational Development Leader, Strategic Outsourcing - Delivery, IBM "Strength based Leadership" on 11-03-2014	2014
13	Mr. Rakesh Pardasani, Partner at RSM Dahman, Dubai - A talk & interactive session on "Business Plan and It's Components " on 16-09-2014	2014
14	Ms. Miel Barrios-Severinova, Manager, TiE Dubai- A lecture session on "Business Plan Competition and TiECon" on 25-09-2014	2014
15	Mr. Ashish Patel, CEO, Euphoria Ventures. A Talk and Interactive session on "The Entrepreneurial Journey" on 07-10-2014	2014
16	Mr. Mohsin Ali and Mr. Zubair Kazmi, ADAM Global Legal Consultants LLC Talk and interaction session on "How to set up Business in U.A.E. - Legal Aspects" on 26-11-2014.	2014
17	Mr. T.P. Anand, Motivaluate Consulting & Training FZ LLC - Business Planning & Strategies on 22-02-2015	2015
18	Mr. Jayan Ramankutty, CEO, BITSAA International - Interactive session on Internships & Business proposals on 03-03-2015	2015
19	Mr. Prem Talreja, CEO, Fabricnet.com -Entrepreneurial Start-ups : Venture capital funding on 17-03-2015	2015
20	Ms. Tanvi Bhatt, Euphoria Consulting - Start-ups on 19-03-2015	2015
21	Prof. AP Arora, MDI, Gurgaon Marketing Research 22-3-15 to 3-4-2015	2015
22	Mr. Somnath Mitra, Program Manager, IBM - Web 3.0 Technology on 05-04-2015	2015
23	Prof. Naufel Vilcassim, Prof. Rajesh Chandy, Prof. Vikrant Vig from Aditya Birla Centre, TP Classroom lecture from Hyd campus on Symposium on 'Business, Finance, Marketing and Entrepreneurship' on 05-05-2015	2015
24	In Association with ADIB (Abu Dhabi Islamic Bank) - Financial Education Awareness Program - organized for the benefit of students. Total 92 students participated and vouchers worth AED 1500 were distributed to the students, on 5 & 6 May 2015.	2015



45. List the teaching methods adopted by the faculty for different programmes.

MBA Program - Case discussions, exercises, Group discussions, video clippings presentations, role plays etc.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Feedback system - continuous basis. Feedback is collected from students, alumini and industry.

47. Highlight the participation of students and faculty in extension activities.

Arranging guest lectures, industry visits, special lectures by entrepreneurs etc.

48. Give details of “beyond syllabus scholarly activities” of the department.

Projects, assignments, group discussions etc.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. : No

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

Changes in course syllabus, pedagogy/cases based on latest trends

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

STRENGTHS	WEAKNESSES:
<ul style="list-style-type: none"> • With the exception of Al Hosn University in Abu Dhabi that offers MBA in ET Management, ours is the only university to offer ET and IT management. • KHDA has ranked BITS MBA program as 7th in UAE • Classes are conducted at timings convenient for students who are mostly working professionals. • Strategically located in Dubai which is a commercial and trading hub of the Middle East. • Comprehensive programs with 8 months dissertation. • 2 year program (others have for 1 year) with benchmarked academic curriculum and superior pedagogy topped by 	<ul style="list-style-type: none"> • No accreditation and recognition by Ministry of Higher Education • More resources and research journals are required • More full time faculty members are required to cover all disciplines • 4. Weak research program in place for Humanities and Social Sciences <p>OPPORTUNITIES:</p> <ul style="list-style-type: none"> • Introducing exchange programs for students with foreign universities • Collaboration with foreign universities • Distance learning in MBA & Humanities (for GCC countries also) • Certificate and diploma programs (1 year programs specific to the Dubai) • Corporate training programs



<p>continuous evaluation</p> <ul style="list-style-type: none"> • CIIE (Centre for Innovation, Incubation & Entrepreneurship Leadership) • promotes budding entrepreneurs and prepares students for taking part in business competitions in other universities. • CEL has collaboration with other local entrepreneurial associations (TiE Dubai) • General MBA being offered which students has use depending on available opportunities • Hostel facilities on campus • Student Visa being provided • Supporting inter-disciplinary core and elective courses. • Inter-disciplinary research. 	<p>(Management Development Programs)</p> <ul style="list-style-type: none"> • Development of research program <p>THREATS:</p> <ul style="list-style-type: none"> • Lots of business schools coming up in a diversified manner • No government funding for research • Emiratization – denies jobs to Indian students • Economic instability in the region • Need for courses to be more specific to the land as Trade Laws of UAE • Policy regarding Ph.D. program
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52. Future plans of the department.

- To organize HSS Department Conference ;
- Focus on research;
- Introduce Ph.D. program in Humanities & Social Sciences;;
- To explore opportunities for Training and consulting in Humanities & management areas;
- To introduce new courses in line with the demands/expectations of local population/ community.
- Collaboration with foreign Universities for joint research/teaching.
- Distance learning programs in MBA/Humanities & Social Sciences , to cover GCC countries also.
- Introducing exchange programs for students with foreign universities

53. Any other information regarding your department which you would like to include.

It was already highlighted in 'Weaknesses' as mentioned at Point No. 51.



Dubai Campus: Evaluative Report of the Department MECHANICAL ENGINEERING

1. **Name of the Department** : Mechanical Engineering,
2. **Year of establishment of the Department:** 2004
3. **Is the Department part of a Faculty of the university?**
Departments function as independent entities in the university and are not part of any school or faculty.
4. **Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.).**
 - BE (Hons.) Mechanical Engineering
 - ME Design Engineering
 - PhD
5. **Interdisciplinary programmes and departments involved** : Not Applicable
6. **Courses in collaboration with other universities, industries, foreign institutions, etc.**
Note: some of our structure courses like Practice School and thesis dissertation are done by our students in industries and universities outside BITS.
7. **Details of programmes discontinued, if any, with reasons:** Not applicable
8. **Examination System:** Semester and choice based credit system.
9. **Participation of the department in the courses offered by other departments**
 - Engineering Graphics- for all departments
 - Fluid Mechanics & Heat transfer lab- for Chemical Engg.
 - Total Quality Management, Supply Chain Management, Production & Operations Management- for MBA
10. **Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others).**

	Sanctioned	Filled	Actual number
Professor	Note**	3	3
Associat Professors		1	1
Asst. Professors		4	4
Others			

Note**:The faculty positions for the University is broadly governed by Growth plan which also covers designation-wise breakup with a larger vision. Keeping in mind the fluidity of movement of faculty and proposed student to faculty ratio in each campus for first degree, higher degree as well as Ph.D. programmes, individual department needs are not fixed. Besides, as we are in expansion plan which calls for new programmes, courses being introduced, the demand on faculty in terms of numbers, for each



department, is broadly governed by all the above factors and hence it is not possible to have a fixed number of faculty for each department. Recruitment of faculty, therefore, varies, based on departmental needs.

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	Years of Experience	No of PhD / MPhil Students guided last 5 years	
					Guided	Guiding
Dr.C.Periasamy	PhD	Professor	Fluid dynamics	30 Years	-	-
Dr.R.Karthikeyan	PhD	Professor	Manufacturing Engineering	23 Years	Guided 4 before 2010	2
Dr.R.Udayakumar	PhD	Professor	IC Engines	26 Years	Guided 3 before 2010	1
Dr.MVN.Sankaram	PhD	Associate Professor	Design Engineering	32 Years	-	-
Dr.Miller jothi	PhD	Assistant Professor	Energy Engineering	18 Years	-	1
Dr.C.Mallika parveen	PhD	Assistant Professor	Industrial Engineering	22 Years	-	-
Dr.Vishal Naranje	PhD	Assistant Professor	Manufacturing Engineering	15 Years	-	-
Dr.Vincent Shanthakumar	PhD	Assistant Professor	Materials Science	-	-	-

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors: Nil

13. Percentage of classes taken by temporary faculty – programme-wise information:NIL

14. Programme-wise Student Teacher Ratio

(BE (Hons) Mechanical:

Year	Students	Ratio
2014-15	463	66
2013-14	420	60
2012-13	397	49
2010-11	380	42
2009-10	333	37

ME Design Engineering:

Year	Students	Ratio
2014-15	16	2:1
2013-14	17	2:1
2012-13	15	2:1
2010-11	16	2:1
2009-10	12	2:1



20. Research facility / centre with

- state recognition
- national recognition
- international recognition

Internationally recognized facilities are available to do research in Computer aided design, Materials science and IC Engines

21. Special research laboratories sponsored by / created by industry or corporate bodies: NIL

22. Publications:

Sl No.	Details	Specify number here
1	Number of papers published in peer reviewed journals (national / international)	56 since 2010
2	Monographs	Nil
3	Chapters in Books	1
4	Edited Books	Nil
5	Books with ISBN with details of publishers	
6	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	50
7	Citation Index – range / average	Max:1310 Min: 0 AVERAGE: 200
8	SNIP	1.0
9	SJR	1.0
10	Impact Factor – range / average	Max:3.5 Min: 0 Avg:0.8
11	h-index	4.5 AVERAGE
12	Number of papers published in peer reviewed conferences (national / international)	38

Details of the publications as per the number given above (Give details in the last five years

The department faculty members have published more than 100 journal papers overall and 56 in last 5 years.

Details of Publication in Journals

SL No	Authors	Title of the Publications	Details of the Journal	National/International	Year
1	M. Thiagarajan, P. Dhandapani, C. Periasamy	Thermal Radiation Effect On Unsteady Hydromagnetic Convective Flow Past A Heated Stretching Sheet	United States of America Research Journal (USARJ), Vol. 5, No. 1	International	2015



		With Free Stream Pressure Gradient			
2	Ganesh Ram R K, Yashaan Nari Cooperb, Vishank Bhatia, R. Karthikeyan and C. Periasamy	Design Optimization and Analysis of NACA 0012 Airfoil using Computational fluid dynamics and Genetic Algorithm	Applied Mechanics and Materials, Vol. 664 pp 111-116	International	2014
3	C Senthilkumar, G Ganesan, R Karthikeyan	<u>Electrochemical machining of Al/15% SiCP composites through a response surface methodology-based approach</u>	International Journal of Materials Research, 103 (3), 378-382	International	2012
4	C Senthilkumar, G Ganesan, R Karthikeyan	Parametric optimization of electrochemical machining of Al/15% SiC p composites using NSGA-II	Transactions of Nonferrous Metals Society of China , 10, 031	International	2011
5	V Srinivasan, R Karthikeyan, N Mohamad Raffi, G Ganesan	Wear Characterisitcs Of Nano-Particle Filled Gfrp Composites	Advanced Composites Letters, 19 (1), 11-22	International	2010
6	M Seeman, G Ganesan, R Karthikeyan, A Velayudham	Study on tool wear and surface roughness in machining of particulate aluminum metal matrix composite-response surface methodology approach	The International Journal of Advanced Manufacturing Technology, 48 (5-8), 613-624	International	2010
7	C Senthilkumar, G Ganesan, R Karthikeyan	Parametric optimization of electrochemical machining of Al/15% SiCp composites using NSGA-II	Transactions of Nonferrous Metals Society of china, 21 (10), 2294-2300	International	2011
8	BK Raghunath, K Raghukandan, R Karthikeyan, K Palanikumar,	Flow stress modeling of AZ91 magnesium alloys at elevated temperature	Journal of Alloys and Compounds , 509 (15), 4992-4998	International	2011



9	S Raju, G Ganesan, R Karthikeyan	Influence of variables in deep drawing of AA 6061 sheet	Transactions of Nonferrous Metals Society of China, 20 (10), 1856-1862	International	2010
10	C Senthilkumar, G Ganesan, R Karthikeyan	Bi-performance optimization of electrochemical machining characteristics of Al/20% SiCp composites using NSGA-II	Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Manufacturing	International	2010
11	D Kanagarajan, K Palanikumar, R Karthikeyan	Effect of Electrical Discharge Machining on strength and reliability of WC-30% Co composite	Materials & Design, 39, 469-474	International	2012
12	V Kalaichelvi, R Karthikeyan, D Sivakumar, V Srinivasan	Tool Wear Classification Using Fuzzy Logic for Machining of Al/SiC Composite Material	Modeling and Numerical Simulation of Material Science, 2, 28	International	2012
13	C Senthilkumar, G Ganesan, R Karthikeyan, S Srikanth	Modelling and analysis of electrochemical machining of cast Al/20% SiCp composites	Materials Science and Technology, 26 (3), 289-296	International	2010
14	V Kalaichelvi, R Karthikeyan, D Sivakumar	Analysis of gas metal arc welding process using GA tuned fuzzy rule based system	Journal of Intelligent and Fuzzy Systems, 25 (2), 429-440	International	2013
15	S Anbu Selvan, S Ramanathan, R Karthikeyan, BK Raghunath	Development of processing maps for as-cast ZE41A magnesium alloy	Transactions of Nonferrous Metals Society of China, 20 (1), 22-27	International	2010
16	S Selvan, S Ramanathan, R Karthikeyan, BK Raghunath	Development of processing maps for as-cast ZE 41 A magnesium alloy	Transactions of the Nonferrous Metals Society of China, 20 (1), 22-27	International	2010



17	C Senthilkumar, G Ganesan, R Karthikeyan	Influence of Input Parameters on Characteristics of Electro Chemical Machining Process	International Journal of Applied Science and Engineering, 11 (1), 13-24	International	2013
18	C Senthilkumar, G Ganesan, R Karthikeyan	Optimisation of ECM parameters using RSM and non-dominated sorting genetic algorithm (NSGA II)	International Journal of Machining and Machinability of Materials, 14 (1), 77-90	International	2013
19	C Senthilkumar, G Ganesan, R Karthikeyan	Optimization of ECM process parameters using NSGA-II	Journal of Minerals and Materials Characterization and Engineering, 11 (10), 931	International	2012
20	V Srinivasan, NM Raffi, R Karthikeyan, V Kalaichelvi	Characterisitcs of Al2O3 nano-particle filled GFRP composites using wear maps	Journal of Reinforced Plastics and Composites, 29 (19), 3006-3015	International	2010
21	V Bhatia, R Karthikeyan, RK Ganesh Ram, YN Cooper	Design Optimisation and Analysis of a Quadrotor Arm using Finite Element Method	Applied Mechanics and Materials, 664, 371-375	International	2014
22	R Karthikeyan, RK Ganesh Ram, V Kalaichelvi	Modeling and Control Techniques for Microstructure Development	Applied Mechanics and Materials, 541, 317-323	International	2014
23	V Kalaichelvi, RK Ganesh Ram, R Karthikeyan	Biomass Boiler Drum Water Level Control System Using Neural Networks	Applied Mechanics and Materials, 541, 1260-1265	International	2014
24	S Raju, G Ganesan, R Karthikeyan	Sensitivity analysis and statistical process optimisation of deep drawing of AA 6061 sheet material	Materials Science and Technology, 29 (5), 573-580	International	2013



25	C Senthilkumar, G Ganesan, R Karthikeyan	Electrochemical machining of Al/15% SiCP composites through a response surface methodology-based approach	International Journal of Materials Research , 103 (3), 378-382	International	2012
26	Akshay Sharma, N.K.Millerjothi, Kavita Jerath, S.Karthiyayini	'Forecast analysis of the potential and availability of renewable energy in Gulf countries'	Environmental Science and Development, Vol.6 No.5, 22nd May	International	2014.
27	R.Udayakumar, Anshul Singhal and Miller Jothi	FRP Mold and panel manufacturing for FSAE body panel and driver seat	SAE Technical Paper 2015-01-0727,	International	2015
28	Ariz Ahmad , R.Udayakumar	Analysis of Combustion Chambers in Internal combustion engines	Global Science and Technology Journal Vol. 2 No.1 pp. 12-21	International	2014
29	Prabjot sigh, R.Udayakumar	Use of Alcohol as an alternate fuel in Diesel Engine	Mechanica Confab , Vol. 2, No. 5	International	2013
30	Chandra Bhushan Kaseera, R.Udayakumar	Combustion Analysis of a Diesel Engine Operating With Performance Improvement Additives	Journal of Engineering and Science, Volume 1, Issue 2 11-16.	International	2012
31	Siddharth Arora, Udayakumar, Shobit Chitkara	Thermal analysis of evacuated solar tube collectors, Journal of Petroleum and gas engineering	Academic Journals, Vol. 2(4), pp. 74-82, April 2011	International	2011

Details of Publication in Conferences

SL No	Authors	Title of the Publications	Details of the Conference	National/ International	Year
1	N.K. Miller Jothi and V. Padmashree	Effective Utilization of DEE as a Renewable Fuel In DI Diesel Engine	International Conference on Harnessing Technology, ICHT 2011, February, 2011 Muscat, Sultanate of Oman, Page No:20 .	International	2011



2	N.K. Miller Jothi, Shakelul Rahman	Utilization of DEE as a Renewable Fuel in Homogeneous Charge CI Engine Fuelled with LPG	Sharjah International Conference on Nuclear and renewable Energy (SHJ-NRE11), 3-5 April, 2011. Volume 1, Page No.RE:153	International	2011
3	N.K.Millerjothi, Ajinkya Pandey	Experimental study of using waste cooking oil as an alternative fuel for DI compression ignition engines	International Conference on Technology and Business Management 2010, 16 th -18 th of March, 2010 at IMT Dubai, Volume 2, Page 301-304 .	International	2010
4	N.K.Millerjothi	Effect of EGR on the Characteristics of HCCI Engine Using DEE as an Ignition Enhancer'	International conference on Mechanical, Automotive and Aerospace Engineering 2013, ICMAAE'2013, 2-4 July, 2013, Kuala Lumpur. Volume 2, Page 301-304	International	2013
5	Anomitra Banerjee, N.K.Millerjothi	Site Remediation Techniques In India: A Review	International Conference on Environmental Remediation and Radioactive Waste Management, September 8-12, 2013, Brussels, Belgium, ICEM2013, Volume:2, Paper No. ICEM2013-96215, pp. V002T04A012; 5 pages, ISBN: 978-0-7918-5602-4	International	2013
6	Anomitra Banerjee, N.K.Millerjothi,	Groundwater Remediation Through Nanoscale Iron Particles,	Poster) Proceedings of the 5 th International Conference on Environmental Remediation and Radioactive Waste Management" September 8-12, 2013, Brussels, Belgium, ICEM2013	International	2013
7	Parveen, C., Jain, K., Saksena, A., and Miller Kalamegam, M.,	Heuristic Approach for CFD Analysis around Birds of Prey.	SAE Technical Paper 2014-01-2102, 2014, doi:10.4271/2014-01-2102.	International	2014
8	U. Gangadhara Surya, N. K. Miller Jothi, Mallika Parveen,	Renewable Fuel in Direct Injection Diesel Engine,	International Conference on Biotechnology and Bioengineering ICBB-2014, Paper No. O43, 29-30 October 2014.	International	2014



9	Akshay Sharma, N.K.Millerjothi, Kavita Jerath, S.Karthiyayini	Forecast analysis of the potential and availability of renewable energy in Gulf countries'	International Journal of Environmental Science and Development, Vol.6 No.5, 2nd May 2014.	International	2014
10	Udayakumar Rajamanickam, Anshul Singhal, and Miller Jothi	FRP Mold and Panel Manufacturing for FSAE Body Panel and Driver Seat'	SAE Proceedings 2015-01-0727, Year: April 2015	International	2015
11	C.Periasamy and Satish Kumar	FEA Analysis and Structure of the Solid Rocket Booster and external Tank	2nd International Conference on Innovative Trends in Science , Engineering and Management 2015, 25-26, Feb 2015	International	2015
12	C.Periasamy and Viswa Venkat Mounish Vadlapudi	Solar Roadways and its Application in UAE	ASME Power & Energy 2015,11-13, May, 2015	International	2015
13	Ganesh, Ram and Periasamy,C	Design Optimization And Analysis Of NACA 0012 Airfoil Using Computational Fluid Dynamics And Genetic Algorithm	3rd International Conference on Electronics, Mechatronics and Automation, Dubai, 22-23 August,2014	International	2014
14	A.R.Gowtham Ram and C.Periasamy	Design of a Bio-Mass Plant Using Agro-Industrial Waste Based Power Project	3 rd Annual Research Conference, Abu Dhabi University , UAE, April 23-24 2014	International	2014
15	Menon Shweta Ramesh and C.Periasamy	Harnessing electricity from, Waste Sound,	5 th Engineering Students Renewable Energy Competition 2014, May3, 2014 , Al Ain, UAE	International	2014
16	Zuhair Ahamed and C.Periasamy	Experimental analysis on the construction of effective VAWT system	Proceedings of the International Conference on Heat Transfer and Fluid Flow Prague, Czech Republic, August 11-12, 2014	International	2014



17	Mallika Parveen, Abhilash Saksena, Kyati Jain,	Heuristic Approach for CFD Analysis Around Birds of Prey	Aerospace Systems and Technology Conference, SAE International, 23-25 September 2014	International	2014
18	Mallika Parveen	"Investigation of Management Philosophies in Lean and Green Supply Chain - Impact of Employee Empowerment in Improving Productivity,	CMEM'13, Toronto, 8-9 August 2013	International	2013
19	Mallika Parveen, Anshul Singhal	Air Flow Optimization via a Venturi Type Air Restrictor	WCE, London, 3-5 July 2013	International	2013
20	Mallika Parveen, Radhika Kapoor,	Comparative Analysis Of Hybrid Vehicle Braking System – A Perspective Of KERS	CMEM'13, Toronto, 8-9 August 2013	International	2013
21	Mallika Parveen, Venkateswaran Santhanam,	Optimization of Automatic Transmission Fluid Parameters using Taguchi Method and its Application	CMEM'13, Toronto, 8-9 August 2013	International	2013
22	Mallika Parveen, Abilash Saksena, Khyati Jain, Harsh Saksena,	Logistics Network Simulation Design	WCE Proceedings London, 3-5 July 2013	International	2013
23	Mallika Parveen, Radhika Kapoor,	Kinetic Energy Recovery System - KERS A Relative Analysis	WCE Proceedings, London, 3-5 July 2013	International	2013
24	Mallika Parveen, Venkateswaran Santhanam,	Optimization of Hydraulic Fluid Parameters in Automotive Torque Converters	Proceedings of International Conference on Aerospace, Mechanical, Automotive and Materials Engineering, Dubai, 30-31 January 2013	International	2013
25	R.K.Ganesh Ram., Lenvin Dsouza., V.Kalaichelvi ., and R.Karthikeyan	Fuzzy Logic approach for Temperature Control in BioReactor	Annual International Conference on Advances in Biotechnology	International	2014



26	Swathika R., Ganesh Ram R.K . Kalaichelvi.V Karthikeyan R	Application of Fuzzy Logic for Charging Control of Lead-Acid battery in Stand-alone Solar Photovoltaic System	IEEE International Conference on Green Computing, Communication and conservation of Energy	International	2014
27	R.VarunDas,V.Kalaichelvi,R.Karthikeyan.,	Application of Fuzzy Logic Control Strategy for Temperature Control in Friction Stir Welding	SME Gas turbine India Conference	International	2014
28	V. Kalaichelvi, R. Karthikeyan, D. Sivakumar and V. Srinivasan	Fuzzy Modeling of Flow Stress in Hot Deformation Process	International Conference on Advances in Engineering and Technology	International	2014
29	Ganesh Ram R K., Akshan Paresh Mehta.,Karthikeyan R., KalaichelviV	Design Optimization Of Wind Turbine Using Fluid Structural Interaction Analysis & Genetic Algorithm	SME Gas India Turbine Conference.,Dec 15-17.	International	2014
30	Akshan Paresh Mehta.,Ganesh Ram R K ., KalaichelviV.,andKarthikeyan R.,	“Neural Predictive Controller For Hydraulic Power Transmission in Wind Turbine	SME Gas India Turbine Conference .,Dec 15-17.,India Habitat Centre,New Delhi.	International	2014
31	R.Udayakumar, Anshul Singhal and Miller Jothi	FRP Mold and panel manufacturing for FSAE body panel and driver seat	SAE CONGRESS 2015	International	2015
32	R.Udayakumar , Ramesh Ponnusamy	Computer Aided Design and Analysis of Disc Brake Rotors for Passenger Cars	International Conference on Computer Applications Technology, ICCAT'2013-January 20-22,Sousse,Tunisia	International	2013
33	R.Udayakumar , Ramesh Ponnusamy	Computer Modelling and Simulation of Diesel Engine Processes	International Conference on Computer Applications Technology, ICCAT'2013-January 20-22,Sousse,Tunisia	International	2013
34	Pranav Menon, Vidya Janardhana , SaiRahul and R.Udayakumar	Development of a solar mobile charger from the sunshade of the passenger cars and a novel way of	Emirates Student Renewable Energy Competition conducted by the ,UAE University ,2014	National	2014



		utilizing heat in the engine exhaust			
35	Monit Kothari, Jainashah and R.Udayakumar	Active suspension system for accident free handling	United Arab Emirates Undergraduate Student Research Competition held at Abudhabi University.2014	National	2014
36	R.Udayakumar, Mohammed Atyab and Rithwick parthasarathy	Commercial use of mechanical fasteners using rapid prototype technology and its limitations	United Arab Emirates Undergraduate Student Research Competition held at Abudhabi University.2015	National	2014
37	Deol Aditya and R.Udayakumar	Preparation and analysis of Bio diesel from the waste vegetable cooked oil	Emirates Student Renewable Energy Competition conducted by the ,UAE ,2013	National	2013
38	Varundas, Deepan Kishore Kumar and R.Udayakumar	Analysis of an active automobile suspension system	United Arab Emirates Undergraduate Student Research Competition held at Abudhabi University.2015	National	2013

23. Details of patents and income generated : Not applicable

24. Areas of consultancy and income generated: Design Engineering: AED 30000

25. Faculty selected nationally / internationally to visit other laboratories / institutions industries in India and abroad

Details of Universities and Industries visited by the Faculty

Faculty	Visited Laboratories India or Abroad	Visited Industries India or Abroad
Dr.Millerjothi	1 Central Workshop, International Islamic University, Kuala Lumpur, Malaysia, 2013. 2. Robotics lab & Workshop K.K.Birla Campus , Goa,2012 3. R&AC Lab, Energy Lab, I.C.Engines Lab , Anna University, India, 2015 4.I.C.Lab , VIT University, Vellore, India, 2015	Emirates Industrial Gas Co., Dubai Al Rawabi dairy, Dubai United Diesel DulSCO, Dubai
Dr.R.Karthikeyan	BITS Pilani Hyderabad campus, All labs of Mechanical Engg., 2015 Petroleum Institute, Lab view lab,	ETA M&E, Elfit Arabia, Al Ghandi Auto, Rotopacking, Interplast, UAE



	Abudhabi (2015)	
Dr.C.Periasmay	1.Design Engineering lab, Anna University, Chennai 2. Robotics Research Lab, Jamia Millia University	Central motors, Verger Del porte, Petrofac
Dr.C. Mallika Parveen	Ryerson University (Canada) SRM university, VIT, American University of Sharjah,	Intercoil Al Quoz Foundry, Dubai
Dr.MVN.Sankaram	Andhra University, Osmania University and J N T University(India) and University Malaya and University Putra Malasia(Malaysia), Ryerson University(Canada)	Visakhapatnam Steel Plant, Sujana Metal Products, Euroflex Couplings and Aerobindo Pharma (India)
Dr.R.Udayakumar	Ford Research Lab (Michigan), 2015, NIT, IC engines lab, Tiruchirappalli,	Elfit Arabia LLC, Ajman, Topnet Disributions, Dubai, Bosch Central Motors,Sharjah, Al Nabooda Automobiles, Dubai, Kingsmen Middle east, Dubai, ETA(M&E),Dubai, Star Cements,Dubai, Gargash Enterprises, Dubai, Serck Radiators, Dubai,UAE
Dr.Vishal Naranje	S.V. National Institute of Technology, Surat Gujrat, Department of Technology University of Pune	Gulf Metal Foundry , Kingsmen Gulf wireless and television Dubai, UAE

26. Faculty serving in National committees b) International committees c) Editorial Boards d) any other (please specify)

- Dr.MVN.Sankaram, Member, ASME District-J Operating Board
- Dr.R.Udayakumar, Faculty Advisor, ASHRAE. Served as a Regional Student chair of ASHRAE , in charge of student activities of the ASHRAE Emirates Falcon Chapter which is the largest chapter of ASHRAE in the Afro Asia region for 2 years. Served as a Governing council member ASHRAE emirates Falcon Chapter for 2 years
- Dr.N.K.Millerjothi, Faculty Advisor, SAE

List of journals reviewed by faculty members

Faculty Name	Journals for which the papers were reviewed
Dr.Miller jothi	1 International Journal of energy Institute 2 International Journal of Inder science 3.2 nd International conference on energy and environment research (ICEER 2015), July 13-14, 2015, Lisbon, Portugal. www.scie.org



Dr.R.Karthikeyan	1. Engineering Science and Technology: an International Journal, Elsevier 2. Int. J. of Enterprise Network Management, Inderscience 3. Scientific world journal, Hindawi Publishing Corporation
Dr.C.Periasamy	1. Journal of Applied Fluid Mechanics 2. International Journal for Research in Emerging Science and Technology
Dr.C.Mallika parveen	1. European Journal of Operations Research, European Journal of Industrial Engineering
Dr.R.Udayakumar	1. Proceedings of the National Academy of Sciences, Physical Sciences, NASA, Springer Journal. 2. International Journal of Applied Energy, Elsevier Journal. 3. Society of Automotive Engineers(SAE) , Journals and conferences, USA 4. Journal of Petroleum and Gas Exploration Research, Inder Science Journal 5. Academic Journals, Nigeria.
Dr.Vishal Naranje	1. Reviewer of Part B: Journal of Engineering Manufacture

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

BITS Hyderabad: Industry immersion (2015)-Dr.R.Karthikeyan

BITS Pilani, Hyderabad & Goa (2013, 2014 & 2015): Quality Assessment & Assurance-
Dr,C.Mallika Parveen

BITS Goa, TLC workshop (18-20, July 2015)- Dr.R.Udayakumar, Dr.MVN.Sankaram, &
Dr.Mallikaparveen

BITS Goa, Mission 2012-Vision 2020, Campus life Task force meeting- Dr.Millerjothi
Region At large ASHRAE conference at Abudhabi , sep 2011. Given the honour of
participating in the world general body meeting of ASHRAE as an honorary invitee-
Dr.R.Udayakumar.

28. Percentage of students who have done in-house projects including inter-departmental projects

All the students have done projects (average 2 projects/ student) 100%

Percentage of students doing projects in collaboration with other universities
/industry / institute

All the Students will do projects in collaboration with industries in Practice school I & II
(95%). Some students have done off-campus theses in IITB and Petroleum Institute.

29. Awards / recognitions received at the national and international level by Faculty/ Doctoral / post doctoral fellows .

The faculty members guided the FD Students for the following achievements.

- Anomitra Banerjee-First Indian to win Old Guard Oral Presentation - 2014 in Canada organized by ASME.
- Pranav Mohan and his team has won the student prestigious design competition in ASME District J held in Lebanon and participated in student in the finals held in Canada.



- Mohd. Atyab & Arjun Arya (I in Middle East -ASRAE Design competition-2015).
- Shreyas Nayak – one of the top 10 designs for MASS ROVER "SCARE CROW" conducted on 15-06-2015.
- Mechanical Engg. Students are participating FSAE and BAJA competitions conducted by SAE since 2013. Students are also participating Robotics related competitions like IARC.
- Shweta Menon, Karan Sharma, Sushmita Sahu & Shebin Suresh Kumar won first prize in Petro games organized by PETROFAC, 2014.
- Deol Aditya, has won the Best idea price at Emirates Student Renewable Energy Competition conducted by the ,UAE University in the year 2013
- Pranav Mohan, Vidya Janardhana have won the Best idea price at Emirates Student Renewable Energy Competition conducted by the ,UAE University in the year 2014
- Vishank Bhatia and his team have won International Autonomous Robotics challenge 2015 conducted by the IIT , Kanpur and came fourth position out of forty four teams

30. Seminars/ Conferences/Workshops organized and the source of funding (national/ international) with details of outstanding participants, if any.

Although funding is not available from the government agencies in UAE, with the support from student professional bodies, many workshops are organized.

List of Workshops organized by the Department

S.No	Category of Event (Workshop/Symposium/Seminars/Scientific Meeting)	Even conducting Date(s)
1	BPDC ASME Student Section organised first ever Leadership Meet of Student District Operating Board of District-J comprising of Middle East Asia and North African Region	28 th October 2010
2	BPDC ASME Student Section organised first ever Student Professional Development conference (Middle East Asia Region)	10-12, March 2011
3	BPDC ASME Student Section hosted first ever ASME Student Professional Development Conference-2012 Final Competition for the Distinct-G (Asia-Pacific Region)	7-8, April 2012.
4	BPDC ASME Student Section & Association of Electronics Engineering, BPDC organized the Mobile Autonomous Robotics Workshop, conducted by the Robotech Labs, India.	20-22, November 2014
5	Three day workshop on Industrial Automation- PLC & SCADA by Innovians Technologies, during Enginuity	April 16-18, 2015
6	Three days workshop named Fourstroke by Elite Technogroups , India during Enginuity	April 1-3, 2014
7	Advanced MATLAB Hands-on workshop" conducted during Enginuity	April 17, 2013
8	Business process simulation, Prof.D.S.Broca, XLRI, Jamshedpur	26.11.12



31. Code of ethics of research followed by the Department.

The department follows the Code of Ethics specified by the Institute.

32. a) Student profile programme-wise:

Name of the Programme	Applications Received	Selected		Pass percentage	
		Male	Female	Male	Female
BE Hons. Mechanical	2011-12 (792)**	110	4	100%*	100%
	2012-13 (887)	102	4		
	2013-14 (953)	102	5		
	2014-15 (1098)	128	8		
	2015-16 (1293)	134	9		
ME Design	2011-12(87)	10	0	100%	NA
	2012-13 (104)	5	0	100%	
	2013-14 (90)	9	0	100%	
	2014-15 (97)	7	0		
	2015-16 (58)	8	0		
PhD	2011-12 (16)	0	0		
	2012-13 (36)	1	0		
	2013-14 (39)	3	0		
	2014-15 (26)	0	0		
	2015-16 (20)	2	0	NA	NA

*BITS follows a credit based system and cafeteria approach in offering of courses. Students not performing well are monitored by ACB (Academic Counselling Board), HDCC (Higher Degree Counselling Cell) and ACC (Academic Counselling Cell). Their pace is slowed down. Normally not more than 3% students (including all programmes, B.E., B.Pharm, M.Sc, M.Pharm and M.E. etc.) at a given point of time are under the purview of ACB. ** Total no. of applications received including all programmes

b) Diversity of students

Name of the Programme	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
BE Mech.	NA			GCC: 75% Non GCC: 25%
ME Design	14%			86%
PhD	80%			20%

GCC: UAE, KSA, Oman, Qatar, Kuwait

Non GCC: India, Pakistan, Kenya



33. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

Around 30% of the students clear GRE/ GMAT exams every year and they get admission to reputed foreign universities including Stanford, Cornell, Columbia, Cambridge etc.

34. Student progression

Student progression	Percentage against enrolled
UG to PG	35%
PG to M.Phil.	Not Applicable
PG to Ph.D.	10%
Ph.D. to Post-Doctoral	Not Available
Employed	
Campus selection	20%
Other than campus recruitment	20%
Entrepreneurs	5%

35. Diversity of staff

Percentage of faculty who are graduates	
of the same university	12.5%
from other universities within the State	-
from universities from other States	
from universities outside the country	87.5%

36. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period : One

37. Present details of departmental infrastructural facilities with regards to

- Library: A centralised library is available with 2584 books for Mechanical Engineering and also following databases.
 - IEEE Xplore Digital Library
 - ASME Online Journals
 - Proquest SciTech e-journals
 - EBSCO Engineering Source
 - e-brary - E-books collection
- Internet facilities for staff and students: **Internet with WIFI (100 Mbps) is available to all the faculty & students inside the campus**
- Students’ laboratories: Facilities are available for the following courses: Workshop practice, Engineering Graphics, Mechanical Engineering laboratory, Production techniques I & II, Heat transfer, Prime movers and fluid machinery, Computer aided design, Fluid power systems, Computational Fluid dynamics
- SOFTWARE: AUTOCAD, CATIA, ANSYS, AUTOMATION STUDIO, MSC ADAMS, MATLAB.
- Research laboratories



Research level facilities are available for the following research areas:
Computer aided design, Materials science and IC Engines

38. List of doctoral, post-doctoral students and Research Associates

- from the host institution/university
Mr.Nandkumar
Mr.Cherishmani
Mr.Kesar Kothari
Mr.Subin
- from other institutions/universities
Mr.Sundar

39. Number of post graduate students getting financial assistance from the university.

Post graduates are working professionals- some of the students are offered professional assistantships in university- up to 70% fee waiver is being given to PhD scholars

40. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.

Any curriculum change will be subjected to the following steps.

1. Need for the programme is assessed by the admission department through market survey.
2. Departmental Cross campus committee will be formed within the university
3. Curriculum will be developed & reviewed in Tele Presence meetings by teams
4. A panel containing academicians and industrialists will be formed
5. Curriculum will be reviewed and finalised
6. Approval from senate after discussion is obtained

41. Does the department obtain feedback from

a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

1. Faculty will be involved in curriculum revision- They can modify the course content, add or remove the courses after discussion across campuses and approval from senate.
2. Regular faculty meetings will be held within the department for feedback on teaching and learning. Problems will be discussed and solved at the departmental level. Budget meetings are also held to procure new equipments for the academic year.

b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

1. Students can give 24x7 online feedback on faculty, staff and curriculum-
2. Class committees are formed to discuss the class proceedings 3 times/ semester. Problems related to teaching learning will be identified and rectified with mutual consent



3. Feedback forms on faculty & staff for theory, tutorial and lab are obtained each semester by the Instruction division and the same is shared with the faculty.
4. Student council is also present to discuss & resolve general/ academic matters

c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

1. BITSAA arranges alumni meetings annually in the campus. Suggestions and feedback will be considered for curriculum review and infrastructure development.
2. The Quality Assurance and Assessment (QAA) imperative team of BITS (in which one of the faculty from our department is a member representing the entire Dubai campus) has devised a questionnaire & has come up with the methodology to collect the feedback from alumni (graduating students and employers (employer satisfaction survey) to find out how they rate BITS Pilani as a preferred university for studies and employment. This will be implemented from 2015-16 academic year.

42. List the distinguished alumni of the department (maximum 10)

- Adeel Arif, Management Consulting, San Francisco Bay Area, USA
- Sparsh Mittal, Consultant, McKinsey & Company, USA
- Dani Bhuman, The Boston Consulting Group, London, UK
- Sanket Mehta, Mechanical Design and Energy Engineer at SPIE, London, UK
- Annamalai Azhagappan, Controls & Planning Manager - UFB at Vision stream NZ, Auckland, New Zealand
- Harshit Solanki, Project Manager - VMC at DNV GL, UAE
- Sidhanth Maheswari, Siemens, UAE
- Yash Yasthan, Grundfos, UAE
- Harshavardhan Mishra, National Oil well Varco, UAE
- Neha Nair, IIM Calcutta, Assistant Brand Manager at ITC Limited, Chennai, India
- Vikram Menon Malik, Certified Lean Six Sigma Black Belt (Region - South Asia & ASEAN) at The Linde Group, Kolkata, West Bengal, India
- Arjun Alok Goyle, Involute Tooling Corporation which is involved in the manufacture of gears & gearboxes., New Delhi (Entrepreneur)

43. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Invited lectures are arranged to enrich the knowledge of the students by eminent persons from academics and industry. List of Invited talks arranged by the Department

S.No.	Category of Event (Workshop/Symposium/Seminars/Scientific Meeting)	Event conducting Date(s)
1	Mr.Anbalagan, Proleed Presented An Invited Talk On 'HVAC Industry & Its Basics'	7.5.15



2	Dr.Omar Lt Saleem Duque, Spain Presented An Invited Lecture On Applications Of Msc/Adams	29.10.14
3	Mr.Nadig, Centre For Cryogenic Technology, IISc, Bangalore Presented An Invited Talk On 'Cryogenic Engineering'	4.8.15
4	Dr.Jyotirmay Mathur, Mnit, Jaipur, Presented An Invited Talk On 'Earth Air Tunnel Cooling System'	27.1.15
5	Dr.Era Poddar, Ergo Era, Presented An Invited Lecture On 'Ergonomic Principles For Automobiles'	4.5.15
6	Mr.Amit Sinha, Gulf Metals Foundry, Presented A Lecture On 'Quality Control In Manufacturing Industries'	7.5.15
7	Mr.C.Renganathan, Director Chennai Metco Pvt Ltd, India, presented a lecture on 'Metallography'	14.03.13
8	Dr. Shivakumar Ranganathan, Assistant Professor/ Mechanical Engineering, American University of Sharjah, UAE presented a lecture on 'Scaling and Homogenization in Spatially Random Composites'	13.11.13
9	Prof. Kuldip Singh Sangwan, HOD, Mechanical Engineering, BITS Pilani, Pilani Campus delivered a talk on "Unconventional manufacturing"	20.12.12
10	Prof. Kuldip Singh Sangwan, HOD, Mechanical Engineering, BITS Pilani, delivered a talk on "Lean and sustainable manufacturing"	23.12.12

44. List the teaching methods adopted by the faculty for different programmes.

1. Course handouts containing complete details of lectures, text books and evaluation components will be given in the first day and it is strictly followed.
2. White board, OHP and LCD projections are available for teaching
3. Interactive smart boards are also used for teaching certain courses
4. Industrial visits are arranged related the courses
5. For lab courses, videos are taken and circulated
6. Tutorial classes are held for all CDC courses for practice
7. Guest lectures are arranged related to the courses, if required.
- 8 Chamber consultancy hour / week is specified in the course handout for discussion with students who face difficulty

45. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

1. Course outcomes are specified for each course in the handout -the instructor in charge ensures that the and Course objectives are inline with programme objectives.
2. Achievement of program objectives are checked using university examination results, achievements in competitive examination results (GRE, GMAT) and admission to reputed universities for higher studies, placements in reputed companies and prizes won in competitions conducted by international organizations.



46. Highlight the participation of students and faculty in extension activities. Faculty members are motivating and guiding students to participate in various extension activities.

1. Industrial visits are arranged to various industries.
2. Students are encouraged in the participation of cultural events held in the university like Sparks & Jashn and also in other universities in UAE.
3. Students are also encouraged to participate in social activities related to fund raising for the need ones, health awareness, blood donation and clean up drives etc..
4. Students are encouraged in sports activities - BITS Sports Festival and other inter university competitions
5. Students are encouraged to participate in OASIS and APOGEE held in Pilani campus every year
6. Mechanical Engineering Association (MEA) organizes many student activities like workshops, industrial visits and invited talks.
7. Students are also members of clubs like Paribasha, MAD, Photography, Social and Environmental club related to dancing, music, debate, social activities etc..

47. Give details of “beyond syllabus scholarly activities” of the department.

Faculty members are guiding students in various competitions related to the following annually.

1. ASME - old-guard & design competitions
2. ASHRAE- Design Competition
3. SAE - Vehicle building for SAE BAJA and FSAE
4. ESREC - Renewable energy related competition
5. Technofest- Intra university technical competition
6. Enginuity - Inter university Technical events
7. UGSRC - under graduate students research competition
8. CEL- for promoting entrepreneurship

Many UG students have published papers in journals and conferences with the guidance from faculty members.

48. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.

NAAC from India & KHDA of UAE

49. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

1. Students are motivated to participate in various competitions organized by different professional bodies
2. Latest software are added and workshops are conducted to enrich the knowledge
3. Making students a part of the research & consultancy done by the faculty
4. Conference grants are given to students to motivate research



50. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strength: No. of students, Qualified faculty, Flexible curriculum, Industrial training, Infrastructure	Weakness: Lack of research funding from government agencies, Faculty strength, Less number of PG students, Technical Staff strength, Difficulty in Organizing conferences
Opportunities: Industries for research & consultancy work, Scope for placements, Certificate programs & workshops for working professionals, cross campus collaboration for teaching and research, MoUs with local universities	Challenges: Other universities with world class facilities with local and international accreditation, Placements in reputed companies, Research labs, Full time research scholars,

51. Future plans of the department.

1. Increasing the number of HD students & full time research scholars
2. Developing thrust area laboratories for research (Material science, IC Engines and Industrial Engg.)
3. Promoting Inter disciplinary research activities (Mechatronics)
4. Industry collaborative workshops and certificate programs
5. Increased funding through Industrial consultancy projects
6. Centre of excellence for thrust areas of research
7. 100% placement record for registered students

52. Any other information regarding your department which you would like to include.

1. Anomitra Banerjee a FD student has won the ASME old guard competition (2014) held in Canada for the first time by an Indian
2. SAE students are regularly building cars for participation in BAJA and FSAE competitions every year

Projects submitted:

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount (Lakhs)	Duration
1	Submitted a proposal to Star cements on Waste heat recovery system	Dr.R.Karthikeyan, Dr.R.Udayakumar, Dr.Prakashkumar	Star Cements, UAE	50000AED (submitted)	1 year
2	Concept Proposal on Waste water and energy management under centre of research excellence Dec,2014	Production and testing of biodiesel from the cooked vegetable oil and useful fuel from the waste engine oil	BITS Pilani Inter Disciplinary Research Grant	Rs.50 lakhs (Submitted)	1 year

