

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

- 1. Inclusion of research ethics in the research methodology course work**
- 2. Presence of Ethics committee**
- 3. Plagiarism check through software**
- 4. Research Advisory Committee**

The main objective is to promote the research and research publications and prevention of misconduct including plagiarism in R&D.

New Horizon College of Engineering is committed to promote and maintain high standards of integrity and accountability in the conduct of academic research and keen to implant and endorse the culture of honesty and transparency in all its institutional activities while trying to allow academic freedom and innovative thinking. The institute strives to preserve academic honor and integrity by eliminating all forms of academic and intellectual fraudulence, including plagiarism.

The college is committed to maintain the standard of research, original thought and expression which are ensured through review committee Constituted at the institutional level. All teachers and students follow the guidelines given by Visveswaraya Technological University for publication in various journals which are recognized by UGC. Every research scholar of the institute pursuing degree has to check his/her final project report using plagiarism checking software Turnitin before submission. Research ethics are included in the course work conducted by VTU for registered Ph. D research Scholars. Our library is equipped with quality journals, e-journals, e-books for MBA. It helps to provide a good platform for quality research.

Inclusion of research ethics in the research methodology course work	http://newhorizon-mechanical-engineering.s3.ap-south-1.amazonaws.com/nhengineering/mechanical-engineering/wp-content/uploads/2020/09/17104528/M.TECH-Machine-Design-.pdf
Presence of Ethics committee	<ol style="list-style-type: none"> 1. https://newhorizonindia.edu/nhengineering/statutory-committee/#1580974152607-5df390fb-f330 2. https://newhorizon-nhengineering.s3.ap-south-1.amazonaws.com/nhengineering/wp-content/uploads/2021/03/29050256/Universal-HumanValues-committee.pdf
Plagiarism check through software	https://newhorizonindia.edu/nhengineering/library-new/services/
Research Advisory Committee	https://newhorizonindia.edu/nhengineering/statutory-committee/#1580974152607-5df390fb-f330

Every researcher should register in the following research portal for Getting Recognition/Enhancing Visibility of your Research Publications globally.

- ORCID id – <https://orcid.org/register>
- Web of Science Researcher Id – <https://www.researcherid.com/#rid-of-researchers>
- Scopus Author Id – A Scopus Author ID is automatically generated the first time one of your publications is indexed in Scopus.
- Google Scholar – <https://scholar.google.com/>
- Research Gate – researchgate.net/login
- academia.edu – <https://www.academia.edu/signup>
- Vidwan – <https://vidwan.inflibnet.ac.in/>
- Mendeley – <https://www.mendeley.com/>
- LinkedIn – <https://www.linkedin.com/>
- Twitter – <https://ads.twitter.com/login>
- Kindle Direct Publishing(Books) – https://kdp.amazon.com/en_US/help/topic/G200620010

Ethics committee/Universal Human Values Committee

Universal Human Values Committee

Sl.No.	Name	Designation	Role
1	Dr Manjunatha	Principal	Chairman
2	Dr. Sowmya Narayanan	HoD- Dept of Life skills & Lifelong learning	Member
3	Mr.Aravinda. K	Sr. Assistant Professor	Member
4	Dr. Anitha S. Rai	Head- Library & Information Center	Member
5	Ms Vijaya	Advocate	Member
6	Dr. Anusuya Devi V S	HoD&Professor– Chemistry	Member Secretary

Institute Research and Development Committee

Sl.No.	Name	Designation	Role
1	Dr. Manjunatha	Principal	Chairman
2	Prof. Kamalashish Deb	Asst. Professor-ME	Member
3	Dr. Clara Kanmani. A	Assoc. Professor – CSE	Member
4	Dr. Geetha Varma. V	Assoc. Professor – CV	Member
5	Dr. Sujitha. S	Assoc. Professor – EEE	Member
6	Mrs. Swathi B	Sr. Asst. Professor – ISE	Member

7	Dr. Mangayarkarasi	Professor – ISE	Member
8	Dr. Reema Sharma	Assoc. Professor – ECE	Member
9	Dr. Sujin Jose	Assoc. Professor – AUT	Member
10	Dr. Priyameet Kaur	Assoc. Professor – MBA	Member
11	Dr. A.P. Nirmala,	Assoc. Professor – MCA	Member
12	Mr. Ramanjaneya	Library Officer – LIBRARY	Member
13	Dr. Srinivasa G (Maths)	Professor & HOD – Maths	Member
14	Dr. Hitesh Kumar (Maths)	Professor – Maths	Member
15	Dr. Prakash Krishnaiah (Chemistry)	Professor – Chemistry	Member
16	Mr. Rama Chandra Naik (Physics)	Professor – Physics	Member
17	Dr. Gopala krishna	Dean – R & D	Member Secretary

Note: All HoDs of Various departments including the Principal are Ex-officio members of R&D Committee

R & D Advisory Committee

New Horizon College of Engineering

R&D Advisory Committee

Padmashri Prof. R. M. Vasagam
Eminent Scientist, ISRO
Former Vice-Chancellor of Anna University and Dr.MGR University

Dr. L. V. Muralikrishna Reddy
National President,
The Institution of Engineers (India)

Dr. K. Ramachandra
Former Director, Gas Turbine Research Establishment, DRDO
Director, National Design and Research Foundation

Dr. R. Venkatesan
Scientist-G, Head, Ocean Observation Systems, National Institute of Ocean Technology,
Visiting Professor, IIT-Madras & IIT-Kharagpur

Dr. Wooday P Krishna
National President, Indian Institution of Production Engineers

Methodologies

- Identify the particular areas of emerging technology/Inter-disciplinary/Multi-disciplinary Approach
- Identify the problems of particular industry/cluster/region
- SWOT Analysis (Examining of the existing faculty/facilities) for R&D activities
- Sensible Motivation Programmes to distinguish performers and non-performers among faculty members through financial/Non-financial Incentives
- Submit concrete proposals to funding agencies for necessary grant
- Establish/strengthen R&D facilities/Culture at the NHCE in collaboration with industries/professional bodies
- Develop more research-oriented labs and centres in association/support of Industries/Professional Bodies
- Involve students in innovative technology projects/Awards/Competitions
- Research & Development oriented interventions/programmes/education Leading to Startups and IPR
- Create national/international collaborative programmes
- Networking among Institutions/Universities for resource and expertise sharing
- Improving in service conditions of faculty members and technical staff commensurate to that of the industry to attract best faculty & staff
- Introduction of award of merit, recognition and sabbatical leave to performing faculty and staff.

Output Indicators

- Increase in research publication, patents and technology transfer to industry
- Increase in sponsored research projects and consultancy
- Increase at Ph.D. and post-doctoral research
- Increase in the network of eminent Scientists/Think Tanks to strengthen the R&D activities of NHCE
- Increase in state of art laboratories in cutting edge technologies with the support of industries/funding agencies
- Increase in national and international conferences of our own/in association with others
- Increase in qualified (minimum Ph.D.) and talented faculty.
- Substantial increase in the intake quality of students at UG/PG Programmes
- Class rooms and laboratories equipped with latest tools being used meaningfully
- Adjunct / Visiting faculty from the industry/R&D Labs/Professional Bodies
- Faculty Visit/training collaborative ventures with industry, research organizations and

other academic institutions in India and abroad

- Increase in intake quality of students at M.Tech. and Ph.D. level (restructuring the existing programmes & introducing new programmes)
- Increase in the departments and Centre of Excellence
- Increase in resource generation through alumni, consultancy fee, etc.
- Increase in community services to payback to the society
- Increase in non-formal training to industry and other educational institute (Executive / Staff Development Programme)
- Lectures by distinguished professionals from industry and academic institute
- National and Global accreditation certification
- Establishment of industry sponsored Chairs
- Nurturing entrepreneurs by creating Technology Business incubators
- Exchange programmes at national and international level.

RESEARCH METHODOLOGY

Course Code: 19SFC15

Credits: 02

L: T: P: 2:0:0

CIE Marks: 25

Exam Hours: 03

SEE Marks: 25

COURSE OUTCOMES: at the end of the course, the students will be able to:

CO1	Understand the significance and suitability of research for various engineering applications.
CO2	Analyze the various processing techniques of research.
CO3	Understand the research in the development of engineering materials/process.
CO4	Analyze the properties/process of research through various techniques. Understanding that when IPR would take such important place in growth of
CO5	Evaluate the influence of design, analysis and testing of research.
CO6	Knowledge of Report writing

Mapping of Course outcomes to Program outcomes:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	2	1	1	1	1	1	1	1	2
CO2	3	2	2	2	1	1	1	1	1	1	1	2
CO3	2	2	2	2	3	1	1	1	1	1	1	2
CO4	2	2	2	2	3	1	1	1	1	1	1	2
CO5	2	2	3	2	1	3	1	1	1	1	1	2
CO6	3	3	2	2	2	1	1	1	1	1	1	1

Mapping of Course Outcomes to Program Outcomes:

CO/PSO	PSO1	PSO2
CO1	3	2
CO2	3	2
CO3	3	1
CO4	3	2
CO5	3	1
CO6	3	2

Ratings: 3 for high, 2 for substantial, 1 for low.

Module No	Contents of Module	Hrs	Cos
1	Meaning of Research: problem, Sources of research problem, Criteria Characteristics of a good research problem, Errors in selecting a research problem, Scope and objectives of research problem. Approaches of	7	CO1,CO2

	investigation of solutions for research problem, data collection, analysis, interpretation, Necessary instrumentations		
2	<p>Research Design: Concept and Importance in Research – Features of a good research design, Exploratory Research Design, concept, types and uses, Descriptive Research Designs, concept, types and uses. Experimental Design: Concept of Independent & Dependent variables.</p> <p>Qualitative and Quantitative Research: Qualitative research, Quantitative research, Concept of measurement, causality, generalization, and replication. Merging the two approaches.</p>	7	CO2
3	<p>Measurement: Concept of measurement, Problems in measurement in research, Validity and Reliability. Levels of measurement – Nominal, Ordinal, Interval, Ratio.</p> <p>Sampling: Concepts of Statistical Population, Sample, Sampling Frame, Sampling Error, Sample Size, Non Response. Characteristics of a good sample. Probability Sample – Simple Random Sample, Systematic Sample, Stratified Random Sample & Multi-stage sampling. Determining size of the sample – Practical considerations in sampling and sample size.</p>	7	CO3
4	<p>Interpretation of Data and Paper Writing – Layout of a Research Paper, Journals in Computer Science, Impact factor of Journals, When and where to publish ? Ethical issues related to publishing, Plagiarism and Self-Plagiarism.</p> <p>Nature of Intellectual Property: Patents, Designs, Trade and Copyright. Process of Patenting and Development: technological research, innovation, patenting, development. International Scenario: International cooperation on Intellectual Property. Procedure for grants of patents, Patenting under PCT.</p>	7	CO4
5	<p>References: Encyclopedias, Research Guides, Handbook etc., Academic Databases for Computer Science Discipline.</p> <p>Use of tools / techniques for Research: methods to search required information effectively, Reference Management Software like Zotero/Mendeley, Software for paper formatting like LaTeX/MS Office, Software for detection of Plagiarism</p>	7	CO5,CO6

Textbooks:

1. Garg, B.L., Karadia, R., Agarwal, F. and Agarwal, U.K., 2002. An introduction to Research Methodology, RBSA Publishers.
2. Kothari, C.R., 1990. Research Methodology: Methods and Techniques. 2016, w Age International. Fourth edition, ISBN-13: 978-9386649225

Reference Books:

1. Garg, B.L., Karadia, R., Agarwal, F. and Agarwal, U.K., 2002. An introduction to Research Methodology, RBSA Publishers.
2. Kothari, C.R., 1990. Research Methodology: Methods and Techniques. 2016, w Age International. Fourth edition, ISBN-13: 978-9386649225
3. Anderson, T. W., An Introduction to Multivariate Statistical Analysis, 2009, Wiley Eastern Pvt., Ltd., New Delhi, Wiley; Third edition, BN-13: 978-8126524488
- 4 Wayne Goddard and Stuart Melville, "Research Methodology: An Introduction", Juta Academic; 2nd ed edition, 2001, ISBN-13: 978-0702156601
- 5 Robert P. Merges, Peter S. Menell, Mark A. Lemley, 2016, " Intellectual Property in New Technological Age", Clause 8 Publishing , ISBN-13: 978-1945555015

Universal Human Values Committee

Value Added Programs Committee

Women Empowerment Committee

Universal Human Values Committee

Sl.No.	Name	Designation	Role
1	Dr Manjunatha	Principal	Chairman
2	Dr. Sowmya Narayanan	HoD- Dept of Life skills & Lifelong learning	Member
3	Mr.Aravinda. K	Sr. Assistant Professor	Member
4	Dr. Anitha S. Rai	Head- Library & Information Center	Member
5	Ms Vijaya	Advocate	Member
6	Dr. Anusuya Devi V S	HoD&Professor- Chemistry	Member Secretary

MINUTES OF MEETING >



Research and Development Committee

Sl.No.	Name	Designation	Role
1.	Dr. Manjunatha	Principal	Chairman
2	Prof. Kamalashish Deb	Asst. Professor-ME	Member
3	Dr. Clara Kanmani. A	Assoc. Professor – CSE	Member
4	Dr. Geetha Varma. V	Assoc. Professor – CV	Member
5	Dr. Sujitha. S	Assoc. Professor – EEE	Member
6	Mrs. Swathi B	Sr. Asst. Professor – ISE	Member
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10	Dr. Priyameet Kaur	Assoc. Professor – MBA	Member
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14	Dr. Hitesh Kumar (Maths)	Professor – Maths	Member
15	Dr. Prakash Krishnaiah (Chemistry)	Professor – Chemistry	Member
16	Mr. Rama Chandra Naik (Physics)	Professor – Physics	Member
17	Dr. Gopala krishna	Dean – R & D	Member Secretary

Note: All HoDs of Various departments including the Principal are Ex-officio members of R&D Committee

Composition of Research Advisory Board of New Horizon College of Engineering (NHCE)


Name	Designation	Internal/ External	Organisation
Padma Shri. Prof. R. M. Vasagam	Chairman, Research Advisory Board of NHCE, Eminent Scientist, ISRO, Former Vice Chancellor, Anna University and Dr. MGR University	External	World Academy of Engineers
Dr. L. V. Muralikrishna Reddy	President, BRICS FEO & Past President, IEI and Emeritus Professor	Internal	BRICS Federation of Engineering Organisation
Prof. E.S. Dwarakadasa	Former Professor, Dept of Metallurgy, IISc & CEO & MD, KHMD Ltd	External	Karnataka Hybrid Micro Devices Ltd.
Dr. Wooday P Krishna	President, Indian Institution of Production Engineers & Emeritus Professor	Internal	Indian Institution of Production Engineers
Dr. N. Mohandas,	Former Registrar, & Technical Advisor, MHRD, Government of India (GoI), New Delhi	External	Indian Institute of Science
Dr. V. S. Somanath,	Former Chairman, KSIIDC	External	Venture Capital Investments
Dr. K. Ramachandra,	Former Director, GTRE, DRDO & Director, NDRF	External	National Design and Research Forum
Dr. R. Venkatesan,	Scientist "G", Group Head, Ocean Observation Systems, NIOT	External	National Institute of Ocean Technology, Chennai
Dr. K. Venkatesh,	Executive Committee Member, VTU, COO,	External	Drone Aerospace P Ltd
Dr. M.R. Pranesh,	Former Registrar & Professor (Ocean Technology), IIT-Madras	External	Indian Institute of Technology-Madras
Dr. S. Ravichandran	Vice Chancellor, St. Peters University & CEO & Chief Scientist, KP Tech P Ltd	External	KP Technologies P Ltd, Chennai
Mr. S.M. Jamkhandi,	Director, IISc-MSME Centre of Excellence	External	MSME, GoI
Dr. J. Ramkumar,	Asst Professor, IIT-Kanpur	External	Indian Institute of Technology-Kanpur
Dr. G. Prabhukumar	Emeritus Professor, NHCE	Internal	NHCE
Dr. Manjunatha	Principal, NHCE, Ex-officio Member		NHCE
Dr. K. Gopalakrishnan	Dean (R&D) and Member Secretary, Research Advisory Board, NHCE	Internal	NHCE

Consolidated Proceedings of Research Advisory Board Meetings held during Last 5 Years

Sl.No.	Year	Date and Time of Meeting Held
1.	2015-16	10 June 2015 Wednesday 15:00 hrs
2.		22 January 2016 Friday 16:00 hrs
3.	2016-17	18 August 2016 Thursday 15:00 hrs
4.		17 July 2017 Monday 11:30 hrs
5.	2017-18	25 October 2017 Wednesday 14:30 hrs
6.		07 February 2018 Wednesday 14:30 hrs
7.	2018-19	19 September 2018 Wednesday 11:30 hrs
8.		28 June 2019 Friday 15:30 hrs
9.	2019-20	25 October 2019 Friday 11:30 hrs
10.		09 January 2020 Thursday 10.30 hrs


Dr. K. GOPALAKRISHNAN
 Dean (R&D)-NHCE




Dr. Manjunatha
 Principal
New Horizon College of Engineering
 Ring Road, Bellandur Post, Near Marathahalli,
 Bangalore - 560 103

New Horizon College of Engineering

Research Advisory Board

Proceedings of the Meeting held at R&D Cell (RDC), NHCE on 10 June 2015 Wednesday 15:00 hrs

Members Present:

1. Padma Shri. Prof. R. M. Vasagam, *Chairman, Research Advisory Board*
2. Dr. L. V. Muralikrishna Reddy
3. Prof. E.S. Dwarakadasa
4. Dr. Wooday P Krishna
5. Dr. N. Mohandas,
6. Dr. V. S. Somanath,
7. Dr. K. Ramachandra,
8. Dr. R. Venkatesan,
9. Dr. K. Venkatesh,
10. Dr. M.R. Pranesh,
11. Dr. S. Ravichandran
12. Mr. S.M. Jamkhandi,
13. Dr. J. Ramkumar,
14. Dr. G. Prabhukumar
15. Dr. Manjunatha
16. Dr. K. Gopalakrishnan, *Member Secretary, Research Advisory Board*

Decisions:

- a) The Dean (R&D) has welcomed the Members of Research Advisory Board (RAB) of NHCE, while he reposed faith and confidence on them, since they are going to provide the vital organic link between the R&D Cell with their respective Domain Experts/Industries/Departments/Faculty members & Students, during the course of implementation of various decisions of RAB.
- b) It is decided to identify minimum 2 or 3 interested and needy faculty members by the R&D Coordinators at their Departments, in such a way to ensure them to write papers and hand hold them to achieve any one or more of the following activities by creating appropriate awareness or hand holding or with positive interventions among them/faculty members and students. It is also decided to provide all out support for those who are interested to write/publish papers from any/every Department by R&D Cell right from start to end till their paper get published. Similarly, all the registered PhD Scholars will be provided adequate support for their works in terms of fulfilling their Publication requirements and logically elevated to the level of Patents based on the needs as required.

Envisaged Activities:

- ▶ **R&D Awareness/Sensitization Programmes** (*Individual/Team/Group*)
- ▶ **Publications** (*Papers/Books/Monographs/White Papers/Compendia/Proceedings of Conference/Seminars/Symposia etc*)
- ▶ **Patents** (*Utility/Design/Biological/Business/Chem./Software/Copy Right/Trade Mark*)
- ▶ **R&D Proposal for Funding:** *Faculty/Students/Jointly with Experts/Industry*
- ▶ **Startups & Technology Business Incubators (TBI):** *Proposal under Ministries/CDP/MSME etc*
- ▶ **Awards & Honors:** *National/International Competitions*
- ▶ **Student Satellite Programmes:** *Collaborative Mode/ISRO/Global Opportunities/Advantages*

- c) As a part of R&D Awareness initiatives, it has been circulated the following documents to the R&D Coordinators and HoDs of all the Departments. It is also decided to Circulate this information to all the Faculty Members in Department in general and among the needy Faculty Members in particular.

- ▶ Opportunities for Publications Provided by NHCE R&D Cell
- ▶ List of Sponsoring Agencies Providing Research Grants for Projects
- ▶ Funding Opportunities at Various Ministries
- ▶ Research Grants to Projects in Humanities and Sciences including English
- ▶ R&D Grant Opportunities-National Centre for Biological Science
- ▶ Modified Guidelines of MSE

- d) The Proposed Quarterly Plan of R&D Cell


New Horizon College of Engineering
R&D Cell
Quarterly Plan to Realize Annual Target/Milestones
(Once in 15 days Review with/reporting to Chairman)

Sl. No.	Major/Minor Activity (Annual Target)	Target for 1 st Quarter				Remarks
		Jan	Feb	Mar	Total	
1	R&D Awareness Programme: <i>Funding & Publications (12 @ 1 per month)</i>	1	1	1	3	
2	Patents <i>(10-25 in 2 Years)</i>	1	1	1	3	Dean R&D
3	Publications <i>(Print/On-line) @ 2 per Dept</i> Journals Monographs/Books/White Papers Conference Proceedings	-	10-20	15-30	25-50	Co-ordination and Monitoring at Dept Level with R&D Coordinators/HoD
4	R&D Funding Proposals: <i>Min 1/2 per Dept/Month (Rs.50 Lacs-2 Cr. in 2 Years)</i> Project Funding <i>(Grant-in-Aid)</i> Collaborative Research Projects with Industry Programme Funding <i>(Events/Conferences etc)</i> Travel Grant for International Participation Consultancy Projects Skill Training Programmes/MDPs	3-6	3-6	3-6	9-18	-do-
5	Technology Business Incubator (TBI)/Start-ups) Project Proposals with Ministries/Others	1	1	1	3	DST/MSE-CDP/NMCP
6	Student Satellite Programme					Preparatory Works
7	Catch Them Young: Student Projects UG/PG/Short-Term/NH Schools					Submission for Grants/Awards/Honors
8	Signing MoU/Networking for Collaboration	1	1	1	3	
9	Establishing Centers (of Excellence)/Societies Centre for Teaching-Learning Resources <i>(Physical/Virtual)</i> Centre for Technopreneurship Development Centre for Innovation and IPR Centre for Technology Transfer SPICE: <i>Society for Promotion of Innovation, Creativity and Entrepreneurship</i>	1	1	1	3	Co-ordination and Monitoring at Dept Level with R&D Rep./HoD with Lead Dept to Mentor the Activities

	Society for Students Satellite Programmes (SSSP/S3P/3SP)					
10	Open House: Student Project /Design Awards UG/PG/PhD/Polytechnics/ Schools					Regularly Drive Traffic of Smart Students/Aspirants to NHCE (Future Recruits to Us) Right Time: Sept-Dec
11	Explorium (Exhibition + Museum + Projects) To provide hands-on experience and kindle creativity, innovation, lateral thinking of young minds at UG/PG/PhD/Polytechnics/ Schools					State of the Art to be built over the period of 3 years with Global Funding
12	Activate/Make Vibrant "New Horizon Research Foundation" R&D Advisory Board with Eminent People Introduction of "Emeritus Professors" or "Distinguished Professor of Eminence in Research" for NHCE to Mentor Our Faculty Members:					Update the Website with Papers/Books Published by NHCE Faculty Members during the last 10 Years. List of Student Projects, R&D Projects/Activities etc


Dr. K. GOPALAKRISHNAN
 Dean (R&D)-NHCE




Dr. Manjunatha
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 Bangalore - 560 103

New Horizon College of Engineering Research Advisory Board

Proceedings of the Meeting held at R&D Cell (RDC), NHCE on 22 Jan 2016 Friday 16:00 hrs

Members Present:

1. Padma Shri. Prof. R. M. Vasagam, *Chairman, Research Advisory Board*
2. Dr. L. V. Muralikrishna Reddy
3. Prof. E.S. Dwarakadasa
4. Dr. Wooday P Krishna
5. Dr. V. S. Somanath
6. Dr. K. Ramachandra
7. Dr. R. Venkatesan
8. Dr. K. Venkatesh
9. Mr. S.M. Jamkhandi
10. Dr. G. Prabhukumar
11. Dr. Manjunatha
12. Dr. K. Gopalakrishnan, *Member Secretary, Research Advisory Board*

Leave Absence Granted: *Dr. N. Mohandas, Dr. J. Ramkumar, Dr. M.R. Pranesh and Dr. S. Ravichandran*

Decisions:

It is decided to have an ambitious target of filling Minimum 365 Patents of NHCE in 100 days' time frame.

*Here after the Project will have a Nick Name: “**Project: 365 Wheels**”*

Name of the Proposed Event (May be decided after the Brainstorming with activists):

- a) **Invent for India**
- b) **Invent in India**
- c) **Invent 2 Succeed** *(The name Dr. Amarnath used, INV for **invent** and ENT for **entrepreneurship**.)*

Once the name is finalized we can design a logo for the event.

Road Map:

- a) We need assistance from Lawyers to draft the Patents. We can speak to the law college (Seshadripuram Law College/National Law School): Bringing in the students specializing in Patent Law.
- b) We also need draft for,
 - i. Non-Disclosure Agreement
 - ii. Sharing commercial value in case the idea is generated by the student(s) **OR**
 - iii. Non-Sharing of commercial value in case the idea is other than that of the student(s).
- c) If industries can sponsor from the start, they will be interested in the commercial aspects and we can also inform that we can take up projects to solve their technical problems/requirements.
- d) Agencies to be Networked for Support/Sponsorship:
 - i. National Design and Research Foundation (NDRF)-IEI
 - ii. National Institute for Advance Studies (NIAS)-IISc *(Both the NDRF & NIAS headed by Dr. Baldevraj as Chairman and Director respectively)*
 - iii. TIE, Bangalore for a tie up since they support such events.
 - iv. Other sponsors for the event could be CII, FICCI, MSME, Registrar of Patents, NID, IIPe etc

- e) We need at least 400 students, who will be willing to be guided in creating new ideas and new product.
- f) **Dr. Amarnath**, Our Lead Anchor & Head for the Project, will have to address them generally on CREATIVITY & INNOVATIONS for which he will prepare a PPT. Date for Inauguration/Launch of the Project/Event need to be decided (*Preferable date during the 1st week of Feb 2016*).
- g) Subsequently he can guide a minimum of 25 and maximum of 50 students at a time to create an individual product for each and also *aimed for such a mega event which will result in filling of Patents*).

h) Methodology:

- i. He needs 3-6 days per batch of undivided attention from the students in a classroom (from 9 a.m. to 5 p.m. with lunch and tea breaks) and they should know at least one software to create the model on a computer (*It may outsource or done with the help of others/students who are good at it*). At the end of 3-5 days they will be able to give a PPT of their own. The best can be showcased at an exhibition after completing all 365 innovations.
- ii. The student will have to sign a nondisclosure agreement (NDA) and also a joint agreement that the patent will be filed jointly by the College, Dr.Amarnath, the student(s) and any other Faculty member(s) involved in the process/contributed towards the sensible idea/product(s). The sequential order of name(s) will be in the same order/level of individuals' Contribution from top first to least.
- iii. As and when the project is completed, we should engage a patent lawyer(s) and file for a priority date. On completion of all the 400 innovations, the best 365 or 366 should be filed for a patent on a single day.
- iv. There are many incentives available for filing a patent and we can look into the same. Project funding can also be availed based on individual idea(s)/project(s).
- v. A team of student representatives from different departments should be selected and a cell for creativity and innovation should be set up in the campus and one or two staff members from each department along with R&D Coordinators should also take responsibility for the event.
- vi. Wherever possible we can make a prototype and an exhibition can be held on a suitable day to showcase all the innovative products under one roof.
- vii. If possible a VVIP should be invited to inaugurate the exhibition and industrialist should be invited and the patents offered for sale on suitable terms such that the students will also be benefited.
- viii. The entire event can be packaged in such a way to attract funding/internal or self supporting by the participating students/faculty members/professional bodies/ industrial association/Crowdfunding etc and/or funding Agencies may also be approached appropriately.
- ix. If the entire Project goes as we envisaged and if could succeed, then it will be historical event, across the World and surely will get an entry in to **“Guinness Book of World Records”**


- x. Networking with “**Guinness Book of World Records**” and fulfill their requirements etc to be done on fast track. We have also identified an agency at London, which has recently (2014-15) done liaison works for a leading TV Channel in Chennai for their Guinness Record.
- xi. The Proposed Budget/Economics need to be worked out in detail. However, the primary focus will be making it a “Frugal Event” with self generated/self-propelled event with optimum budget and with financially viable model. Local Hospitality (*Accommodation at our Guest House/Hostel with Boarding is preferable to have more evening sessions with Students (4-7/9 pm)*), Logistical support to Dr.Amarnath (*2AC/AC Chair Car Train Fare: To & Fro Chennai. 4/5 times only in 2-3 months*) may be provided by NHCE to Dr.Amarnath.
- xii. We need a Team of dedicated/interested/self-motivated team of volunteers from Students (UG/PG) & Core Faculty members from all departments.

We are open to any suggestion from the members of RAB.

Last week of April is celebrated as **International Innovation Week** and we should target to complete the project before that. We have approximately 90 days to achieve it.


Dr. K. GOPALAKRISHNAN
Dean (R&D)-NHCE




Dr. Manjunatha
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New Horizon College of Engineering

Research Advisory Board

**Proceedings of the Meeting held at R&D Cell (RDC), NHCE on
18 August 2016 Thursday 15:00 hrs**

Members Present:

- a) Padma Shri. Prof. R. M. Vasagam, *Chairman, Research Advisory Board*
- b) Dr. L. V. Muralikrishna Reddy
- c) Prof. E.S. Dwarakadasa
- d) Dr. Wooday P Krishna
- e) Dr. V. S. Somanath
- f) Dr. K. Ramachandra
- g) Dr. J. Ramkumar
- h) Dr. R. Venkatesan
- i) Dr. K. Venkatesh
- j) Dr. S. Ravichandran
- k) Mr. S.M. Jamkhani
- l) Dr. G. Prabhukumar
- m) Dr. Manjunatha
- n) Dr. K. Gopalakrishnan, *Member Secretary, Research Advisory Board*

Leave Absence Granted: *Dr. N. Mohandas and Dr. M.R. Pranesh*

Decisions:

Items Discussed and Approved for Immediate Implementation

A. Incentive for Best Performance: Introduction of Awards (*Financial/Non-Financial*)

Teaching Awards

- Outstanding Performance Award
- Long Service Award
- Teaching Honour Roll
- Annual Teaching Excellence Award
- Most Promising Teacher Award
- Engineering Educator Award
- Teaching Commendation Award

Research Awards/Student Awards

- Certificate of Appreciation/Award
- Best Paper Award/Best Monograph Award/Best Proceedings Award
- Certificate of Merit Award
- Prestigious Publication Award
- Research Innovation Award

Teaching Learning Process: Self Learning, MOOCs, Discovery Channel, You Tube Videos, Webinar etc

Audio/Video Recording of Keynote Addresses of Chief Guests (Including Convocation Addresses) at Main Auditorium

Suggested Innovation in Teaching & Learning Process

- Process Approach to Teaching Learning
- Focus to kindle Students' Creativity and Innovation/Lateral Thinking
- Revised Bloom's Taxonomy
- Experiential Learning
- Real World Applications and Examples
- Video Assignments (*Must Watch Series*): Refer to the Group-Moderator
- Audio Assignment s (*Must Hear Series*)
- Audit Courses
- Open Air Theatre: Group Presentation/Oral/Audio-Visual etc; Evening Open Screening
- Peer Learning/Role Play/Debate/Elocution
- Traditional Knowledge/Vedic Science Foundation/Historical Learning
- Monograph Series (*Contribution from All the Students: Wiki Model*) To enrich contemporary Understanding/To Know the Emerging Trends
- Centre for Teaching Resources and Teaching Aids
- Technology Watch/Future Watch (Discovery Channels/You Tube Watch)
- Patents' Watch: PQ (*Patent Quotient*)
- Startups' Watch: SQ (*Startup Quotient*)
- Innovation Quotient: *InnovQ*
- Creativity Quotient: *CQ*

B. Co-curricular & Extra-curricular Activities

(30 Activities under 12 & 16 Possible/Proposed)

If any of the following activities are already in place, can be strengthened and shall be made visible in Campus and in our Website

1. **Infosys Campus Connect/Foundation Programme**
2. **Microsoft Innovation Center**
3. **CAMBRIDGE ESOL Examination Center**
4. **Wipro: Mission 10X**
5. **Microsoft: Campus Agreement**
6. **Online Certificate Verification of Students** (*Credentials of Students Can be verified through online with payment*)
7. **NHCE Moodle**
(*Moodle is an education software helping teachers and trainers create and deliver effective online learning environments used by millions world-wide*).
8. **IIT-Bombay FOSSEE**
(*FOSSEE: Free and Open Software in Education*) project promotes the use of FOSS tools to improve the quality of education in our country. We aim to reduce dependency on proprietary software in educational institutions. We encourage the use of FOSS tools through various activities to ensure commercial software is replaced by equivalent FOSS tools. We also develop new FOSS tools and upgrade existing tools to meet requirements in academia and research.
The FOSSEE project is part of the National Mission on Education through Information and Communication Technology (ICT), Ministry of Human Resources and Development, Government of India.)
9. **CEC**
The Consortium for Educational Communication (CEC) popularly known as CEC is one of the Inter University Centres set up by the University Grants Commission of India.

10. ICTACT

ICT Academy (ICTACT) is an initiative of the Government of India in collaboration with the state Governments and Industries. The organization was formed with representations from the State Government of Tamil Nadu, leading companies in the ICT industry and National Association of Software Services Companies (NASSCOM) in India. ICTACT is a not-for-profit society. It was started to meet the skill requirements of the industry and generate more employment especially in tier 2 and 3 towns, the rural parts of the country.

11. ARM University Program: The Architecture for the Digital World

(Similar initiatives are listed in Table under Advanced Labs, which may bring very good value addition during NB: Industry Driven Labs or Contemporary Tools of Industries etc at Campus)


Preparing Students Today for Tomorrow's Technology






The ARM University Program enables educational use of ARM technology. University courses and labs, student projects, and academic research in embedded systems, microprocessors/controllers, mechatronics, System on Chip (SoC) design, computer architecture, and other areas all benefit from using ARM. The program provides a variety of teaching materials, hardware platforms, software development tools, IP, and other resources for educators, students, and researchers.




The ARM University Program Launches the Graphics and Mobile Gaming Education Kit: ARM Launches the Graphics and Mobile Gaming Education Kit in partnership with Chukong Technologies and Rockchip Microelectronics. The kit enables educators worldwide to teach students the fundamentals of graphics and mobile game design using state-of-the-art technologies from the ARM eco-system.

Find below the Proposed Advanced Labs, which are primarily for Free or through MoU may be established at NHCE. Concerned Departments can look in to it and do the needful. There are similar opportunities available with many industries. Many such free tools can be put in to use at our existing Labs with the involvement of our Faculty Members and Students. Many of these Labs will provide contemporary insight and real life industry practices and exposure to real life needs of industry. They can be easily setup at our existing Labs by freely downloading many of these tools or by signing MoU with little negotiations. Even some of the Modules can be part of our G, P & E Programmes, if any cost involved. Many of our faculty members may aware of the existence of these tools and techniques; however, it needs sensible intervention from Management to make them to realize/understand the seriousness and expectations of management in this regard in such a way to transfer the benefits to our students in ensuring their employability/overall developments etc.

12. Advanced Labs (10) Identified for Establishment at NHCE

Name of the Lab	Salient Features/Description/Benefits	Beneficiaries Dept/ Engagement Model/Remarks
	SIEMENS: Industrial Automation Lab SIEMENS certification training (45 hours) is given to the third year ECE and EEE students which provide hands on training in Ladder Logic design. This lab is being powered by Siemens "State of the art" Programmable Logic Controllers (PLCs) of 1200 and 200 series, AC and servo drives, Human Machine Interface (HMI) and SCADA software.	ECE, EEE MoU

	<p>ARM: ES Lab</p> <p>Students are trained on 8/16/32 bit processors ranging from ARM7, ARM, Cortex M0/A8 PIC 16F/18F, DSP C51, TMS C67xx DSK, Raspberry pi, Beagle bone</p> <p>Students are exposed to hardware platforms like ARM, Free scale, Intel, Texas Instruments ARM University Program.</p> <p>Working knowledge of ARM assembly Language and optimization Knowledge of the Linux internals / Linux device drivers. Ability to use JTAG debuggers, logic analyzers. Familiar with RTOS concepts and develop applications using communication protocols Students on track for ARM Accredited Engineer Certification program from ARM.</p>	<p>ECE, EEE, (CSE, ISE: If Electives Offered) Free/MoU</p>
	<p>LABVIEW</p> <p>Training our students on LabVIEW Core I and II Producing Certified LabVIEW Associate Developers Getting Internships for our students Solving problems related to Measurement, Automation and Control Engg. (MACE) Prototyping proof-of-concept pieces of software and hardware</p>	<p>ECE CSE, ISE, MCA & Others MoU</p>
	<p>CADENCE: VLSI Lab</p> <p>With an objective of bringing out a System on Chip (SoC) from our student's community, an advanced VLSI lab is set up with Cadence Design Suite (30 users' license) and also Xilinx FPGAs for FPGA prototyping. Skilled professors with enough industrial experience are able to inspire, motivate and guide the students to carry out our initiatives/mission. Students are categorized based on their skill set and trained as required by industries as a Digital Logic Design Engineers Verification Engineers FPGA Design Engineers Physical Design Engineers ASIC Design Engineers</p>	<p>ECE, EEE</p>
	<p>ISTQB Software Testing Lab</p> <p>We train our students on manual and automated testing using Quick Test Professional (Functional), Load Runner (Performance) and Quality Centre (Defect management). Students also learn about software testing life cycle and test cases preparation and execution. Students gain International Software Testing Qualification Board (ISTQB) Certification (Foundation Level).</p>	<p>CSE, ISE, MCA MoU</p>
	<p>MOBILE APPLICATIONS DEVELOPMENT Lab</p> <p>A dedicated laboratory for development of mobile applications can be established with state of the art computing machines and smart devices. Enthusiastic teams of students and faculty members develop industry standard applications to cater the needs of individual smart phone users and corporate world.</p>	<p>CSE, ISE, MCA MoU</p>

	<p>RUBY ON RAILS Lab</p> <p>Ruby on Rails (RoR) is uniquely structured and an aspirant Open Source Dynamic Web Development Framework. Our training on RoR covers OOPS in Ruby, Control structures in Ruby, Mixins in Ruby, MVC architecture, Ruby gems and rake tool and creating applications in rails. Also add Python, Objective-C, PyObjC, Node.js etc. The trained students are assigned with projects like Web Blog creation, Expert corner, Employee time tracking system, E- Magazine, etc. We produce Certified Ruby Programmers (Silver).</p>	<p>CSE, ISE, MCA Free</p>
	<p>LADDER Lab</p> <p>We can enter into an Academic Certification Partner (ACP) Agreement with Dassault Systems. Activities included in the LADDER lab: Training our students on CATIA V6 PLATFORM - CATIA, DELMIA, SIMULIA and ENNOVIA for duration of 120 hours. Producing Certified CATIA Users Training our students on SolidWorks 2016 Getting Internships for our students Providing support and consultancy to industries on design and development projects.</p>	<p>Mech, Auto, Civil, EEE MoU</p>
	<p>AUTODESK CERTIFICATION</p> <p>We train the students on products from AUTODESK like AUTOCAD 2016, Inventor Professional 2016. Students are trained by Autodesk Certified Instructor - ACI. Training students based on the course prescribed AUTODESK Producing AutoCAD Certified Professionals Producing Autodesk Inventor Certified Professionals.</p>	<p>Mech, Auto, Civil, EEE MoU</p>
	<p>CLOUD COMPUTING Lab</p> <p>We provide 40 hours training for international certification course Cloud Infrastructure Associate (CIA), framed by EMC. We also initiated a Level-I certification program called "Cloud Infrastructure and Services Associate" collaborated with ICTACT.</p>	<p>CSE, ISE, MCA & Others MoU</p>

13. Scientific and Industrial Research Organisation (SIRO) as Recognized by Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology, Government of India

The Recognition Scheme for Scientific and Industrial Research Organisations (SIROs) will bring together voluntary organizations operating in non-commercial sector with a view to promote their activities in the area of scientific and industrial research, design and development of indigenous technology to achieve technological self-reliance and minimize foreign inputs.

The Organisations seeking support under the scheme will undertake activities for the extension of knowledge in the field of natural and applied sciences, agricultural, medical and social sciences. Functional SIROs having clearly stated objectives of undertaking scientific research, broad based Governing Council, Research Advisory Committee, research personnel, infrastructure facilities for research, well defined, time bound research programmes and clearly stated objectives of undertaking scientific research are

considered eligible for recognition by Department of Scientific and Industrial Research (DSIR).

The SIROs recognized by DSIR (other than hospitals) are eligible for customs duty exemption and excise duty waiver on import of equipment/instruments and their spares and consumables; under notification nos. 51/96-Customs dated 23.7.1996 and 10/97-Central Excise dated 1.3.1997 respectively. The recognition would help them to evolve research infrastructure by way of overall administrative support assistance and other assistance as may be necessary for the efficient working of a research-oriented organization.

14. Events/Competitions may be planned regularly among Students' Teams

On/Covering: Self Learning, MOOCs, Discovery Channel, You Tube Videos, and Webinar etc.

15. List of Professional Bodies (*Few may be already existing at our Campus*)

1. Institution of Engineers (India)	2. Bangalore Management Association
3. Institute of Electrical and Electronics Engineers	4. Institute of Directors
5. Institution of Engineering and Technology	6. Indian Society for Training & Development
7. Institution of Electronics and Telecommunication Engineers	8. Federation of Karnataka Chambers of Commerce and Industry
9. Institution of Civil Engineers (India)	10. Institute of Indian Foundry Men
11. Institution of Mechanical Engineers (India)	12. Engineering Design and Analysis Forum
13. American Society of Mechanical Engineers	14. Rapid Prototyping Society of India
15. Indian Institution of Industrial Engineering	16. Bird Strike Research Group of India
17. Aeronautical Society of India	18. National Design and Research Forum
19. Computer Society of India	20. Indian Welding Society
21. Indian Society for Technical Education	22. Institute of Marine Engineers (India)
23. Indian Institution of Bridge Engineers	24. National Safety Council of India
25. Indian Institution of Production Engineers	26. Loss Prevention Association of India
27. National Institution for Quality & Reliability	28. Indian Institution of Plant Engineers
29. Indian Environmental Association, Accredited Member of Water Environment Federation USA	30. Indian Society for Networked Autonomous Unmanned Systems
31. Institute for Counseling & Transactional Analysis (India), Affiliated to International Transactional Analysis Association	33. International Association of Engineers
32. Data Science Association	34. International Association of Computer Science and Information Technology
	<i>50+ Domain Specific Societies are there with them</i>

List Incomplete (*Many more Professional Societies are there in India and abroad for Networking*)

SOCIETIES OF IACSIT (*Many are Free Online Membership Only*)

International Association of Computer Science and Information Technology (IACSIT)

IACSIT Society Chapters

♦ Chapters are:

- technical subunit of one or more Sections, or a Council;
- constituted by a minimum of five (5) members of a Society;
- established by petition to the parent unit(s) and Societies concerned to represent and fulfill the technical needs of the members and the missions of IACSIT;

IACSIT Sections

♦ Sections are:

- the basic operating organizational unit of IACSIT;
- constituted by a minimum of ten (10) members;
- established with the approval of IACSIT by petition of those who live/work in relatively

close proximity to be served by activities that meet their needs and further the missions of IACSIT.

If you want to apply for to establish IACSIT new Chapter/ Section, please compile and return the SOCIETY CHAPTER PETITION / SECTION PETITION to petition@iacsit.org. Your application will be processed in 15 work days.

SOCIETIES OF IACSIT

Most IACSIT members choose to add value to their membership by joining one or more IACSIT Societies. Benefits include access to current information, opportunities to network with peers, and enhancement of the worldwide value of your profession. The members of IACSIT Societies can help the development of IACSIT by joining our different societies, proposing new societies, acting in our journal's editorial boards, organizing conferences and involving in our executive committee.

- IACSIT Transportation and Traffic Society (TTS)
- IACSIT Systems, Man & Cybernetics Society (SMCS)
- IACSIT Software Engineering Society (SES)
- IACSIT Social Science and Humanities Society (SSHS)
- IACSIT Signal Processing Society (SPS)
- Reproductive Biology and Genetics Society (RBGS)
- IACSIT Reliability and Safety Society (RSS)
- IACSIT Power Engineering Society (PES)
- IACSIT Photonics and Microelectronics Society (PMS)
- IACSIT Modern Education Technology Society (METS)
- IACSIT Modeling and Simulation Society (MSS)
- IACSIT Microwave, Antennas and Remote Society (MARS)
- IACSIT Mechanical Engineering Society (MES)
- IACSIT Management Science and Engineering Society (MSES)
- IACSIT Internet Society (IS)
- IACSIT Information Technology Society (ITS)
- IACSIT Industry and Management Society (IMS)
- IACSIT Graphic and Image Processing Society (GIPS)
- IACSIT Food and Agriculture Society (FAS)
- IACSIT Financial Engineering Society (FES)
- IACSIT Environment Science Society (ESS)
- IACSIT Electronics and Electrical Society (EES)
- IACSIT Economics and Business Society (EBS)
- IACSIT Communication Engineering Society (CES)
- IACSIT Construction and Building Society (CBS)
- IACSIT Computer Society (CS)
- IACSIT Computer Theory and Engineering Society (CTES)
- IACSIT Components, Packaging & Manufacturing Society (CPMS)
- IACSIT Communication Engineering Society (CES)
- IACSIT Circuits & Systems Society (CSS)
- IACSIT Applied Chemical Engineering Society (ACES)
- IACSIT Bioinformatics and Biomedical Engineering Society (BBES)
- IACSIT Automation and Robotics Society (ARS)
- IACSIT Applied Physics Society (APS)
- IACSIT Applied Mathematics Society (AMS)
- IACSIT Aerospace Society (AS)
- IACSIT Advanced Control System Society (ACSS)

16. Co-curricular and Extra Curricular Activities

- a) Forum for Women Empowerment
- b) ECO MITRA: Nature Club
- c) Vivekananda Adhyayana Kendra
- d) Life Skills Forum
- e) LAKSHYA: Commerce and Management Forum

- f) DEEKSHA: The Humanities Forum
- g) PRAGNAYA: The Science Forum
- h) Society for the Promotion of Innovation, Creativity and Entrepreneurship (SPICE) Club
- i) SHRISTI: Entrepreneurship Cell
- j) Wellness Centre
- k) Centre for Global Excellence
- l) Bhasha Sngama: The Forum for Languages
- m) National cadet Corps (NCC)
- n) National service Scheme (NSS)
- o) Youth Red Cross
- p) Bharat Seva Dal
- q) Free Thinkers' Forum
- r) Film Appreciation Club
- s) Humour Club

17.Events/Competitions on Gaming Industry (Video Games, ICT Tools), Game Engine/Game Development etc.

18. Centre of Excellence for E-Sports/Gaming Industry/VR/AR etc

19. Crytek Focuses on the Future with New “VR First” Academic Initiative

Frankfurt am Main (Germany) – January 19, 2016

The creators of CRYENGINE will provide full source code access for free and equip a new generation of talent to explore the power and potential of VR

Seeking to nurture grassroots virtual reality development worldwide, Crytek today announced the launch of its new *VR First* program.

Under the initiative, Crytek will partner with academic institutions to provide state-of-the-art technology and facilities for students and researchers looking to explore the power and potential of VR.

Beneficiaries of the *VR First* program will not only enjoy full source code access to Crytek's CRYENGINE development suite, but also free use of hardware from *VR First* affiliates.


VR First seeks to empower the development talent of tomorrow by ensuring academic institutions around the world are equipped to support their ambitions in this exciting new field. The initial *VR First* Lab opens its doors today at Istanbul's Bahçeşehir University and will act as a pilot destination for the scheme. Crytek and the program's affiliate hope to ensure every *VR First* lab facilitates users to play a key part in shaping the future of VR.

For more information on *VR First*, and details of how to become an affiliate or academic partner, please visit <http://vrfirst.cryengine.com>

About Crytek

Crytek is an independent videogame developer, publisher and technology provider with headquarters in Frankfurt am Main (Germany) and seven other studios around the world. Established in 1999, Crytek has created multiple award-winning titles, including the original Far Cry, the Crysis series, Ryse: Son of Rome and Warface. All of Crytek's games are developed using CRYENGINE, the company's cutting-edge 3D game technology, which is also the first choice of other leading developers and licensees when creating games for PC, Xbox One, PlayStation®4, and Android. Crytek's ongoing growth in the games-as-a-service market has extended the company's reach as they continue to deliver top quality interactive experiences to players through self-publishing platforms online.

For more information visit: www.crytek.com and www.cryengine.com.


Dr. K. GOPALAKRISHNAN
Dean (R&D)-NHCE



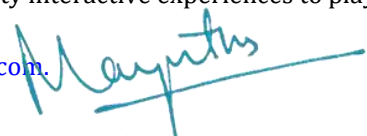

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Table Agenda Items Circulated Among the Members of Research Advisory Board

References:

<http://venturebeat.com/2015/10/27/even-siberians-can-make-a-game-with-30m-downloads-in-todays-global-game-market/>

Perhaps the most unusual game company I met while in Israel was [MyTona](#), a studio founded by twin brothers who grew up in one of the coldest regions of the world in Russia's Siberia. MyTona has more than 100 employees in Yakutsk, and it published a hit game [The Secret Society: Hidden Mystery](#), via Swedish game publisher G5. The game has been downloaded more than 30 million times since 2012.

The DeanBeat: 10 predictions for the game industry in 2016

<http://venturebeat.com/2015/12/25/the-deanbeat-predictions-for-the-game-industry-in-2016/>

The trends below were conceived with the help of game industry observers, but the arguments are my own. I thought about making predictions about Steam Machines and Apple TV as alternative platforms, but the future of those products seems foggy.

For fun and embarrassment, here are my predictions for [2015](#), [2014](#), [2013](#) and [2012](#). Please vote for your favorite prediction in the poll at the bottom. I've credited people who came up with the ideas in the text.

- 1. Virtual reality will take off, but not as fast as the hype would suggest**
- 2. VR and AR will command much of the new investments in gaming**
- 3. Esports viewership will be on a path to rival the Super Bowl**
- 4. Sony will widen its lead again in consoles**

This prediction is based on momentum and the idea of the big getting bigger.



With 30 million units sold, Sony has won the current generation console war. Nintendo, which had a one-year headstart on Sony, has sold only 11 million Wii U consoles. And Microsoft's Xbox One is at about 17 million. Even with a stronger lineup for Xbox One, Microsoft isn't gaining much ground on Sony during this holiday season.

Next year, Sony is expected to launch a series of big titles such as Uncharted 4: A Thief's End, Street Fighter V, The Last Guardian, Horizon: Zero Dawn, Hellblade, Ratchet & Clank, and more. Those exclusives, as well as the launch of the PlayStation VR platform, should satisfy the appetites of PlayStation fans and help ward off competitive threats from rivals.

Microsoft and Nintendo will likely provide stiff competition and survive as alternative, profitable game companies. But I can't see them catching up with Sony in this generation.

- 5. Game companies will explore the possibilities of augmented reality (AR) but won't cash in on it yet**
- 6. Nintendo will show its cards for its turnaround strategy**
- 7. Hardcore gaming gains ground on mobile devices**
- 8. Consolidation will continue as foreign companies and media conglomerates acquire more game publishers**

9. Markets such as India and Brazil will become much more interesting

	INDIA (2014) CHINA (2004)	
1.2 billion	Population	1.3 billion
32%	Urban population	38%
26.2 years	Median age	31.9 years
\$1.50 trillion	GDP	\$1.49 trillion
7-8%*	GDP Growth (next five years)	11.42%
140 M	Smartphone Users (India)/Internet Users (China)	95 million
650 million*	Smartphone Users (India) /Internet Users (China) (next 5 years)	390 million

Above: Is India just like China was five years ago?

Image Credit: Atul Bagga

It took a very short time for China to move from a gaming backwater to the world's biggest gaming market. It owes that growth to the fast adoption of digital gaming on the PC and mobile devices.

As smartphone adoption picks up in other emerging markets such as India and Brazil, we'll see games in those markets take off. Games are becoming a global business, and they always make their way to the fastest-growing platforms in the fastest-growing markets. After years of slow growth, India is looking promising, and Brazil is close behind. These countries may very well leapfrog Western countries when it comes to mobile growth.

Atul Bagga, a longtime game analyst and the former head of Zynga Asia, [estimates](#) the Indian mobile-game market could grow from \$200 million today to \$3 billion by 2019. Bagga wrote, "India's smartphone installed base [is] expected to reach 650 million units by 2019, up from 140 million in 2014; it's driven by a large mobile subscriber base (900 million, or three times the size of the U.S.), a shift from feature-phones to smartphones, increasing smartphone affordability, and new business-friendly government. The demographics of the nation, most of all, make it ripe for the game industry."

10. The traditional gaming media will lose ground to new ways of reaching consumers

- **Wargaming**

Wargaming is an award-winning online game developer and publisher and one of the leaders in the free-to-play MMO market. Founded as a privately held company in 1998, Wargaming has shipped mo... [All Wargaming news »](#)



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New Horizon College of Engineering

Research Advisory Board

**Proceedings of the Meeting held at Conference Room, NHCE on
17 July 2017 Monday 11:30 hrs**

Members Present:

- a) Padma Shri. Prof. R. M. Vasagam, *Chairman, Research Advisory Board*
- b) Dr. L. V. Muralikrishna Reddy
- c) Dr. Wooday P Krishna
- d) Dr. V. S. Somanath
- e) Dr. K. Ramachandra
- f) Dr. J. Ramkumar
- g) Dr. K. Venkatesh
- h) Dr. S. Ravichandran
- i) Dr. G. Prabhukumar
- j) Dr. Manjunatha
- k) Dr. K. Gopalakrishnan, *Member Secretary, Research Advisory Board*

Leave Absence Granted: *Prof. E.S. Dwarakadasa, Dr. N. Mohandas, Dr. R. Venkatesan, Mr. S.M. Jamkhandi and Dr. M.R. Pranesh*

Decisions:

The Member Secretary has presented the Action Taken Report on the Decisions of RAB Meeting held on **18 August 2016 Thursday 15:00 hrs**

It is decided unanimously to implement the Proposals with an Approval to the Drafts as presented as below:

1. Draft Incentive Schemes for Motivation/Encouragement to Sponsored Research Projects/Consultancy Projects/Publications,
2. Operational Guidelines to Strengthen Sponsored Research,
3. IPR Policy of NHCE and
4. Business Incubation Policy of NHCE to encourage the Startup Companies" etc including the views and suggestions/modifications, as suggested by board members. It is decided to implement it immediately and circulate among the Faculty Members for their information at all Departments of NHCE.
5. Encourage the Participation of Students' Teams to Various Hackathons including UC Berkeley-AP Smart India Hackathon, 2017 to be held during 2017, August 29-31, Vijayawada, AP with the support of IBM-OpenPOWER Foundation!

Action Taken on Report on Meeting held on 13th June 2017 and Review on Suggestions Given by NBA Committee Experts' Exit Meeting (*Presented before the RAB for Noting*)

1. 10% incentive will be paid by Trust to the faculty members for getting Research Grants. (*Noted*)
2. Quality Research papers should be published. Dr. Gopalakrishnan, Dean - R&D should prepare list of Journals & circulate among everyone. (*List has been Shared with Head-HR & Principal: Awaiting Circulation among Faculty after Review/Approval of Principal*) Attached here also.
3. Dean-R&D should submit proposal for paper publication incentives (*Non Financial Incentive: Every Paper Published in our proposed List of Journals, by our Faculty*)

Member/Students will get 8hrs of OOD in his/her Account which can be consumed later by themselves as 30 minutes/1 hour or 2 hours or in multiples of permissions either in the morning or in the evening based on their needs. However, they can consume it without affecting their regular class work).


4. Dean – R&D to submit proposal for incentives to students for good paper publication.
5. Every department should have consultancy project. To immediately start in CSE/CIVIL/ME/MBA. Dean- R&D to frame consultancy policy. *(Revised Policy Based on earlier Approval of our Chairman)*
6. Dean R&D to make Innovation Center and Entrepreneurship Development Center active. *(Work with EDC/Club & MBA Dept. Orientation with Dr.W.Amarnath & Others Planned)*
7. Dean- R&D should allot 4 to 5 Project Works *(Socially Relevant Products)* to students which can continue among the students.

RAB has Recommended the Seed Money: Rs. 5 Lacs-50 Lacs in Phases-Leading to Start-ups (Investments will be Recovered & Recycled) for the following Projects:

- a) *Intrusion Detection using OFC-Defence/Border Security/e-Fencing(ECE/EEE/CSE/ ISE/MCA)*
- b) *Desktop Machine for Making Oil (Petrol/Diesel) from Waste Plastics (Mech/Auto/ MBA)*
- c) *Intelligent Career Design Tool (Online/Physical) Decision Support System (All Depts)*
- d) *Science DTH: Learning Solutions (All Departments)*
- e) *Tourism: Home Stay/Serviced Apartments-Decision Tool (Civil/CSE/ISE/MCA)*
- f) *Water: Cost Effective Desalination Plant for Coastal Zone Living/Agriculture (All Depts)*
- g) *Conservation and Two-way Transportation of Fresh Water along the Coast for Long Distance: Alternate Proposal to Inter-Linking of Rivers (Civil/All Depts)*
- h) *Smart Agriculture: IoT for Agriculture (All Depts)*
- i) *Virtual Reality-Augmented Reality for Education/Training/Entertainment (All Depts)*
- j) *Affordable Health Care: Portable Devices/System for Rural Health Care (All Depts)*
- k) *Power Generation Using Waves (All Depts)*
- l) *Fuel Cell Projects (All Depts)*
- m) *Student Satellite Project (All Depts)*
- n) *Applications of Satellite Images for Domestic Needs/Urban Planning/Water Tables/ Crop Monitoring etc (All Depts)*


Dr. K. GOPALAKRISHNAN
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NEW HORIZON COLLEGE OF ENGINEERING

Research Advisory Board (RAB)

Proceedings of the Meeting held at Conference Room, NHCE on
25 October 2017 Wednesday 14:30 hrs

Members Present:

1. Padma Shri. Prof. R. M. Vasagam, *Chairman, Research Advisory Board*
2. Padma Shri. Dr. Mylswamy Annadurai, *Special Invitee*
3. Prof. E.S. Dwarakadasa
4. Dr. N. Mohandas
5. Dr. R. Venkatesan
6. Dr. L. V. Muralikrishna Reddy
7. Dr. Wooday P Krishna
8. Dr. J. Ramkumar
9. Dr. S. Ravichandran
10. Dr. G. Prabhukumar
11. Dr. Manjunatha
12. Dr. K. Gopalakrishnan, *Member Secretary, Research Advisory Board*

Leave Absence Granted: *Dr. V. S. Somanath, Dr. K. Ramachandra, Dr. K. Venkatesh,
Mr. S.M. Jamkhandi and Dr. M.R. Pranesh*


DECISIONS:

The Research Advisory Board has Decided the following unanimously after due deliberations:

1. Appreciated the Successful Students' Team who have Won the UC Berkeley-AP Smart India Hackathon-2017, under "Entrepreneurship Category" held during August 29-31, Vijayawada, AP.
2. Decided to Conduct Karnataka Smart Village Hackathon- Review of Preparations- Accommodation -Inauguration-Minute by Minute Programme- Any other Items
3. Coordinate the IBM OpenPOWER-DL/ML Expert's Visit to NHCE on 9 Feb
4. Initiate Students Satellite Programme at NHCE as suggested by Padma Shri. Dr. Mylswamy Annadurai, *Project Director, Chandrayaan 1 & 2 and Mars Orbiter Mission (MOM)-Mangalyaan*
5. Establish Tinkering Lab: *Chairman has also Approved it!*
6. Organise Interdisciplinary International Conference with Foreign Speakers: *Chairman has also Approved it!*
7. RAB has Appreciated the efforts of Dean (R&D) for Filing Patents as planned and Reviewed the Patents Filed, Progress have Made with reference to Sponsored Research/Consultancy Projects & Publications and then Appreciated the R&D Cell for its significant interventions at Department Level at NHCE!


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NEW HORIZON COLLEGE OF ENGINEERING

Research Advisory Board (RAB)

Proceedings of the Meeting held at Conference Room, NHCE on
07 Feb 2018 Wednesday 14:30 hrs

Members Present:


1. Padma Shri. Prof. R. M. Vasagam, *Chairman, Research Advisory Board*
2. Prof. E.S. Dwarakadasa
3. Dr. M.R. Pranesh
4. Dr. N. Mohandas
5. Dr. R. Venkatesan
6. Dr. L. V. Muralikrishna Reddy
7. Dr. Wooday P Krishna
8. Dr. K. Ramachandra
9. Dr. J. Ramkumar
10. Dr. S. Ravichandran
11. Dr. G. Prabhukumar
12. Dr. Manjunatha
13. Dr. K. Gopalakrishnan, *Member Secretary, Research Advisory Board*

Leave Absence Granted: *Dr. V. S. Somanath, Dr. K. Venkatesh and Mr. S.M. Jamkhandi*

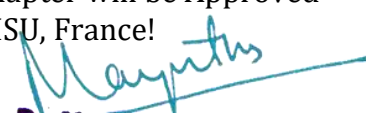
DECISIONS:

1. It is decided to encourage the Students' Satellite Team Members to participate in **International CanSat/Rocketry Championship** to be held at Serbia during October 2019. Preliminary trainings as required need to be supported by NHCE.
2. Decided to Organise AgRuTech Hackathon 2018 and Accelathon 2.0 Hackathon etc at NHCE during 2018-19 Academic Year!
3. Decided to be part of **Indo-Israel ITCA's Delegation: Global Technology Cooperation Initiatives with Israel** (03-08 June 2018) and arrange the interaction with Mr. Ofir Akunis, Israel's Minister of Science. Technology and Space at the Israeli Parliament "Knesset" on 06 June 2018.
4. **Decided to Publish "Compendium of Students' Satellites" with the support of World Federation of Engineering Organisations (WFEO)** and Indian Technology Congress Association (ITCA) with ISBN: 978-93-84893-88-0, to be Edited by **Dr. K. Gopalakrishnan**. The Compendium shall be Compiled by NHCE Students and to be Released by Hon'ble CM of Karnataka on 05 September 2018 at NIMHANS Convention Centre, Bangalore.
5. **Decided to initiate "75 Students' Satellite Consortium" under the Guidance of Dr. K. Gopalakrishnan, Dean (R&D)-NHCE** and also decided to Organise "**1st International Seminar on Students' Satellites**" in association with ITC 2018 and other Professional Bodies during 05-06 September 2018 at NIMHANS Convention Centre, Bangalore. He will be the Convener of "**75 Students' Satellite Consortium: Mission 2022!**"

6. **Decided to Sponsor 13 Students of NHCE who have gone for International Internship at France to Participate in IBM Hackathon at Netherlands** and the Visit to Rome Sapienza University, Italy. NHCE Students (13) will participate in IBM OpenPOWER Summit Europe and Netherlands Hackathon to be held at Netherlands (Amsterdam) during 06-07 October 2018.
7. **Decided to Sponsor NHCE Students (3) for Visiting Rome Sapienza University, Italy** during 24-26 November 2018 and to explore the possibilities collaborations/ interactions on space debris research projects etc with Prof. Fabio Santoni.
8. **Decided to strengthen the ITCA-Israel Tie-ups: Dr. K. Gopalakrishnan, Dean (R&D)-NHCE** has established active working relationships with Israel. ITCA has planning to coordinate **2nd Indo-Israel Delegation Visit to Israel** during 10-16 November 2018 to explore the funding opportunities at Israel for EEs. It is approved by RAB and noted the progress with appreciation.
9. **Authorized Dr. K. Gopalakrishnan, Dean (R&D)-NHCE** to Organise “**2nd International Programme on Students’ Satellites: Mission 2022**” during 28-29 Nov 2018 in association with ITCA and UNISEC India at FKCCI Auditorium, Bangalore as Organising Secretary.
10. **Decided to provide an Opportunity and also provide Financial Support/ Sponsorship** for **SIX** of our NHCE Students who have got selected to participate in World Famous “**The International Summer Space School: Future Space Technologies and Experiments in Space**” held at **Samara National Research University, Samara, Russia** during **17-29 June 2019**. FIVE of them will participate in this Summer School at Russia; even our Chairman has sponsored part of their expenses.
11. **Authorized Dr. K. Gopalakrishnan, Dean (R&D)-NHCE** for establishing the Chapter of **University Space Engineering Consortium (UNISEC) India** and Approved his candidature as **the Secretary General and Point of Contact** for the **Global Activities**. <http://www.unisec-global.org/pointofcontact.html>.
12. Decided to network with D’Vine Research Labs (DRS) and encourage them to NHCE as Start-up.
13. Three of our Students Mr. Nihkil, Mr. Denzel and Ms. Bhavana from New Horizon College of Engineering, Bangalore have been selected for **Attending 6th Global Meet of UNISEC** and presenting at International Space University, France. NHCE Students will Represent UNISEC India at International Space University, Strasbourg, France during 6th UNISEC Global Meeting as the Representatives of Indian Student Community! They will also present reports of activities during the Global Meet! University Space Engineering Consortium (UNISEC)- India has been repressed by our Delegates at 6th UNISEC Global Meeting held at International Space University (ISU), Strasbourg, France during 19-21 November 2018! UNISEC Global Head Quarters is situated at Japan. UNISEC India Chapter will be Approved formally and to be Inaugurated during the Global Meet at ISU, France!


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NEW HORIZON COLLEGE OF ENGINEERING

Research Advisory Board (RAB)

Proceedings of the Meeting held at Conference Room, NHCE on
19 September 2018 Wednesday 11:30 hrs

Members Present:


1. Padma Shri. Prof. R. M. Vasagam, *Chairman, Research Advisory Board*
2. Prof. E.S. Dwarakadasa
3. Dr. M.R. Pranesh
4. Dr. N. Mohandas
5. Dr. R. Venkatesan
6. Dr. L. V. Muralikrishna Reddy
7. Dr. Wooday P Krishna
8. Dr. V. S. Somanath
9. Dr. K. Venkatesh
10. Dr. K. Ramachandra
11. Dr. G. Prabhukumar
12. Dr. Manjunatha
13. Dr. K. Gopalakrishnan, *Member Secretary, Research Advisory Board*

Leave Absence Granted: Dr. J. Ramkumar, Dr. S. Ravichandran and Mr. S.M. Jamkhandi


DECISIONS:

The RAB has Congratulated the Dean (R&D) for the Successful Implementation of the following Decisions:

1. **Indo-Israel ITCA's Delegation: Global Technology Cooperation Initiatives with Israel** (03-08 June 2018) and the fruitful interaction of Dr. K. Gopalakrishnan, Dean (R&D), NHCE with **Mr. Ofir Akunis**, Israel's Minister of Science. Technology and Space at the Israeli Parliament "Knesset" on 06 June 2018.
2. **Published the "Compendium of Students' Satellites" with the support of World Federation of Engineering Organisations (WFEO)** and Indian Technology Congress Association (ITCA) with ISBN: 978-93-84893-88-0, Edited by **Dr. K. Gopalakrishnan**. The Compendium was Compiled by NHCE Students and Released by Hon'ble CM of Karnataka on 05 September 2018 at NIMHANS Convention Centre, Bangalore.
3. **Dr. K. Gopalakrishnan, Dean (R&D)-NHCE has founded the "75 Students' Satellite Consortium"** and also Organised **"1st International Seminar on Students' Satellites"** in association with ITC 2018 and other Professional Bodies during 05-06 September 2018 at NIMHANS Convention Centre, Bangalore. He was the Convener of **"75 Students' Satellite Consortium: Mission 2022!"**
4. It is decided to organise Inter-disciplinary International Conference at NHCE with International participations of delegates.
5. Decided to encourage the International Internships for deserving "smart students of NHCE" at Various European Countries/Russia/USA/Canada for deserving students with the support of NHCE.


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NEW HORIZON COLLEGE OF ENGINEERING

Research Advisory Board (RAB)

Proceedings of the Meeting held at Conference Room on 28 Jun 2019, Friday @ 15:30 hrs


Members Present:

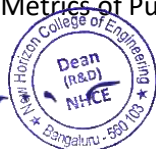
1. Padma Shri. Prof. R. M. Vasagam, *Chairman, Research Advisory Board*
2. Prof. E.S. Dwarakadasa
3. Dr. M.R. Pranesh
4. Dr. N. Mohandas
5. Dr. R. Venkatesan
6. Dr. L. V. Muralikrishna Reddy
7. Dr. Wooday P Krishna
8. Dr. G. Prabhukumar
9. Dr. Manjunatha
10. Dr. K. Gopalakrishnan, *Member Secretary, Research Advisory Board*


Leave Absence Granted: *Dr. J. Ramkumar, Dr. S. Ravichandran, Mr. S.M. Jamkhandi, Dr. V. S. Somanath, Dr. K. Venkatesh and Dr. K. Ramachandra*

DECISIONS:

1. **Decided to provide** an Opportunity and also provide Financial Support/Sponsorship for **6 of our NHCE Students** to part of **2nd Indo-Israel Space Tech Leadership Programme held at Israel during 26-31 May 2019**. FIVE of them will participate in this delegation; even our Chairman has agreed to sponsor part of their expenses. *(6th Student has joined duty with IBM on regular scale, hence, he could not avail leaves to be part of this delegation. Appreciated the Dean R&D who is instrumental in getting these boys Internship at IBM, USA and at IIT Kanpur during May 2018 which has led to his selection at IBM-Off Campus Placement Interview again coordinated by Dean R&D through his links at IBM).*
2. Appreciated the Success of NHCE Students (13) who have Sponsored and participated in IBM OpenPOWER Summit Europe and Netherlands Hackathon held at Netherlands (Amsterdam) during 06-07 October 2018-**NHCE Students' Won 2 Awards**. This event has paved the way and instrumental for IBM has agreed to establish IBM OpenPOWER AI Centre of Excellence at NHCE! RAB has Congratulated Dr. K. Gopalakrishnan, Dean (R&D) for his sensible interventions!
3. Congratulated the NHCE Students (3) who have Visited Rome Sapienza University, Italy during 24-26 November 2018 and had interactions with Prof. Fabio Santoni and he has agreed to attend the International Conference to be held at NHCE during Dec 2019!
4. Appreciated the efforts of IPR related activities and Strat-up Initiatives at NHCE by R&D Cell.
5. Suggested to conduct Orientations and Workshops to sensitize the faculty members with respect to the Quality Metrics of Publications with Quality Journals!


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NEW HORIZON COLLEGE OF ENGINEERING

Research Advisory Board (RAB)

Proceedings of the Meeting held at Conference Room on 25 Oct 2019, Friday at 11:30 hrs


Members Present:

1. Padma Shri. Prof. R. M. Vasagam, *Chairman, Research Advisory Board*
2. Prof. E.S. Dwarakadasa
3. Dr. M.R. Pranesh
4. Dr. N. Mohandas
5. Dr. R. Venkatesan
6. Dr. L. V. Muralikrishna Reddy
7. Dr. Wooday P Krishna
8. Dr. V. S. Somanath
9. Dr. K. Venkatesh
10. Dr. J. Ramkumar
11. Dr. K. Ramachandra
12. Mr. S.M. Jamkhandi
13. Dr. G. Prabhukumar
14. Dr. Manjunatha
15. Dr. K. Gopalakrishnan, *Member Secretary, Research Advisory Board*


Leave Absence Granted: *Dr. S. Ravichandran*

DECISIONS:

1. Congratulated Dr. K. Gopalakrishnan, Dean (R&D)-NHCE who have identified potential students from current final years and have fielded them as Competition Teams after 2 months of training and interventions for 2019 SERBIA CANSAT COMPETITION held at Serbia during 04-06 October 2019. FOUR of NHCE Team have been shortlisted for the Final Competition among other teams from various Countries! NHCE Teams Won GOLD and SILVER Medals in the Competition and also all the FOUR Teams have received UNISEC Global Jury Award as well! Dean (R&D) have also successful in arranging the sponsorship through ITCA and UNISEC India Chapters!
2. **Provided an Opportunity for NHEI for Collaboration with Israel Satellite Launching at PSLV, India (October/November 2019 Launch with PSLV, India)**
The Israeli Student Satellite **Duchifat-3** is an experimental and educational spacecraft developed and built by students of secondary schools at the Space Laboratory of the Herzliya Science Centre (HSC), Israel. It is built to the 3U CubeSat standard (10 cm x 10 cm x 30 cm with an Approximate Cost: USD 1.5 Million-Rs. 9-10 Cr in Last 1-2 Years. Approximate Mass of Satellite: 2.5 kg) under the Guidance of **Dr.Meir Ariel**, Director, Nano Satellite Centre, Tel Aviv University, Israel and Director, Herzliya Science Centre, Israel who have instrumental for the design of longest serving Nano Satellite in orbit.
 - Opportunity to Launch Jointly as Member of ITC 75 Students' Satellites Consortium by Supporting minimum 1/6 of the Launch Cost to the tune of up to Rs.25 Lakhs! However, negotiations are underway with ISRO-NSIL through our network to optimize/finalize the cost of Launch! It was also approved by ExCom Meeting held during 04 & 08 April 2019.
3. Established UNISEC India Chapter at NHCE and Inaugurated by **Padma Shri Prof. R. M. Vasagam** during National Seminar on New Space-An Era of Small Satellites: Opportunities and Challenges at our Auditorium, NHCE.


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NEW HORIZON COLLEGE OF ENGINEERING

Research Advisory Board (RAB)

Proceedings of the Meeting held at Conference Room on 09 Jan 2020, Thursday at 10.30 hrs

Members Present:

1. Padma Shri. Prof. R. M. Vasagam, *Chairman, Research Advisory Board*
2. Prof. E.S. Dwarakadasa
3. Dr. M.R. Pranesh
4. Dr. N. Mohandas
5. Dr. R. Venkatesan
6. Dr. L. V. Muralikrishna Reddy
7. Dr. Wooday P Krishna
8. Dr. V. S. Somanath
9. Dr. S. Ravichandran
10. Dr. K. Venkatesh
11. Dr. G. Prabhukumar
12. Dr. Manjunatha
13. Dr. K. Gopalakrishnan, *Member Secretary, Research Advisory Board*


Leave Absence Granted: Dr. J. Ramkumar, Dr. K. Ramachandra and Mr. S.M. Jamkhandi

DECISIONS:


1. Recommended the following Metrics to be followed for Research Publications @ NHCE:
 - a) *Google Scholar*
 - b) *Web of Science*
 - c) *Scopus*
 - d) *PUBMED*
 - e) *FT45/FT50*
 - f) *Research ID*
 - g) *ORCID ID*
 - h) *"h" Index*

Decided to Circulate the details of the above Metrics and respective Agencies etc among the Faculty Members of NHCE.

2. Suggested to conduct the detailed Objective Evaluation of the R&D Training Requirements at Departments of NHCE as per the Guidelines/Format Provided by the RAB of NHCE.
3. Recommended Self Evaluation Format for Faculty Members regarding their own Progress/continuous Improvement with reference to "R&D Performance Evaluation Metrics"


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Publication Metrics and Respective Agencies/Companies Responsible for Calculation

Metrics	Parent Organisation/ Company	Description
Google Scholar	Google Inc	Google Scholar Citation
Web of Science	Thomson Reuters Inc	Web of Science is an online subscription-based scientific citation indexing service originally produced by the Institute for Scientific Information, now maintained by Clarivate Analytics, that provides a comprehensive citation search. Web of Science provides you access to the most reliable, integrated, multidisciplinary research connected through linked content citation metrics from multiple sources within a single interface. And since Web of Science adheres to a strict evaluation process, you can be assured only the most influential, relevant, and credible information is included - allowing you to uncover your next big idea faster. (90 million+ records)
Scopus	Elsevier Inc	Scopus is the largest abstract and citation database of peer-reviewed literature: scientific journals, books and conference proceedings. Delivering a comprehensive overview of the world's research output in the fields of science, technology, medicine, social sciences, and arts and humanities, Scopus features smart tools to track, analyze and visualize research. Scopus is Elsevier's abstract and citation database launched in 2004. It is the world's largest abstract and citation database of peer-reviewed research literature. (69 million+ records)
PUBMED	National Center for Biotechnology Information, USA	PubMed is a free search engine accessing primarily the MEDLINE database of references and abstracts on life sciences and biomedical topics. (27 million Citations)
FT45/FT50	Financial Times Rank Research	This was the "FT 45" list, which was expanded in 2016 and now it is the FT50 list.
Research ID	Thomson Reuters Inc	ResearcherID is an identifying system for scientific authors. The system was introduced in January 2008 by Thomson Reuters. This unique identifier aims at solving the problem of author identification.
ORCID ID	Non-Profit Organization <i>Connecting Research and Researchers</i>	ORCID is a nonproprietary alphanumeric code to uniquely identify scientific and other academic authors and contributors. ORCID provides a persistent digital identifier that distinguishes you from every other researcher and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between you and your professional activities ensuring that your work is recognized.
"h" Index	Open Tool	The h-index is an author-level metric that attempts to measure both the productivity and citation impact of the publications of a scientist or scholar. The index was suggested in 2005 by Jorge E. Hirsch, a physicist at UCSD, as a tool for determining theoretical physicists' relative quality and is sometimes called the <i>Hirsch index</i> or <i>Hirsch number</i> . Hirsch suggested that, for physicists, a value for <i>h</i> of about 12 might be typical for advancement to tenure (associate professor) at major research universities. A value of about 18 could mean a full professorship, 15–20 could mean a fellowship in the American Physical Society , and 45 or higher could mean membership in the United States National Academy of Sciences .
"i-10" Index	Google Inc	Created by Google Scholar and used in Google's My Citations feature. i10-Index = the number of publications with at least 10 citations. This very simple measure is only used by Google Scholar, and is another way to help gauge the productivity of a scholar.
SJR	SCImago Journal & Country Rank	SCR lets you view journal rankings by subject category, to view a variety of indicators (including the SCR Rank and H-index) for individual journals, and to compare journals to each other

Objective^ Evaluation of the R&D Training Requirements of Individual Faculty Members at Departments

- A. How to write research papers for Journals/Conferences?(5 = Know Very well; Do not Know = 1)
 B. How to write and publish books with ISBN/book chapters?(5 = Know Very well; Do not Know = 1)
 C. Where can I get the details of R&D Grants availability for Engineering College Faculty Members?(5 = Know Very well; Do not Know = 1)
 D. Where can I get the details of funding agencies and their formats for applying?(5 = Know Very well; Do not Know = 1)
 E. How to write Proposals for Sponsored Research Organisations?(5 = Know Very well; Do not Know = 1)
 F. Do you need help in correcting your R&D Proposals before submitting to funding agencies?(5 = Know Very well, hence not required; Do not Know, hence, required = 1)
 G. How to understand the difference between Sponsored Research Projects and Consultancy Projects?(5 = Know Very well; Do not Know = 1)

Kindly mark your current skills as applicable to the above questions: Likert Scale: 1, 2, 3, 4, 5; For Example, Question "A", if you know very well, how to write a paper then mark, "5"; if you do not know, how to write a paper, then mark "1". Similarly, based on the degree/level of your understanding/knowledge about the questions, you can choose

R&D Related Training Requirements of Faculty Members Vs Total Faculty Members in the Departments @ NHCE

Name of the Department	A. How to Write Research Papers for Journals/Conference	B. How to Write and Publish Books with ISBN	C. Where R&D Grants are Available for Faculty Members	D. Names of Funding Agencies and their Formats	E. How to Write Proposals for Funding Projects	F. How to Correct your R&D Proposal Before Submission	G. Difference Between Sponsored and Consultancy Projects	Specific Requirements
MBA	-	-	7/10	7/10	5/10	5/10	5/10	How to Apply and Get R&D Grants and Consultancy
CSE	5/31	17/31	20/31	21/31	21/31	22/31	17/31	R&D/Consultancy Proposal Writing
Auto	-	6/7	7/7	7/7	4/7	4/7	4/7	-
Maths	-	1/13	4/13	7/13	9/13	9/13	12/13	Guidance in Writing R&D Proposal and Patent Filing
MCA	-	3/10	6/10	6/10	9/10	10/10	8/10	Training for How & Where to Get R&D Grants and Consultancy
EEE	-	14/21	7/21	11/21	8/21	10/21	7/21	Training for How & Where to Get R&D Grants and Consultancy
Mechanical	-	8/33	10/33	10/33	16/33	15/33	3/33	Training for How & Where to Get R&D Grants and Consultancy
Chemistry	-	-	-	-	-	-	-	Liasoning with Funding Agencies and Info on Patent Filing
Civil	-	18/23	12/23	12/23	14/23	15/23	12/23	Training for How & Where to Get R&D Grants and Consultancy
ECE	3/25	13/25	15/25	15/25	16/25	17/25	15/25	Training for How & Where to Get R&D Grants and Consultancy
Physics	-	1/7	-	-	1/7	4/7	2/7	Simulation, Monte-Carlo, DFT Techniques & Python Program
ISE	-	-	-	-	-	-	-	R&D/Consultancy Proposal Writing, Books & Patent Filing
Total	8/202	81/202	88/202	96/202	103/202	111/202	85/202	

Note: 3 HoDs of CSE, ECE & ISE has not given their own self assessment. May be they will take care of themselves! However, All Other 9 HoDs have given their Own Self Assessments, out of 12 HoDs!

Objective[^] Evaluation of the R&D Training Requirements of Individual Faculty Members at Departments

- A. How to write research papers for Journals/Conferences?(5 = Know Very well; Do not Know = 1)
 B. How to write and publish books with ISBN/book chapters?(5 = Know Very well; Do not Know = 1)
 C. Where can I get the details of R&D Grants availability for Engineering College Faculty Members?(5 = Know Very well; Do not Know = 1)
 D. Where can I get the details of funding agencies and their formats for applying?(5 = Know Very well; Do not Know = 1)
 E. How to write Proposals for Sponsored Research Organisations?(5 = Know Very well; Do not Know = 1)
 F. Do you need help in correcting your R&D Proposals before submitting to funding agencies?(5 = Know Very well, hence not required; Do not Know, hence, required = 1)
 G. How to understand the difference between Sponsored Research Projects and Consultancy Projects?(5 = Know Very well; Do not Know = 1)

Kindly mark your current skills as applicable to the above questions: Likert Scale: 1, 2, 3, 4, 5; For Example, Question "A", if you know very well, how to write a paper then mark, "5"; if you do not know, how to write a paper, then mark "1". Similarly, based on the degree/level of your understanding/knowledge about the questions, you can choose

Assessment Parameters Related to Publications, R&D Grants, Consultancy Etc.		A. How to write research papers for Journals/Conferen ce					B. How to write and publish books with ISBN					C. Where R&D Grants are available for faculty Members					D. Names of funding agencies and their formats					E. How to write Proposals for Funding Projects					F. How to correct your R&D Proposal before submission					G. Difference between Sponsored and Consultancy Projects					Do you require any training with ref to your R&D skill set, if so, What is that? Specify your requirement. (if you need more space, write below the table)*	
Departments Names of Faculty Members/		5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1		
Name of the Faculty Member	Designation																																					
Department of Management																																						
Dr.Sheelan Misra	Prof & HoD	5						4					4					4					5					4				5					How to procure consultancy	
Dr. Sainath Ambedkar Ramoji Rao	Professor		4						3					3					3				4					4					3				How to write and publish books with ISBN.	
Dr. Priyameet Kaur Keer	Assoc Professor		4					4						3					3					3					3				3				Various R&D funding/ Consultancy projects	
Mr.Santosh Kumar S	Sr. Asst Professor		4					4							2						2				2				3				3				How to get funded projects. Links for the reference.	
Mr.Lokesh K N	Sr. Asst Professor		4					4							2						2				2				3				3				Handholding in writing & publishing books research proposal	
Mr.Sheshu A	Sr. Asst Professor			3					3						2						2				2				2					2			Rising fund for project/consultancy	
Mr.Srikanth Rajath K G	Sr. Asst Professor			3					3						2						2				2				2					2			consultancy	
Ms.Pavithra S	Asst Professor		4					4							2						2				2				2					2			R&D grants	
Ms. Jayashree N	Asst Professor		4					4							2						2				2				2					3			R&D grants	
Ms. Saumi Roy	Asst Professor		4						3						2						2				2				2					3			R&D grants	
Department of CSE		5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1		
Dr. Pamela Vinitha Eric	Professor	✓						✓							✓						✓							✓					✓				Consultancy, Availability of Research Grants	
Dr. Clara Kanmani A	Associate Prof	✓						✓							✓						✓							✓					✓				Consultancy, Availability of Research Grants	
Dr. Thirukkumaran R	Associate Prof	✓						✓							✓						✓							✓					✓				Research proposal writing	
Dr. Sridevi S	Associate Prof	✓							✓						✓						✓							✓					✓				Consultancy, Availability of Research Grants	
Dr.Vinodha K	Associate Prof					✓	✓							✓	✓						✓						✓					✓					Proposals for Funding Projects and Grants	
Dr. Rachana P	Associate Prof	✓												✓							✓							✓					✓			✓		Research proposal writing
Mr. Siva Balan N	Sr.Asst Prof	✓											✓								✓							✓				✓	✓				Consultancy and Research proposal writing	
Dr. Jaya R	Sr.Asst Prof	✓						✓					✓								✓							✓					✓			✓		Research proposal writing
Ms. Asha Rani Borah	Sr.Asst Prof	✓						✓					✓								✓								✓						✓		Research proposal writing	
Ms. Shanmuga Priya S	Sr.Asst Prof					✓								✓							✓								✓						✓		Research proposal writing	
Ms. Pramilarani K	Sr.Asst Prof	✓							✓					✓							✓							✓					✓			✓		Research proposal writing
Ms. Padmapriya M K	Sr.Asst Prof			✓						✓					✓						✓						✓			✓				✓			Research proposal writing	
Ms. Alpha Vijayan	Sr.Asst Prof			✓						✓					✓						✓						✓			✓				✓			Research proposal writing	
Ms. Soja Rani S	Sr.Asst Prof			✓					✓					✓							✓								✓					✓			Research proposal writing	
Mr. Santosh Kumar B	Sr.Asst Prof			✓					✓					✓							✓											✓			✓		Consultancy project and Research proposal writing	
Ms. Deepti Rai	Sr.Asst Prof			✓					✓					✓							✓								✓					✓			Research proposal writing	
Ms. Suganya.R	Sr. Asst Prof	✓										✓									✓							✓						✓		✓	Proposals for Funding Projects and Grants	

Mr. Govindaraju M	Sr. Asst Professor			✓					✓				✓					✓						✓				✓				✓	Yes- C,D,E,F & G
Mr. Vishwanatha C R	Sr. Asst Professor			✓					✓				✓					✓						✓				✓				✓	Yes- C,D,E,F & G
Mrs. Jincy C Mathew	Asst. Professor			✓				✓					✓					✓						✓				✓				✓	Yes- C,D,E,F & G
Mrs. Kavitha S N	Asst. Professor			✓				✓					✓					✓						✓				✓				✓	Yes- C,D,E,F & G
Mrs. Anu Bala	Asst. Professor			✓					✓				✓					✓						✓				✓				✓	Yes- C,D,E,F & G
Department of EEE		5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1		
Dr. Guna Priya B	Asso.prof			3					2				2				3					3					1				1	How to write Proposals for Funding Projects &Sponsored and Consultancy Projects *	
Dr. Vinoth Kumar	Asso.prof	5					5						3				4					4					3			4			Nil
Mr. Inbasakaran S	Sr.Asst Prof		4					3					3					3					3				3			3			Nil
Ms. Karthika M	Sr.Asst Prof	5							2			4					4					4					3			3			Nil
Mr. Joshua Daniel Raj	Sr.Asst Prof		4						1				2								1			2				1			2		Funding Agencies, Proposal Writing and related software training
Mr. Satish Kumar D	Sr.Asst Prof			3				3				4					4					3					1			2			Yes
Mr. Muni Prakash. T	Sr.Asst Prof		4					3				3								2		3					3			3			Nil
Mr. Mohan B.S	Sr.Asst Prof		4						1			3							2				2					1		3			I want to do some consultancy projects.
Ms. Deepa V.Bolanavar	Sr.Asst Prof		4						2			3						3			5						3			5			Yes we require training on different funding agencies criteria and how to proceed, and Book writing
Mr. Vinod Kumar S	Sr.Asst Prof			3					2				1							1			1				2			3			Patent Filing Process Can Be Added
Dr. Prasanth Ram j	Sr.Asst Prof	5						3					1							1		3					3			3			Nil
Dr. Mohan Dass.R	Sr.Asst Prof			3					3				3					3				4					3			3			Yes for Funding Projects
Dr. Singaravelan.A	Sr. Asst Prof	5							2				2						2				2				2				2		Yes, I need training for Book publication and research fund proposal.
Ms. Kavitha Channa Reddy	Sr. Asst Prof			3					1				1						2				2					1			2		Yes we need training
Mr.Sunil S K	Sr. Asst Prof	5					4				5						5					4				4				4			R&D funding
Mr. Ramakrishnan.S	Asst Prof 2			3					1				2							1				1				1			3		Yes
Dr. N Prabhakaran	Sr. Asst Prof	5						3					1							1		3					3			3			How to write proposals for funding agencies.
Mr. Lithesh J	Asst Prof 2		4					3				3						3				3					3			3			Nil
Ms. Roopa.C	Asst Prof 2			3					1				1							1			2					1			2		Yes, Starting from proposal writing, funding agenesis, proposal correction and also how to make patenting of project.
Ms. Anitha A	Asst Prof 2		4					3				4					4									3				3			Licensed Software (PSCAD, Lab view) and Training on Hardware setup (proto type)
Ms .Rashmi N	Asst Prof 1		4						2				3									2						2			2		Yes
Department of Mechanical		5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1		
Dr. M.S Ganesha Prasad	Dean, Professor & HoD	ü					ü					ü					ü					ü				ü				ü			
Dr. Gopalakrishnan. K	Dean, R&D	ü					ü					ü					ü					ü				ü				ü			
Dr. B. Viswanath	Professor		ü				ü					ü					ü					ü				ü				ü			Require help for Research proposals and Consultancy projects
Dr. Priyabrata Adhikary	Professor		ü				ü					ü					ü					ü				ü				ü			Liasoning with DST / AICTE
Dr. Ashok Kumar	Associate Professor	ü					ü					ü					ü					ü				ü				ü			
Dr. K Gopal	Associate Professor	ü					ü					ü					ü					ü				ü				ü			Training - Proposals Writing
Dr. Srinath. M.K	Associate Professor	ü					ü					ü					ü					ü				ü				ü			
Dr. Hemanth Raju T	Associate Professor	ü					ü					ü					ü					ü				ü				ü			Training required to write the proposals for funding projects
Dr. Nagendra.J	Sr. Assistant Professor	ü					ü					ü					ü					ü				ü				ü			Not required
Dr. Aditi Raj	Sr. Assistant Professor		ü				ü					ü					ü					ü				ü				ü			
Mr. Shiva Prakash. S	Sr. Assistant Professor		ü				ü					ü					ü					ü				ü				ü			Training required for sponsored and consultancy projects
Mr. Raghu Tilak Reddy	Sr. Assistant Professor	ü					ü					ü					ü					ü				ü				ü			
Mr. Ravi Kumar . M	Sr. Assistant Professor	ü					ü					ü					ü					ü				ü				ü			Not required
Mr. Naqabhushana. N	Sr. Assistant Professor		ü				ü					ü					ü					ü				ü				ü			

Mr. Chetan Kumar D S	Sr. Assistant Professor	ü						ü					ü				ü								ü																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Mr. Channabasava		Asst Professor	√							√				√					√					√				√			B, C, E, F & G		
Mr. Yogesh K S		Asst Professor	√							√				√					√					√				√			B, C, E & F		
Mr. Rahul N K		Asst Professor		√						√									√								√				B, C, D, E, F & G		
Ms. Geethu V		Asst Professor	√						√				√					√					√			√		√			B, C, D, E, F & G		
Mr. Satish D		Sr. Asst Professor	√							√			√						√					√			√		√		B, C, D, E, F & G		
Department of ECE			5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	
Dr. B. Mohan Kumar Naik		Professor		4					4						3							3					3			4		Kindly on effective R&D grant proposal write up and submission.	
Dr. K C R Nisha		Professor	√						√				√				√				√				√			√			Guidelines laid down for consultancy work How to effectively implement the projects with available resources and facilities to achieve desirable outcomes and deliverables		
Dr. Jayanthi M		Assoc Professor	5						3					2						2					2				1		1	Yes. Writing proposal for funding projects and requirement of research organizations	
Dr. Reema Sharma		Assoc Professor		4					3				4					4				3				3			3		4	How to improve proposal writing skills so that it gets selected?	
Dr. Piruthiviraj P		Assoc Professor									√			√					√					√			√			√		Patent Publish,	
Dr. Dhivya M		Assoc Professor		4				5					4					4				3				3			3				
Dr. A B Gurulakshmi		Assoc Professor		4					3					3				4				4				4				3			
Dr. Aravinda K		Sr. Asst Professor	5						4					3					3				3					2			2		Require training wrt Grants
Dr. Naveen H		Sr. Asst Professor		4							1			2					2			3					2			3		Training on Patent Drafting, Training on effective technical writing	
Ms. Ishani Mishra		Sr. Asst Professor			√					√				√					√					√				√			√	How to publish papers in reputed journals ,how to write proposals in an effective manner. Training program should be conducted related to publications in reputed journal, writing research proposals and so on.	
Ms. Divya Sharma		Sr. Asst Professor			√					√				√					√					√				√			√	How to write and publish papers in SCI, IEEE and equivalent journals. Also would like to learn more on writing proposals	
Ms. Lipsa Dash		Sr. Asst Professor	√						√					√					√				√				√			√		Require inputs on how to write proposals	
Ms. Monika Gupta		Sr. Asst Professor			3							2				1						1			1				1		1	The training on patent drafting would help us in applying for patents.	
Mr. Rajesh G		Sr. Asst Professor			3							1			2					2				2				1		3			
Mr. Ashok K		Sr. Asst Professor		4								1				1					1			1				1			2	Regarding how to apply for patents and research grants	
Ms. Daliya V K		Sr. Asst Professor		4							1			2					2			3					3				2	Training on scientific paper writing, patent filing, consultancy and sponsored projects	
Mr. Santhosh Krishna B V		Sr. Asst Professor			3				4					2				3				2				3				3		If provided will be better is what I feel.	
Ms.Ramanamma P		Asst Professor				2			4					1							1				1				1		1	YES.	
Mr. karthik C V		Asst Professor			3						2			2							2				2			2			2	Yes. I would like to know how to write project proposals for funding projects.	
Mr. Rajiv Gopal		Asst Professor			3							1		3				3				2				2					2	Yes required. With respect to being more active in R & D and contributing to the society.	
Mr. Richard Lincoln Paulraj		Asst Professor			3					2				2					1			1					1				1	I would be willing to get trained on how to write the research papers effectively with minimum flaws	
Ms. Tessy Tomy		Asst Professor				2						1				1						1					1				1		
Ms. Mamta B Savadatti		Asst Professor			√					√				√						√				√				√			√		
Mr. Deepak Kumar S N		Asst Professor			3						2			3					2				2				2			3		Yes , On how to get funded projects	
Mr. Anush G R		Asst Professor				2					2			1					2			2				2				2		Yes I feel attending a training will help us understand the methodologies in a better manner.	
Department of Physics			5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	
Dr. Revathi V		Prof & HoD	5						4				4					5				4				4				3		Simulation techniques	
Dr. Prashanth K.S		Assoc Professor	5						4				5					4				5				5				4		Monte-Carlo, DFT Techniques	
Dr.Jisha P.K		Assoc Professor		4					4					4					4				3					2		3		Simulation techniques	

Dr. Dhanalakshmi K		Sr. Asst Professor		4					4					3				3				2				2			2			Simulation techniques
Dr. Bhavya P		Sr. Asst Professor		4					4								4								3			1			1	Simulation techniques
Dr. Rohini B		Sr. Asst Professor		4						2				4				4								3				4		Simulation techniques & Python programming
Dr. Ramachandra Naik		Asst Professor	5						5								5											1		4		Simulation techniques
Department of ISE			5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1
Dr Saravanan		Professor		4					5								5												4			Help in learning about digital marketing
Dr Aravind Kapse		Professor	5						4					4				4											4			Process of getting sanctioned the R&D proposals
Dr Mangaiyarkarsi		Assoc Professor	5							3				4				4											4			Book publishing and consultancy
Dr Srinivasan		Assoc Professor	5						4					4				4											4			Patents writing and to commercialize
Dr Supriya		Sr. Asst Professor	5						4					4					3									4			Patents writing and to commercialize	
Ms Karthiyani		Sr Asst Professor	5						4					4				4										4			Consultancy	
Ms Shoba		Sr. Asst Professor		4					4					4					4				3				3			4		Writing proposals
Ms Vandana		Sr. Asst Professor	5							3				4				5										4			Patents publishing process	
Ms Rafega begum		Sr. Asst Professor	5						4					4				4										4			Research grants proposal	
Ms Mounica		Sr.Asst Professor		4						3				4				4					3				3			4		Hints for getting proposals sanctioned, part of patent filing process.
Mr Gangadhar		Sr .Asst Professor		4					4					4				4									3			4		Support for writing and commercializing patents.
Ms Swathi		Asst Professor		4					4					4					4				3				3			4		List of correct Scopus journals
MS Divya		Asst Professor		4						3				4					4								3			4		Help in writing books and patents
Ms Bilvika		Asst Professor		4					4						3				4					3			3			4		Support in writing a proposal
Ms Gowri		Asst Professor	5							3				4				4									4			4		Book publishing
Ms Lohitha		Asst Professor			3					3				4				4					3				3			4		To write a successful project proposal.

New Horizon College of Engineering: Name of Department R&D: Performance Evaluation of Department- R&D Watch <i>R&D Activity Progress Monitoring Mechanism with Metrics: Self Evaluation by Each Department</i>								
Time Line/Out Come Activity Description	Points Per Activity	Weekly/ Points Earned	Fortnightly/ Points Earned	Monthly/ Points Earned	Quarterly/ Points Earned	Yearly/ Points Earned	Responsibility	Remarks
1. Publications								
Research Papers: Published in Journals @ 2 Points per Paper (With ISSN/Impact Factors etc)	2							
Research Papers: Published in Conference @ 2 Points per Paper (Proceedings with ISBN)	2							
Books @ 2 Points per Book	2							
Monographs/White Papers @ 2 Points per Publication	2							
"h" Index of Each Faculty @ 3 per 1 Index per Faculty	3							
"i10" Index @ 3 Points per 1 Index per Faculty	3							
Sub Total								
2. Intellectual Property Rights (IPR)								
Patents @ 5 Points per Patents	5							
Trade Marks @ 2 Points per TM	2							
Geographical Indications @ 2 Points per GI	2							
Layout-Designs of Integrated Circuits @ 2 Points per Design	2							
Industrial Designs @ 2 Points per Design	2							
Trade Secrets @ 2 Points per Trade Secret	2							
Copy Rights (rights of authors of literary and artistic works including Computer Programmes) @ 2 Points per Copy Right	2							
Sub Total								
3. Sponsored Research Projects/Grant-in-Aid: Received								
Students Min. Rs.5000/- @ 2 Points per 5K	2							
Faculty Min. Rs.25,000/- @ 3 Points per 25K	3							
Sub Total								
4. Sponsored Research Projects/Grant-in-Aid: Submitted								
Students Min. Rs.5000/- @ 0.25Points per 5K	0.25							
Faculty Min. Rs.1 Lakh @ 0.3 Points per 1 Lakh	0.3							
Faculty Min. Rs.10 Lakhs @ 3 Points per 10 Lakhs	3							

Faculty Min. Rs.100 Lakhs @ 30 Points per 1 Crore	30							
5. Consultancy Projects: Received								
Students Min. Rs.5000/- @ 2 Points per 5K	2							
Faculty Min. Rs.25,000/- @ 3 Points per 25K	3							
Sub Total								
6. Consultancy Projects: Submitted								
Students Min. Rs.5000/- @ 0.25Points per 5K	0.25							
Faculty Min. Rs.1 Lakh @ 0.3 Points per 1 Lakh	0.3							
Faculty Min. Rs.10 Lakhs @ 3 Points per 10 Lakhs	3							
Faculty Min. Rs.100 Lakhs @ 30 Points per 1 Crore	30							
Sub Total								
7. Industry Sponsored Equipment/Lab: Received								
Students Min. Rs.5000/- @ 2 Points per 5K	2							
Faculty Min. Rs.25,000/- @ 3 Points per 25K	3							
Sub Total								
8. Industry Sponsored Equipment/Lab: Submitted								
Students Min. Rs.5000/- @ 0.25Points per 5K	2							
Faculty Min. Rs.1 Lakh @ 0.5 Points per 1 Lakh	0.5							
Faculty Min. Rs.10 Lakhs @ 5 Points per 10 Lakhs	5							
Faculty Min. Rs.100 Lakhs @ 50 Points per 1 Crore	50							
Sub Total								
9. Free/Online/Advanced Labs: Established								
Students/ Faculty Activities @ 3 Points per Lab/Facility	3							
Sub Total								
10. R&D Awareness Programmes								
Participation of Min. 2 Faculty with Dean (R&D) or HoD @ 2 Points per Activity	2							
Sub Total								
11. Extra Curricular/Co curricular Activities								
Establishing Chapters of Professional Societies/Trade Bodies @ 2 Points per Activity	2							

Enhancing Team Activities/Interpersonal Skills etc –do-	2							
Sub Total								
12. Emerging Trends Watch: Alternative Teaching & Learning								
Innovations/Patents/Video Watch etc 2 Points per Activity	2							
Sub Total								
13. Industrial Visits/Industry Collaboration								
Arranging Industrial Visits/Field Training of Faculty/Students at Industries @ 3 Points per Visit	3							
B.Tech and M.Tech Mini-Major Project/Dissertation Work at Industries @ 3 Points per Activity	3							
Collaborative Training Programmes/Credit Courses –do-	3							
Companies to Take Students for Learn & Earn Programs –do-	3							
Practical Training/Pre Internship of students in Industries (Unpaid/Paid) –do-	3							
Professional Chairs sponsored by industries at NHCE –do-	3							
R&D Laboratories sponsored by industries at NHCE –do-	3							
MoU between Industries/R&D Labs/Professional/Trade Bodies	3							
Scholarships/Fellowships instituted by industries for students of NHCE –do-	3							
Short-Term Assignment/Exchange of Faculty Members in Industries –do-	3							
Expert/Professionals from Industry as Visiting Professors or Guest Lectures and delivering lectures on Industrial Best Practices & Trends –do-	3							
Sub Total								
14. Knowledge Conferences/Events: Organised/Attended								
Workshops, Conferences and Symposia @ 2 Points per Activity In House Events: Mini. 15 Students' Participation is Essential Faculty Participation in External Events: @ 2 Points per Faculty	2							
MoU between Industries/R&D Labs/Professional/Trade Bodies	2							
Having Tie-ups with Foreign Universities –do-	2							
Promote International Internship –do-	2							
Sub Total								
15. Startups: Established								

Startups by Students/Faculty Members @ 7 Points per Startup	7							
Grand Total								

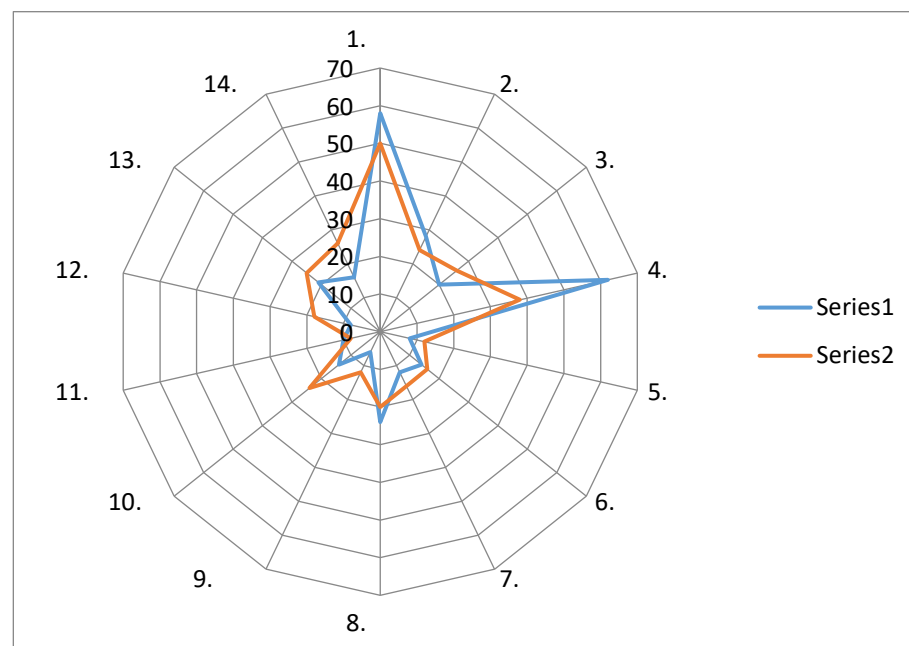
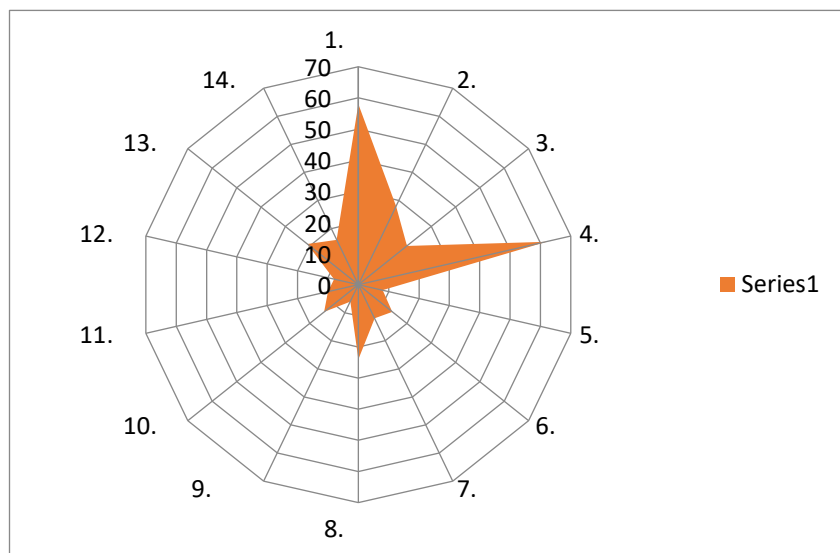
New Horizon College of Engineering: Name of Department

R&D: Performance Evaluation of Department- R&D Watch

R&D Activity Progress Monitoring Mechanism with Metrics: Self Evaluation by Each Department

Spider Web Diagram/Radar Diagram to Monitor the R&D Performance of Each Department

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	Activities/Items as above
58	28	20	62	8	14	12	24	6	14	10	8	21	16	Secured Points: Week 1 (Series 1)
50	24	26	38	12	16	16	20	12	24	8	18	25	26	Secured Points: Week 2 (Series 2)



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NEW HORIZON
COLLEGE OF ENGINEERING
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

UNIVERSAL HUMAN VALUES

Minutes of Meeting

Venue: Conference room

Date: 08.08.2018

Time: 11am

Members Attended:

Sl No	Name	Designation	Position	Signature
1.	Dr Manjunatha	Principal	Chairman	
2.	Dr. Sowmya Narayanan	Prof & HOD- Centre for Life Skills & Lifelong Learning	Member	
3.	Mr.Aravinda. K	Sr. Assistant Professor	Member	
4.	Dr. Anitha S. Rai	Head- Library & Information Center	Member	
5.	Ms. Vijaya	Advocate	Member	
6.	Dr. Anusuya Devi V S	Prof & HOD- Chemistry	Member Secretary	
7.	Mr.Vinay	Physical Education Director	Special invitee	

AGENDA:

1. To build a strong connection between faculty and students to create holistic awareness about Universal Human Values.
2. To inculcate Universal Human Value (UHV) in Technical Education.
3. To channelize the energy of students into several productive activities like sports, cultural programmes etc.
4. To help students in the right development of their world-view, mindset, perspective and values.
5. Action plan for the academic year 2018-19 with respect to UHV

Minutes of the meeting:

- Member secretary welcomed respected Chairman and members of the committee, presented the agenda of the meeting and requested to suggest the necessary action plan to fulfil the objectives of the committee.

1. Student Induction Programme: Chairman of the committee suggested a 3 weeks student induction programme for first year BE students at entry level as per the instructions of AICTE.

The 3-week SIP is to prepare newly admitted undergraduate students for the new stage in their life by facilitating a smooth transition from their home and school environment into the college environment through various discussions and activities. The following are the activities under the induction program in which the student would be fully engaged throughout the day for the entire duration of the program.

- **Physical Activities:** This would involve a daily routine of physical activity with games and sports. There would be games in the evening or at other suitable times according to the climate. These would help develop team work besides health. Each student could pick one game and learn it for the duration of the induction program and continue with it later. The responsibility for the same was given to Mr. Vinay, Physical Education Director, NHCE.
- **Creative Arts:** Every student would chose one skill related to the arts whether visual arts or performing arts like singing, painting, music, dance, photography, pottery, sculpture etc. The student would pursue it every day for the duration of the program. These would allow for creative expression. It would develop a sense of aesthetics and also enhance creativity which would, hopefully, flow into engineering design later.

Dr. Anita Rai, Head- Library & Information Centre was given the responsibility of conducting the same through extracurricular clubs at NHCE.

- **Familiarization with College, Department/Branch:**

The freshers should be told about the credit and grading system, and about the examinations. They should be informed about how study in college differs from study in school. They should also be taken on a tour of the college and shown important points such as library, canteen, and other facilities. They should be shown their department, and told what it means to get into the branch or department. Describe what role the technology related to their department plays in society, and after graduation what role the student would play in society as an engineer in that branch. A lecture by an alumnus of the Dept. would be very helpful in this regard. They should also be shown the laboratories, workshops and other facilities. The above should be done right in the first two days, and then over the afternoons thereafter, as appropriate.

The credits, grading and examinations to the students will be explained by Dean of Academics Dr. Prashanth CSR.

The respective department visit will be taken care by Dr. Anusuya HOD-Chemistry and Dr. Revathi HOD Physics.

Both the HODs should also conduct an orientation programme to first year students by senior students or alumni.

➤ **Literary Activities:** Literary activity would encompass reading a book, writing a summary, debating, enacting a play etc. This activity will be taken care by Dr. Sowmya Narayanan, HOD Life skills.

➤ **Lectures & Workshops by Eminent People:** Lectures by eminent people should be organized. It would give the students exposure to people who are eminent, in industry or engineering, in social service, or in public life. Alumni could be invited as well. Motivational lectures about life, meditation, etc. by Ramakrishna Mission, Art of Living, Vivekanand Kendras, etc. may be organized. Workshops which rejuvenate or bring relief to students would also be conducted, such as, Art of Living workshops.

This activity will be taken care for first year students by Dr. Anusuya HOD-Chemistry and Dr. Revathi HOD Physics.

➤ **Visits to Local Areas:** A couple of visits to the local landmarks including historical monuments should be organized. This would familiarize the students with the area as well as help bonding with each other, like in a picnic. Visits should also be organized to a hospital, orphanage or a village. These would expose them to people in suffering or to different lifestyles. This might also sensitize them to the problems in these areas.

➤ **Extra-Curricular Activities in College.** This activity will also be taken care by first year HODs Dr. Anusuya HOD- Chemistry and Dr. Revathi HOD Physics.

➤ Chairman of the committee asked Dr. Anusuya and Dr. Revathi to prepare a schedule of the Induction programme for 2018-19 batch students for three weeks starting from 27.07.2019 and a detailed report should be submitted about the entire Induction programme.

2. Mentorship:

In each section from the first year to final year of the UG and PG programs, 20-25 students should be allotted to a faculty member handling the same section. These faculty members will be the mentors for allotted students for the academic year. Mentors must keep a track of mentees academic performance and attendance. They must guide students to overcome the difficulties faced by them. Mentors should

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conduct meetings with mentees twice in a month. Parents of the mentees must be called and informed about students' academic performance. Mentor should play a role of Academic guide, advisor and a very good friend to the mentees. For counselling related issues the students should be advised to meet their respective student counsellors.

3. Cultural Activities:

Students of all the departments should be engaged in different art forms like painting, singing, dance, drama, pottery, yoga, meditation etc through the extracurricular clubs. The various talents of the students would be showcased through the Mega event **SARGAM** conducted by NHCE.

4. Sports and Games can be a great lesson in time management and they provide the spirit of competition that drives them to give extra effort. Through **sports**, students learn to respect authority and rules. Sport increases self-esteem, mental alertness and it reduces stress and anxiety. The department of Sports should involve each student in sports by conducting various sports and games. They should encourage students to take part in sports. The talented students must be given necessary training and enable them to participate in inter college level and state level sports events.

5. Constitution of India and Professional ethics: This will be taught in the first year of BE through a mandatory course CIP with the course code ****HSS172/272**. Ms. Vijaya with the LLM qualification will be handling this course. She was also advised to conduct programmes related to the specified course to encourage students in knowing the human rights as per the law and follow in personal and professional life.

6. Talks and Activities based on Universal Human Values: It was instructed to the members of the committee to coordinate with HOD's of all the departments in conducting motivational talks by inviting eminent people of various organizations and conduct the various societal activities by students during the academic year and semester vacation so that they understand the human values and develop themselves as a true human. Students must be encouraged to do various societal activities and awarded **Activity Points** as per the AICTE norms.

The meeting was concluded at 1pm with the vote of thanks proposed by Dr. Anitha Rai.

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COLLEGE OF ENGINEERING
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UNIVERSAL HUMAN VALUES

Minutes of Meeting

Venue: Conference room

Date: 07.08.2019

Time: 2pm

Members Attended:

Sl No	Name	Designation	Position	Signature
1.	Dr Manjunatha	Principal	Chairman	
2.	Dr. Sowmya Narayanan	Prof & HOD- Centre for Life Skills & Lifelong Learning	Member	
3.	Mr.Aravinda. K	Sr. Assistant Professor	Member	
4.	Dr. Anitha S. Rai	Head- Library & Information Center	Member	
5.	Ms. Vijaya	Advocate	Member	
6.	Dr. Anusuya Devi V S	Prof & HOD- Chemistry	Member Secretary	
7.	Mr.Vinay	Physical Education Director	Special invitee	

AGENDA:

1. To build a strong connection between faculty and students to create holistic awareness about Universal Human Values.
2. To inculcate Universal Human Value (UHV) in Technical Education.
3. To channelize the energy of students into several productive activities like sports, cultural programmes etc.
4. To help students in the right development of their world-view, mindset, perspective and values.
5. Action plan for the academic year 2019-20 with respect to UHV

Minutes of the meeting:

- Member secretary welcomed respected Chairman and members of the committee, presented the agenda of the meeting and requested to suggest the necessary action plan to fulfil the objectives of the committee.
- 1. Student Induction Programme:** Chairman of the committee suggested a 3 weeks student induction programme for first year BE students at entry level as per the instructions of AICTE.

The 3-week SIP is to prepare newly admitted undergraduate students for the new stage in their life by facilitating a smooth transition from their home and school environment into the college environment through various discussions and activities. The following are the activities under the induction program in which the student would be fully engaged throughout the day for the entire duration of the program.

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Dr. Anita Rai, Head- Library & Information Centre was given the responsibility of conducting the same through extracurricular clubs at NHCE.

- **Familiarization with College, Department/Branch:**

The freshers should be told about the credit and grading system, and about the examinations. They should be informed about how study in college differs from study in school. They should also be taken on a tour of the college and shown important points such as library, canteen, and other facilities. They should be shown their department, and told what it means to get into the branch or department. Describe what role the technology related to their department plays in society, and after graduation what role the student would play in society as an engineer in that branch. A lecture by an alumnus of the Dept. would be very helpful in this regard. They should also be shown the laboratories, workshops and other facilities. The above should be done right in the first two days, and then over the afternoons thereafter, as appropriate.

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The respective department visit will be taken care by Dr. Anusuya HOD-Chemistry and Dr. Revathi HOD Physics.

Both the HODs should also conduct an orientation programme to first year students by senior students or alumni.

- **Literary Activities:** Literary activity would encompass reading a book, writing a summary, debating, enacting a play etc. This activity will be taken care by Dr. Sowmya Narayanan, HOD Life skills.
- **Lectures & Workshops by Eminent People:** Lectures by eminent people should be organized. It would give the students exposure to people who are eminent, in industry or engineering, in social service, or in public life. Alumni could be invited as well. Motivational lectures about life, meditation, etc. by Ramakrishna Mission, Art of Living, Vivekanand Kendras, etc. may be organized. Workshops which rejuvenate or bring relief to students would also be conducted, such as, Art of Living workshops.

This activity will be taken care for first year students by Dr. Anusuya HOD-Chemistry and Dr. Revathi HOD Physics.

- **Visits to Local Areas:** A couple of visits to the local landmarks including historical monuments should be organized. This would familiarize the students with the area as well as help bonding with each other, like in a picnic. Visits should also be organized to a hospital, orphanage or a village. These would expose them to people in suffering or to different lifestyles. This might also sensitize them to the problems in these areas.
- **Extra-Curricular Activities in College.** This activity will also be taken care by first year HODs Dr. Anusuya HOD- Chemistry and Dr. Revathi HOD Physics.
- Chairman of the committee asked Dr. Anusuya and Dr. Revathi to prepare a schedule of the Induction programme for 2018-19 batch students for three weeks starting from 27.07.2019 and a detailed report should be submitted about the entire Induction programme.

2. Mentorship:

In each section from the first year to final year of the UG and PG programs, 20-25 students should be allotted to a faculty member handling the same section. These faculty members will be the mentors for allotted students for the academic year. Mentors must keep a track of mentees academic performance and attendance. They must guide students to overcome the difficulties faced by them. Mentors should

conduct meetings with mentees twice in a month. Parents of the mentees must be called and informed about students' academic performance. Mentor should play a role of Academic guide, advisor and a very good friend to the mentees. For counselling related issues the students should be advised to meet their respective student counsellors.

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5. Constitution of India and Professional ethics: This will be taught in the first year of BE through a mandatory course CIP with the course code ****HSS172/272**. Ms. Vijaya with the LLM qualification will be handling this course. She was also advised to conduct programmes related to the specified course to encourage students in knowing the human rights as per the law and follow in personal and professional life.

6. Talks and Activities based on Universal Human Values: It was instructed to the members of the committee to coordinate with HOD's of all the departments in conducting motivational talks by inviting eminent people of various organizations and conduct the various societal activities by students during the academic year and semester vacation so that they understand the human values and develop themselves as a true human. Students must be encouraged to do various societal activities and awarded **Activity Points** as per the AICTE norms.

The meeting was concluded at 4pm with the vote of thanks proposed by Dr. Sowmya Narayanan.



UNIVERSAL HUMAN VALUES

Minutes of Meeting

Venue: Conference room

Date: 12.12.2020

Time: 2pm

Members Attended:

Sl No	Name	Designation	Position	Signature
1.	Dr Manjunatha	Principal	Chairman	
2.	Dr. Sowmya Narayanan	HoD- Dept of Life skills & Lifelong learning	Member	
3.	Mr.Aravinda. K	Sr. Assistant Professor	Member	
4.	Dr. Anitha S. Rai	Head- Library & Information Center	Member	
5.	Ms Vijaya	Advocate	Member	
6.	Dr. Anusuya Devi V S	HoD&Professor- Chemistry	Member Secretary	
7.	Mr.Vinay	Physical Education Director	Special invitee	

AGENDA:

1. To build a strong connection between faculty and students to create holistic awareness about Universal Human Values.
2. To create holistic awareness about Universal Human Values.
3. To inculcate Universal Human Value (UHV) in Technical Education.
4. To channelize the energy of students into several productive activities like sports, cultural programmes etc.
5. To help students in the right development of their world-view, mindset, perspective and values.
6. Action plan for the academic year 2019-20 with respect to UHV

Minutes of Meeting:

- Member secretary welcomed respected Chairman and members of the committee, presented the agenda of the meeting and requested to suggest the necessary action plan to fulfil the objectives of the committee.

Student Induction Programme: Chairman of the committee suggested to conduct 1 week online student induction programme for first year BE students at entry level as per the instructions of VTU from 14.12.2020 to 19.12.2020

The following are the activities planned to conduct online

DATE	Morning session 10am-12pm	Afternoon Session 2pm- 4pm
14.12.2020 Monday	<ul style="list-style-type: none">• Orientation programme.• Address by Principal• Address by Chief Guest	<ul style="list-style-type: none">• First year academics by Dr. Anusuya.• Academic guidelines by Dr. Ravati.• Library and information center orientation by Dr. Anitha Rai
15.12.2020 Tuesday	<ul style="list-style-type: none">• Proficiency modules by Life skills (Chemistry Cycle).• Counseling orientation for physics cycle	<ul style="list-style-type: none">• Proficiency modules by Life skills (Physics Cycle).• Counseling orientation for chemistry cycle
16.12.2020 Wednesday	<ul style="list-style-type: none">• Physical health and yoga	<ul style="list-style-type: none">• Awareness about COVID-19 and SOP
17.12.2020 Thursday	<ul style="list-style-type: none">• Orientation on life skills and lifelong learning. (Physics cycle)	<ul style="list-style-type: none">• Orientation on life skills and lifelong learning(Chemistry cycle)
18.12.2020 Friday	<ul style="list-style-type: none">• Universal Human Values by Dr. Aravinda	<ul style="list-style-type: none">• Literary activities-Kannada orientation
19.12.2020 Saturday	<ul style="list-style-type: none">• Familiarization of departments	<ul style="list-style-type: none">• Extracurricular activities

Mentorship:

In each section from the first year to final year of all the UG and PG programs, 20-25 students should be allotted to faculty member of handling the same section. These faculty members will be the mentors for allotted students for the academic year. Mentors must keep a track of mentees academic performance and attendance. They must guide students to overcome the difficulties faced by them. Mentors should conduct meetings with mentees twice in a month. Parents of the mentees must be called and informed about students' academic performance. Mentor should play a role of Academic guide, advisor and a very good friend to the mentees.

Cultural Activities:

Students of all the departments should be engaged in different art forms like painting, singing, dance, drama, pottery, yoga, meditation etc through the extracurricular clubs. The various talents of the students would be showcased through online mode until the offline classes' start.

Sports and games can be a great lesson in time management and they provide the spirit of competition that drives them to give extra effort. Through **sports**, students learn to respect authority and rules. Sport increases self-esteem, mental alertness and it reduces stress and anxiety. The department of Sports should involve each student in sports by conducting various sports and games. They should encourage students to take part in sports. The talented students must be given necessary training and enable them to participate in inter college level and state level sports events. During this covid pandemic, physical education department was instructed to conduct online coaching for students.

Constitution of India and Professional ethics. Will be taught in the first year of BE through a mandatory course CIP with the course code **HSS172/272. Ms. Vijaya with the LLM qualification will be handling this course. She was also advised to conduct programmes related to the specified course to encourage students in knowing the human rights as per the law and follow in personal and professional life.

Talks and Activities based on Universal Human Values: It was instructed to the members of the committee to coordinate with HoDs of all the departments in conducting motivational talks through online for this academic year by inviting eminent people of various organizations. So that they understand the human values and develop themselves as a true human. Students must be encouraged to do various societal activities and awarded **Activity Points** as per the AICTE norms.

The meeting was concluded at 3pm with the vote of thanks proposed by Dr. Anita Rai.

(55)

(8)

To. Head- Library and
information
centre.

Visvesvaraya Technological University

"Jnana Sangama" Belagavi – 590 018
Karnataka State, India.

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10.	Packt e-Books
11.	Net Analytiks (Sententia-tool)
12.	K-Nimbus (Digital Library Platform and Remote Access Solution)
13.	Turnitin (Similarity check tool)

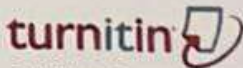
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Co-Ordinator


Registrar


Head Library and Information Center
New Horizon College of Engineering
Ring Road, Kadubisanahalli, Bellandur Post,
Near Marathalli, Bangalore-560 103


Principal
New Horizon College of Engineering
Outer Ring Road, Bellandur Post,
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