



**NEW HORIZON**  
**COLLEGE OF ENGINEERING**

**DEPARTMENT OF  
MECHANICAL ENGINEERING**



**NBA Compliance Report**

# **NATIONAL BOARD OF ACCREDITATION**

Compliance Report Format

(Tier – I/Tier – II)

## **PART- A: Institutional Information**

(To be filled only once for all the programs under consideration)

### **A1. Name and Address of the College: - NEW HORIZON COLLEGE OF ENGINEERING**

City: Ring Road, Kadubisanahalli, Bellandur,  
Bengaluru

Pin code: 560103

Phone No : 080-66297777

Website:

<https://newhorizonindia.edu/nhengineering/>

State: Karnataka

Fax: 080-28440770

E-mail:

[principal@newhorizonindia.edu](mailto:principal@newhorizonindia.edu)

### **A2. Year of Establishment: - 2001**

### **A3. First Approval Letter No.: FNo. 770-53-08 (NDEG)/ ET/2001, Date:31/08/2001**

### **A4. Head of the Institution: -**

Name: - Dr. Manjunatha

Designation: - Principal

Nature of Appointment: -Full Time, Since 2011

Phone No: -080-66297777

Mobile: - +91 - 9901916000

E-mail:

Fax No: -080-28440770

[principal@newhorizonindia.edu](mailto:principal@newhorizonindia.edu)

### **A5. Name and Address of the Affiliating University: -**

**Visvesvaraya Technological University**

City: -Belagavi

State: - Karnataka

Website: -[www.vtu.ac.in](http://www.vtu.ac.in)

Phone No : 0831-2498100

Pin Code: 590018

E-mail: -[registrar@vtu.ac.in](mailto:registrar@vtu.ac.in)

Fax: - 0831-2405467

### **A6. Type of the Institution:**

Institute of National  
Importance  
University

☐☐

Autonomous

☒

\*Any other (Please  
specify)

☐

Deemed University

☐

\*Provide Details:

**A7. Ownership Status:**

Central Government

☐

Trust

☐

State Government

☐

Society

☐

Government Aided

☐

Section 25 Company

☐

Self-financing

☒

\*Any Other (Please specify)

☐

\*Provide Details:

**A8. Students Admissions (Institute level considering all UG programs):**

Item	CAY 2023-24	CAYm1 2022 - 23	CAYm2 2021 – 22	Total
Sanctioned intake	1200	1140	1140	3480
Number of students admitted (Corresponding to sanctioned intake)	1200	1205	1131	3536
% of Students Admitted over last three assessment years (Total Admitted/Sanctioned Intake )				100

*Kindly note that the year mentioned here is exemplary, institute has to consider the academic years as per the definition of CAY given in the document and according to the prevailing year.*

**Table A8**

**CAY: Current Academic Year**

**CAYm1: Current Academic Year minus 1 = Current Assessment Year**

**CAYm2: Current Academic Year minus 2 = Current Assessment Year minus 1**

**A9. Details of the Students actually admitted through Lateral Entry/Separate Division**

Item	CAY (2023 - 24)	CAYm1 (2022 – 23)	CAYm2 (2021-22)
Number of students admitted through Lateral Entry	-	116	110
Number of students admitted through Separate Division	-	-	-
<b>Total Number of students admitted in the second year</b>	<b>1159</b>	<b>1120</b>	<b>1187</b>

**Note: Provide student details of the second shift (if applicable)**

**A10. Provide separate Information for each of the program(s) for which compliance is to be submitted**

Name of the Department	Name of the Program being offered	Name of the program to be considered	Year of start	Intake	Increase in Intake, if any	Year of Increase	AICTE Approval	Accreditation Status*
Mechanical Engineering	BE in Mechanical Engineering	B.E in Mechanical Engineering	2003-04	60	-	NA	F.No.770-53-278(E)/ET/2001/Dated:30-04-2003	Yes Granted Provisional Accreditation for three years up to 30-06-2024 under Tier-1
				120	YES, 60	2010-2011	F.No. South-West/1-436322181/2011/EOA/Dated:01-09-2011	
				180	YES, 60	2013 - 2014	F.No. South-West /1-1433602784/2013/EOA Dated:19-03-2013	
				120	60, (Reduction)	2021-2022	F.No. South-West /1-9322469979/2021/EOA Dated:07-06-2021	
				60	60, (Reduction)	2022-2023	F.No. South-West /1-10970214483/2022/EOA Dated:08-06-2022	

**Write applicable one:**

- Granted provisional accreditation for two /three years for the period(specify period)
- Granted accreditation for 5 / 6 years for the period (specify period)
- Not accredited (specify visit dates, year)
- Withdrawn (specify visit dates, year)
- Not eligible for accreditation
- Eligible but not applied

## **PART B- Program Information**

**B1. Name of the Program: B.E in Mechanical Engineering**

### **B2. Faculty Information and Contributions**

List of faculty in the department as per the format is given in Appendix I  
**FACULTY INFORMATION (CAY-2023-24)**

SL No	Name	PAN No.	Qualification	Area of Specialization	Designation	Date of joining	Date on which designated as professor / associate professor	Currently associated (Yes / No)	Nature of association (Regular/Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving (In case currently
1	Dr. Manjunatha	AELPM 2838P	ME/M. Tech and PhD	Mechanical Engineering	Professor and Principal	25-08-2003	01-08-2008	Yes	Regular	-	NA
2	Dr. Priyabrata Adhikary	AGVPA 3504G	ME/M. Tech and PhD	Renewable Energy & Turbo machine, RAC, FM	Professor and Head	17-07-2017	01-08-2018	Yes	Regular	-	NA
3	Dr. Piyush Kumar Soni	CLTPS9 045M	ME/M. Tech and PhD	Mechanical Engineering	Professor	22-11-2022	NA	Yes	Regular	-	NA
4	Dr. Nagendra J	AJMPJ8 749E	ME/M. Tech and PhD	Mechanical Engineering	Associate Professor	25-07-2011	01-08-2019	Yes	Regular	-	NA
5	Dr. Srinath M K	CEMPS 7308D	ME/M. Tech and PhD	Mechanical Engineering	Associate Professor	25-07-2011	01-08-2019	Yes	Regular	-	NA
6	Dr. Sujin Jose	CPLPS5 622E	ME/M. Tech and PhD	Engg. Materials	Associate Professor	27-08-2018	27-08-2018	Yes	Regular	-	NA
7	Dr. Gopal K	BESPG 1902A	ME/M. Tech and PhD	I.C.engines, Combustion, Alternative Fuels, Optimization, Thermal Science, Renewable energy	Associate Professor	20-08-2018	20-08-2018	Yes	Regular	-	NA
8	Dr.Hemanth Raju	BACPR 0693F	ME/M. Tech and PhD	Mechanical Engineering	Associate Professor	26-07-2010	01-08-2019	Yes	Regular	-	NA
9	Dr. Bopanna . K. D	AQRPB 9187G	ME/M. Tech and PhD	Computer Integrated Manufacturing	Assistant Professor	25-07-2012	NA	Yes	Regular	-	NA
10	Dr. Sudarshan T A	BGNPA 1241D	ME/M. Tech and PhD	Thermal Science and Engineering	Assistant Professor	25-07-2012	NA	Yes	Regular	-	NA

11	Dr. Veerasha G	AOSPV 9206P	ME/M. Tech and PhD	Machine design	Assistant Professor	25-07-2012	NA	Yes	Regular	-	NA
12	Dr. Nagabhusha na Narasappa	AGJPN 7478A	ME/M. Tech and PhD	Manufacturing	Assistant Professor	25-07-2012	NA	Yes	Regular	-	NA
13	Dr. Jayasheel Kumar K A	CEJPK2 492F	ME/M. Tech and PhD	Manufacturing	Assistant Professor	15-07-2013	NA	Yes	Regular	-	NA
14	Dr. Gayatri Tanuja	ALEPG 7720J	ME/M. Tech and PhD	Mechanical Engineering	Assistant Professor	31-07-2022	NA	Yes	Regular	-	NA
15	Raghu Tilak Reddy Maramreddy	AOEPM 9076J	M.E/M.Tech	Computer Integrated Manufacturing	Assistant Professor	26-07-2010	NA	Yes	Regular	-	NA
16	Ravikumar M.	BOIPM 6416H	M.E/M.Tech	Thermal Sciences	Assistant Professor	25-07-2011	NA	Yes	Regular	-	NA
17	Shivaprakash S	CBVPS 8802C	M.E/M.Tech	Tool Engineering	Assistant Professor	25-07-2011	NA	Yes	Regular	-	NA
18	Rakesh C	ATDPC 3939N	M.E/M.Tech	Mechanical Engineering	Assistant Professor	27-07-2011	NA	Yes	Regular	-	NA
19	Hanamant Yaragudri	ADAPY 4102G	M.E/M.Tech	Machine Design	Assistant Professor	25-07-2012	NA	Yes	Regular	-	NA
20	Smitha B S	BYSPS 6107F	ME/M.TECH H	Product Data Management	Assistant Professor	27-08-2012	NA	Yes	Regular	-	NA
21	Sunil Prashanth Kumar	DEFPK 6851H	M.E/M.Tech	Mechanical Engineering	Assistant Professor	20-07-2015	NA	Yes	Regular	-	NA
22	Gowtham Raj R	BJSPR5 491Q	ME/M.TECH H	Product design and manufacturing	Assistant Professor	31-07-2022	NA	Yes	Regular	-	NA
23	Manjesh B C	AVAP M9044 R	M.E/M.Tech	Thermal power Engineering	Assistant Professor	16-08-2010	NA	Yes	Regular	-	NA
24	Vinay D R	AHEPV 4106H	M.E/M.Tech	Design Engineering	Assistant Professor	02-08-2017	NA	Yes	Regular	-	NA
25	Chetan Kumar D S	AHPPC 4423K	M.E/M.Tech	Machine design	Assistant Professor	24-07-2013	NA	Yes	Regular	-	NA
26	Sujeeth Swamy	DHUPS 8030J	M.E/M.Tech	Computer Integrated Manufacturing	Assistant Professor	21-07-2014	NA	Yes	Regular	-	NA
27	Rajesh A	ASUPA 2633F	M.E/M.Tech	Aeronautical engineering	Assistant Professor	24-07-2013	NA	Yes	Regular	-	NA

**B.2.1. Student Faculty Ratio (No of Faculty as per the sanctioned intake):-***(To be calculated at Department Level)*

No. of UG Programs in the Department (n): 1

No. of PG Programs in the Department (m): NA

No. of Students in UG 2<sup>nd</sup> Year= **u1**No. of Students in UG 3<sup>rd</sup> Year= **u2**No. of Students in UG 4<sup>th</sup> Year= **u3**No. of Students in PG 1<sup>st</sup> Year= **NA**No. of Students in PG 2<sup>nd</sup> Year= **NA****No. of Students = Sanctioned Intake + Actual admitted lateral students***(The above data to be provided considering all the UG and PG programs of the department)***S**=Number of Students in the Department = UG1 + UG2 +UG3 + PG1 + PG2**F** = Total Number of Faculty Members in the Department (excluding first year faculty)**Student Faculty Ratio (SFR) = S / F**

Year	CAY (2023-24)	CAYm1 (2022-23)	CAYm2 (2021-22)
u1.1	64	74	138
u1.2	74	138	197
u1.3	138	197	197
UG	276	409	532
p1.1	-	-	-
p1.2	-	-	-
PG			
Total No. of Students in the Department (S)	S1 = 276	S2 = 409	S3= 532
No. of Faculty in the Department (F)	F1=19	F2= 20	F3=31
Student Faculty Ratio (SFR)	SFR1= 14.53	SFR2= 20.45	SFR3=17.16
<b>Average SFR</b>	<b>SFR=(SFR1+SFR2+SFR3)/3</b>		<b>17.38</b>

**B2.2. Faculty Details of the Department (UG + PG)**

Sl . No.	Designation	CAY m1			CAY		
		2022-23			2023-24		
		With PhD		Without PhD	With PhD		Without PhD
		Regular	Contractual		Regular	Contractual	
a.	Professors	3	-	-	3	-	-
b.	Associate Professors	6	-	-	5	-	-
c.	Assistant Professors	4	-	15	6	-	13
d.	Total Number of Faculty in the Department(UG + PG)	28			27		

**B2.3. Faculty Cadre Proportion**

The reference Faculty cadre proportion is 1(F1):2(F2):6(F3)

F1: Number of Professors required =  $1/9 \times$  Number of Faculty required to comply with 20:1

Student-Faculty ratio based on no. of students (N) as per B2.1

F2: Number of Associate Professors required =  $2/9 \times$  Number of Faculty required to comply with 20:1

Student-Faculty ratio based on no. of students (N) as per B2.1

F3: Number of Assistant Professors required =  $6/9 \times$  Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per B2.1

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
<b>CAY</b>	2	3	3	5	9	19
<b>CAYm1</b>	2	3	5	6	14	19
<b>CAYm2</b>	3	3	6	7	18	21
<b>Average Numbers</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>14</b>	<b>20</b>



**B 2.4 Faculty as participants in Faculty development/training activities/STTPs**

Name of the Faculty	(Faculty development/Training activities/STTPs)		
	CAY m1	CAYm2	CAYm3
	2022-23	2021-22	2020-21
Shivaprakash S	13	7	16
Dr. Gopal K	4	10	6
Chetan Kumar D S	1	6	4
Dr. Hemanth Raju T	3	3	7
Dr. Nagendra J	3	1	7
Dr. Shridhar Kurse	2	2	1
Dr. Priyabrata Adhikary	1	1	1
Dr. Srinath M K	2	2	2
Dr. Puneeth H V	-	1	1
Dr. Ashok Kumar	2	1	1
Dr. Sujin Jose	2	2	2
Raghu Tilak Reddy Maramreddy	2	3	1
Ravikumar M.	3	3	5
Rakesh Chandrashekar	3	3	4
Dr. Bopanna . K. D	2	2	2
Hanamant Yaragudri	2	2	4
Dr. Nagabhushana Narasappa	2	2	1
Smitha B S	2	2	2
Jayasheel Kumar K A	1	2	1
Sunil Prashanth Kumar S	1	3	-
Vinay D R	1	2	1
Manjesh B C	1	3	2
Dr. Sudarshan T A	3	1	1
Dr. Veeresha G	1	1	3
Rajesh A	1	3	4
Sujeeth Swami	1	1	1

## B 2.5. Research and Development

Sl. No.	Name of the Faculty	Academic Research			
		Number of quality publications in refereed/SCI Journals, Citations, Books, Book Chapters		Ph.D. guided/Ph.D. Awarded during the assessment period while working in the institute	
		As provided in SAR	After evaluation (till date of compliance report)	As provided in SAR	After evaluation (till date of compliance report)
1	Dr. Gopal K	08	Journal-21, Citation-1150		02
2	Dr. Priyabrata Adhikary	06	Journal-07 , Citation-496		
3	Dr. Manjunatha	4	Journal-13, Citation-10	01	04
4	Dr. Nagendra J	06	Journal-13 , Citation-115		
5	Dr. Srinath M K	07	Journal-15 , Citation-114		02
6	Dr. Puneeth H V	06	Journal-03 , Citation-40		
7	Dr. Ashok Kumar	06	Journal-11, Citation-157		
8	Dr. Sujin Jose	05	Journal-12, Citation-139		01
9	Dr. Hemanth Raju T	07	Journal-12, Citation-97		
10	Raghu Tilak Reddy Maramreddy	05	Journal-03		
11	Ravi kumar M.	06	Journal-08, Citation-07		
12	Shivaprakash S	06	Journal-04, Citation-33		
13	Rakesh Chandrashekar	02	Journal-10, Citation-37		
14	Dr. Bopanna . K. D	04	Journal-07 , Citation-07		
15	Hanamant Yaragudri	08	Journal-03, Citation-03		
16	Dr. Nagabhushana Narasappa	10	Journal-06, Citation-39		
17	Smitha B S	06	Journal-04, Citation-17		
18	Jayasheel Kumar K A	07	Journal-04, Citation-08		
19	Chetan Kumar D S	06	Journal-04		
20	Sunil Prashanth Kumar S	05	Journal-04, Citation-09		
21	Vinay D R	05	Journal-01, Citation-12		
22	Manjesh B C	04	Journal-01		
23	Dr. Sudarshan T A	07	Journal-05 , Citation-01		
24	Dr. Veerasha G	08	Journal-05, Citation-16		
25	Rajesh A	12	Journal-03, Citation-178		
26	Sujeeth Swami	02	Journal-09 , Citation-11		
27	Dr. Gayatri Tanuja Guddla	-	Journal-04, Citation-16		
28	Gowtham Raj R	-	Journal-04 , Citation-05		

## B2.6. Sponsored Research/Consultancy

### (B) Details as provided in the SAR previously

Name of the faculty	Project Title	Project Type Research/ Consultancy	Funding Agency	Amount	Duration
Mr. Vinod Kumar G S	Design And Fabrication Of Human Exoskeleton To Achieve Ease During Movement	Research project	KSCST	Rs. 8,000/-	3 months
Prof. Kamalashish Deb	To Design And Fabricate A Machine To Clean The Slope Surfaces In Step Farming With Proper Finish.	Research project	KSCST	Rs. 7,000/-	3 months
Prof. Vinay D R	Design And Fabrication Of Solar Powered Floating Waste Collector	Research project	KSCST	Rs. 7,000/-	3 months
Prof. Ronald Reagon	Insulin Storage Freezer Using Thermoelectric Devices And Water Cooling	Research project	KSCST	Rs. 6,000/-	3 months
Mr. Karthik S.N	Effect Of Heat Treatment On Mechanical Properties Of Cu30ni5zn (Copper, Nickel (30%) And Zinc (5%) Alloys	Research project	KSCST	Rs. 6,000/-	3 months
Prof. Pavan.P.Kadole	Design And Fabrication Of Multipurpose Machine For Agricultural Purpose	Research project	KSCST	Rs. 6,500/-	3 months
Mr. Hanamath Y	Design And Fabrication Of Automatic Vacuum Operated Chalk Dust Collector.	Research project	KSCST	Rs. 6,000/-	3 months
Prof. Raghu Tilak Reddy M.	Fabrication Of 3 Axis Pneumatic Trailer Lift	Research project	KSCST	Rs. 6,000/-	3 months
Prof. Chetan Kumar D.S.	Design And Fabrication Of Sepration Of Waste Garbage Using Smart Crusher	Research project	KSCST	Rs. 5,000/-	3 months
Mr. Manjesh	Hybrid Solar Windmill	Research project	KSCST	Rs. 6,000/-	3 months
Prof. Veerasha G.	Fabrication Of Automatic Sewage Cleaning Machine	Research project	KSCST	Rs. 7,000/-	3 months
Mr. Puneeth H V	Design, Analysis And Rapid Prototyping Of Instrumentation Probe For Aero Engine Application	Research project	KSCST	Rs. 5,500/-	3 months
Prof. Bopanna K D	Design And Utilization Of Solar Induced Convective Flow For Power Generation Using Solar Updraft Tower	Research project	KSCST	Rs. 6,000/-	3 months
Dr. Kanapathy Gopalakrishnan	Development Of “Single Card Satellite-Bus (Sics-B)”: 10 Cm X10 Cm (Timeline: 30 Months). Indo-Israel Joint Development(Mech: Design And Development Of Satellite	Research project	Itca, Unisec India, Drl, Tsc P Ltd	Rs. 5,00,000/-	2.5 Years

	Monolithic Structure, Machining, Orbital Mechanics-Calculation-Simulation)				
Dr. Kanapathy Gopalakrishnan	Design And Development Of Cubesat 2u; Adsb Including Launch Cost; Indo-Israel Joint Development Under Unisec India.(Mech: Design And Development Of Satellite Monolithic Structure, Machining, Orbital Mechanics-Calculation-Simulation	Research project	Itca, Unisec India, Drl, Tsc P Ltd	Rs. 5,00,000/-	2.5 Years
Dr. M.S. Ganesha Prasad	Agumenting The Life Of Polymer Material Used In 3D Printers By Using Reinforced Polymer Material In FDM Technology	Research project	KSCST	Rs. 6,000/-	3 months
Prof. Nagendra Jayaram	Smart Conveyance For Physically Challenged People	Research project	KSCST	Rs. 6,000/-	3 months
Prof. Bopanna K D	Design And Fabrication Of An Artificial Leg Mechanism For Above Knee Amputees	Research project	KSCST	Rs. 7,000/-	3 months
Mr. Sujeeth Swami	Design And Fabrication Of Portable Solar Operated Water Purification Unit	Research project	KSCST	Rs. 7,000/-	3 months
Prof. Vinayak B	Design And Fabrication Of A Tadpole Model Solar Powered Tricycle	Research project	KSCST	Rs. 7,000/-	3 months
Prof. Vinod Kumar G S	Design And Development Of Human Arm Exoskeleton	Research project	KSCST	Rs. 6,000/-	3 months
Dr. M S Ganesh Prasad	Experimental Study Of Acetylene And Alcohol As An Alternative Fuel For Gasoline Engine	Research project	KSCST	Rs. 11,000/-	3 months
Mr. Kamalasish Deb	A Comparative Study Of The Properties And Effects Of Different Blends Of Biodiesel On Crankcase Lubricant And Perform Exhaust Gas Analysis For The Same	Research project	KSCST	Rs. 7,000/-	3 months
Prof. Lakshmana Naik	Design And Fabrication Of Machine To Convert Plastic Into Oil And Gaseous Fuel Production	Research project	KSCST	Rs. 11,000/-	3 months
Mr. Lakshminarasimha N	Improvisation On Physical And Combustion Properties Of Fuel Briquette From Pongamia And Glycerin Mixing Different Binders	Research project	KSCST	Rs. 5,000/-	3 months
Dr. M S Ganesh Prasad	Multipurpose Compact Solar Fruit Dryer	Research project	AICTE	Rs.13,26,853 /-	3 Years
Dr. Kanapathy Gopalakrishnan	Design Of Structure For Pocketqube Satellite: Testing And Validation 4 Variants	Research project	Tsc Technologies P Ltd	Rs.3,75,000/-	6 months
Dr. Kanapathy Gopalakrishnan	Design And Development Of Cansat/Rocketry 4 Variants-Prototype	Research project	Tsc Technologies P Ltd	Rs.3,50,000/-	6 months
Dr. Kanapathy Gopalakrishnan	Unitysat/Slimsat 0.33u Satellite (Engineering Model Prototype For	Research project	Tsc Technol	Rs.3,00,000/-	2 Years

	Qualification Testing & Flight Model) X 3 =1u With Deployer For Itca Consortium/Cspd Serbia And Unisec India: (Mech: Design And Development Of Satellite Monolithic Structure,Machining, Orbital Mechanics-Calculation-Simulation)		ogies P Ltd		
Dr. Kanapathy Gopalakrishnan	Design And Development Of Cubesat 2u; Adsb Including Launch Cost; Indo-Israel Joint Development Under Unisec India.(Mech: Design And Development Of Satellite Monolithic Structure, Machining, Orbital Mechanics-Calculation-Simulation)	Research project	Tsc Technologies P Ltd	Rs.4,00,000/-	2 Years
Dr. M S Ganesha Prasad,	Design And Optimization Of Water Tanker For Reducing The Spillage Under Dynamic Conditions	Research project	KSCST	Rs. 5,000/-	3 months
Prof. Kadole Pavan Prabhakar	Portable Water Turbine	Research project	KSCST	Rs. 5,000/-	3 months
Prof. Sujeeth Swami	Carbon - Di - Oxide Powered Solar Desalination Unit	Research project	KSCST	Rs. 5,000/-	3 months
Prof. Ronald Reagon R	Improvisation Of Solar Portable All Terrain Wheelchair With Crank And Shaft Mechanism	Research project	KSCST	Rs. 6,000/-	3 months
Prof. Srinath M K,	Hardness And Wear Analysis Of DLC Coated Al alloy Plates With And Without Heat Treatment	Research project	KSCST	Rs. 4,000/-	3 months
Mr. Bopanna K D	Enhancing The Life Of Portable Battery Using Fin Structure	Research project	KSCST	Rs. 4,000/-	3 months
Dr. Kanapathy Gopalakrishnan	Design Of Expandable Motion Simulator On Wheels	Research project	7dplus Network Company	Rs. 9,25,000/-	9 months
Dr. Kanapathy Gopalakrishnan	Design Of Cubesat Deployment Parachute AndTesting	Research project	7dplus Network Company	Rs. 9,25,000/-	6 months
Dr.M.S. Ganesha Prasad Dr. Manjunatha	Enhancement of Productivity Studies	Consultancy project	Pulse Sports Private Limited	Rs, 1,80,000/-	12 Months
Dr.M.S. Ganesha Prasad Dr. Manjunatha	Enhancement of Productivity Studies	Consultancy project	Sri Balaji Industries	Rs. 50,000/-	3 Months
Dr. P. Adhikary	HVAC Low side design	Consultancy project	OPTCOOL	Rs. 10,000/-	3 Months
Dr. Srinath. M. K., and Dr. Nagendra. J	Design and Validation	Consultancy project	Deeksha Enterprises	Rs. 50,000/-	6 Months

Dr.M.S. Ganesha Prasad Dr. Manjunatha	Testing and Validation	Consultancy project	Pulse Sports Private Limited	Rs. 90,000/-	6 Months
Dr.M.S. Ganesha Prasad Dr. Manjunatha	Enhancement of Productivity Studies	Consultancy project	Pulse Sports Private Limited	Rs. 1,80,000/-	1 year
Dr.M.S. Ganesha Prasad Dr. Manjunatha	Testing and Evaluation	Consultancy project	Sai Enterprises	Rs. 25,000/-	1 Month
Dr.M.S. Ganesha Prasad Dr. Manjunatha	Enhancement of Productivity Studies	Consultancy project	Sri Balaji Indus	Rs. 30,000/-	2 Months
Dr.Sridhar kurse Dr.M.S. Ganesha Prasad Dr. Manjunatha	Feasibility Studies, Testing and Evaluation	Consultancy project	Hitesh Creations	Rs. 50,000/-	3 Months
Dr.M.S. Ganesha Prasad Dr. Manjunatha Dr. Sheelan Misra	Evaluation of Projects; Feasibility Studies	Consultancy project	Indian Bank	Rs. 1,00,000/-	6 months
Dr. P. Adhikary	Testing and Validation	Consultancy project	Mahalakshmi Timber	Rs. 50,000/-	3 Months
Dr.M.S. Ganesha Prasad	Testing and Validation	Consultancy project	Exotic Innovation Private Limited	Rs. 50,000/-	3 Months
Dr. Manjunatha	Rapid Prototyping	Consultancy project	Super Power Solutions	Rs. 5,000/-	3 Months
Dr.M.S. Ganesha Prasad Dr. Manjunatha	Testing and Validation	Consultancy project	Venkatesh-wara paper mart	Rs. 10,000/-	3 Months
Dr.M.S. Ganesha Prasad	Online Evaluation Tools	Consultancy project	Edu Merge	Rs. 50,000/-	3 Months
Dr.M.S. Ganesha Prasad	Testing and Evaluation	Consultancy project	Techser Power solutions	Rs. 25,000/-	3 Months
Dr. Manjunatha	Rapid Prototyping	Consultancy project	K.S.R Ceramic	Rs. 50,000/-	3 Months

**Total Research Project Funds:** Rs. 57, 85,853/-

**Total Consultancy Project Funds:** Rs. 10, 05,000/-

**Total Funds:** Rs. 67, 90,853/-

**(II) Details after evaluation (till the date of Compliance Report)**

<b>Name Of The Faculty</b>	<b>Project Title</b>	<b>Project Type Research/ Consultancy</b>	<b>Funding Agency</b>	<b>Amount</b>	<b>Duration</b>
Dr.M.S. Ganesha Prasad	Electric Vehicle Charging Station	Research Project	KSCST	Rs. 6,000/-	3 Months
Prof. .Ravi Kumar M.	Performance And Exhaust Analysis Of Ultrasonic Transesterified Blends Of Pongamia Oil With Biodiesel	Research Project	KSCST	Rs. 7,000/-	3 Months
Prof. Veeresh G	Design And Fabrication Of Cost Effective Agricultural Machine	Research Project	KSCST	Rs. 8,000/-	3 Months
Prof. M. Ragu Tilak Reddy	Design And Fabrication Of Plastic Extrusion Model	Research Project	KSCST	Rs. 5,000/-	3 Months
Prof. Megha Shukla	Kitchen Waste Water Harvesting	Research Project	KSCST	Rs. 6,000/-	3 Months
Prof. .Ravi Kumar M. & Dr.M.S. Ganesha Prasad	Design & Performance Analysis Of Pv Solar Dryer For Retention Of Vital Nutrients In Fruits/Vegetables	Research Project	KSCST	Rs. 7,000/-	3 Months
Prof. Vinod Kumar G S	Fabrication Of Artificial Intelligence Solar Based Fire Fighting Agv	Research Project	KSCST	Rs. 6,000/-	3 Months
Dr. Hemanth Raju T	Development And Wear Characterization Of Al7075-Zircon Particulate Composites For Automotive Applications	Research Project	KSCST	Rs. 7,000/-	3 Months
Prof. Kemaparaju C. R	Design And Fabrication On Fin Tube Heat Exchanger	Research Project	KSCST	Rs. 7,000/-	3 Months
Prof. Vinay. D. R	Low-Cost, Eco Friendly Portable Water Filter	Research Project	KSCST	Rs. 6,000/-	3 Months
Prof. Chetan Kumar D. S	Electricity Generation By A Stirling Engine	Research Project	KSCST	Rs. 5,500/-	3 Months
Prof. Santosh. A. N. And Dr. K. Gopal	Design And Fabrication Of Bike Engine Holder	Research Project	KSCST	Rs. 4,000/-	3 Months
Dr. Hemanth Raju T	Evaluation Of Mechanical Properties Of Al6061-Al2o3-Zircon Hybrid Metal Matrix Components By Using Stir Casting Technique	Research Project	KSCST	Rs. 6,000/-	3 Months
Prof. Vinod Kumar G S	Automatic Metal Cutting Machine Using Geneva Mechanism	Research Project	KSCST	Rs. 7,000/-	3 Months
Prof. .Ravi Kumar M	Performance And Emission Characteristics Of Piliostigma Thonningii Bio Diesel Powered Generator For Irrigation Purposes	Research Project	KSCST	Rs. 8,000/-	3 Months
Prof. Kemaparaju C. R	Sos Ring For Women's Safety Using Bluetooth Low Energy	Research Project	KSCST	Rs. 5,000/-	3 Months
Dr. Srinath. M. K	Tribological Studies Of Heat Treated Aluminium Silicon Alloy	Research Project	KSCST	Rs. 6,000/-	3 Months
Prof. Veeresh G	1 Design And Fabrication Of High Pressure Pipe Bending Tool	Research Project	KSCST	Rs. 7,000/-	3 Months
Prof. Hanamat. Y	Innovative Study Of Evaluation Of Physical And Mechanical Properties	Research Project	KSCST	Rs. 6,000/-	3 Months

	Of Polyethylene Based Wood Plastic Composites				
Prof. .Ravi Kumar M	Comparative Study On Tool Wear Prediction Based On Machine Learning Techniques.	Research Project	KSCST	Rs. 6,000/-	3 Months
Prof. Sudarshan. T. A	Study On Performance And Emission Characteristics Of Fenugreek Oil Blended With Diesel	Research Project	KSCST	Rs. 7,000/-	3 Months
Dr. Srinath. M. K	Analysis Of Aluminium 6082 Alloy With Sic Reinforcement	Research Project	KSCST	Rs. 4,000/-	3 Months
Prof. Sujeeth Swamy. S & Prof. Ravikumar. M	Multipurpose Solar Operated Iot Desalination System For Potable And Agriculture Uses	Research Project	KSCST	Rs. 7,000/-	3 Months
Prof. Ravikumar. M	Novel Drying Technique For Avoiding Food Spoilage	Research Project	KSCST	Rs. 7,000/-	3 Months
Prof. Rajesh. A	Vibration Analysis Of An Optimized Aircraft Wing	Research Project	KSCST	Rs. 7,000/-	3 Months
Prof. Karthik. S. N	Friction Stir Welding Of Dissimilar Metals And Its Characterization	Research Project	KSCST	Rs. 6,000/-	3 Months
Dr. Gayathri. T. G	Blind-Aid Spectacle For Visually Impaired People Using Deep Learning Algorithms And Face Recognition Techniques	Research Project	KSCST	Rs. 6,000/-	3 Months
Prof. Shiva Prakash. S	Developing A System To Prevent Accidents From Sleep Driving	Research Project	KSCST	Rs. 6,000/-	3 Months
Prof. Veeresha. G	Design And Fabrication Of Lake Water Cleaning System	Research Project	KSCST	Rs. 6,000/-	3 Months
Prof. Sujeeth Swamy	Bluetooth Based Agrobot For Spraying Pesticides	Research Project	KSCST	Rs. 5,000/-	3 Months
Dr. Shridhar Kurse	Mechatronics And Development Of Unmanned Ground Vehicle For Millitary Purpose	Research Project	KSCST	Rs. 6,000/-	3 Months
Dr. Manjunatha Dr.Sridhar Kurse	Design Of Structure For Picosatellite: Testing And Validation 3 Variants	Research Project	TSC Technologies P Ltd	Rs.15,00,000 /-	6 Months
Dr. Manjunatha Dr.Sridhar Kurse	Design And Development Of Cubesat 3u; Adsb Including Launch Cost; Indo-Israel Joint Development Under UnisecIndia.(Mech: Design AndDevelopment Of Satellite Modular Structure,Machining, OrbitalMechanics-Calculation-Simulation	Research Project	TSC Technologies P Ltd	Rs. 8,00,000/-	2 Years
Dr. Manjunatha Dr.Sridhar Kurse	Integration Of Automation Panels And Sampling Systems	Research Project	Instrol W L L	Rs. 5,25,000	9 Months
Dr. Manjunatha Dr.Sridhar Kurse	Design And Development Of Cubesat 3u; Adsb Including Launch Cost; Indo-Israel Joint Development Under UnisecIndia.(Mech: Design AndDevelopment Of Satellite Modular Structure,Machining, OrbitalMechanics-Calculation-Simulation	Research Project	ITCA,Unisec India,Drl, TSC P Ltd	Rs.7,00,000/-	1 Year



Dr. Manjunatha Dr.Sridhar Kurse	Integration Of Automation Panels And Sampling Systems	Research Project	Instrol W L L	Rs.4,25,000/-	9 months
Dr. Manjunatha Dr.Sridhar Kurse	Phase 2 - Development Of " Dual CardSatellite-Bus (DICS-B)": 10Cm X10 Cm (Timeline: 24 Months). Indo-Israel Joint Development (Mech: Design And Development Of Satellite Modular Structure,Machining, Orbital Mechanics-Calculation-Simulation)	Research Project	ITCA,Unisec India,Drl, TSC P Ltd	Rs. 10,75,000/-	2 Years
Dr. Manjunatha Dr.Sridhar Kurse	Design And Development Of Cubesat 3u; Adsb Including Launch Cost; Indo-Israel Joint Development Under UnisecIndia.(Mech: Design AndDevelopment Of Satellite Modular Structure,Machining, OrbitalMechanics-Calculation- Simulation	Research Project	ITCA,Unisec India,Drl, TSC P Ltd	Rs. 5,25,000/-	1 Year
Dr. Srinath. M. K. and Dr. Manjunatha	Centre of Excellence for Bio- Mechanical Engineering Sciences	Research Project	VGST	Rs. 40,00,000/-	2 Years
Dr.Gopal K	AICTE - ATAL FDP, Govt. of India	Research Project	AICTE	Rs. 93,000/-	12 months
Dr. M. S. Ganesha Prasad	AICTE- STTP, Govt. of India	Research Project	AICTE	Rs. 3,53,000/-	12 Months
Dr. Ashok. Kumar	Characterization of Lubrication Oil	Consultancy Project	Eshwar Oils	Rs. 10,000/-	2 months
Dr. P. Adhikari	HVAC Design	Consultancy Project	ICON, Kolkata	Rs. 10,000/-	4 months
Dr. Sridhar Kurse	Product design	Consultancy Project	HVAC	Rs. 10,000/-	4 months
Dr. Sridhar Kurse	Lubrication Oil Characterization	Consultancy Project	Shri Ashutosh Auto Agency	Rs. 10,000/-	4 months
Dr. Sridhar Kurse	Skill Development Programme	Consultancy Project	Centre of Excellence Consultancy - Training and Development SAP	Rs. 90,000/-	2 months
Dr. Sridhar Kurse	Skill Development Programme	Consultancy Project	Centre of Excellence Consultancy - Training and	Rs. 104000	2 months
Dr. Sridhar Kurse	Skill Development Programme	Consultancy Project	Development IIOT	Rs. 90000	2 months
Dr. Sridhar Kurse	Skill Development Programme	Consultancy Project	Centre of Excellence Consultancy - Training and	Rs. 110000	2 months
Dr. Sridhar Kurse	Skill Development Programme	Consultancy Project	Development IIOT	Rs. 120000	2 months

Dr. Sridhar Kurse	Skill Development Programme	Consultancy Project	Centre of Excellence Consultancy - Training and	Rs. 80000	2 months
Dr. Sridhar Kurse	Skill Development Programme	Consultancy Project	Development IIOT	Rs. 47200	2 months
Dr. Sridhar Kurse	Skill Development Programme	Consultancy Project	Centre of Excellence Consultancy - Training and	Rs. 126000	2 months
Dr. Sridhar Kurse	ANSYS CFX Certification Training	Consultancy Project	M/s SKYFI Education Labs Pvt.Ltd.	Rs. 1,05,000/-	2 months
Dr. Sridhar Kurse	ANSYS CFX Certification Training	Consultancy Project	M/s SKYFI Education Labs Pvt.Ltd	Rs.75,600/-	2 months
Dr. P. Adhikari	Green Auditing	Consultancy Project	M/s ECO emergime Engineers LLP	Rs.60,300/-	2 months
Dr. P. Adhikari	Green Auditing	Consultancy Project	M/s ECO emergime Engineers LLP	Rs. 40,000/-	2 months
Dr.Nagendra J	Design of Elevator Structure	Consultancy Project	OTIS Elevator Company(I) Ltd.	Rs. 68,592/-	2 months
Dr.Nagendra J	Design of Elevator Structure	Consultancy Project	OTIS Elevator Company(I) Ltd.	Rs.45,262/-	2 months

**Total Research Project Funds:** Rs. 1,01,88,500/-

**Total Consultancy Project Funds:** Rs. 12,01,954/-

**Total Funds:** Rs. 1,13,90,454/-

### B.3. Student's Performance

#### Student Intake Table

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	CAY (2023-24)	CAY m1 (2022-23)	CAY m2 (2021 - 22)	CAY m3 (2020-21)
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Sanctioned intake of the program (N)	60	60	120	180
Total number of students admitted in first year minus number of students migrated to other programs/institutions plus no. of students migrated to this program (N1)	40	44	62	83
Number of students admitted in 2 <sup>nd</sup> year in the same batch via lateral entry (N2)	-	4	14	18
Separate division students, if applicable (N3)	-	-	-	-
Total number of students admitted in the program( N1+N2+N3 )	40	48	76	101

### Academic Performance Table\*-

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated in stipulated period of study)			
		I Year	II Year	III Year	IV Year
CAY (2023-24)	40				
CAY m1(2022-23)	48	44			
CAY <sub>m2</sub> (2021-22)	76	62	73		
CAY <sub>m3</sub> (2020-21)	101	83	97	94	
CAY <sub>m4</sub> (LYG) (2019-20)	155	138	153	145	127
CAY <sub>m5</sub> (LYG <sub>m1</sub> ) (2018-19)	204	184	191	189	181
CAY <sub>m6</sub> (LYG <sub>m2</sub> ) (2017-18)	231	192	181	181	173

#### B3.1. Success rate without backlog in stipulated period

$SI = (\text{Number of students who graduated from the program without backlog in the stipulated period of course duration}) / (\text{Number of students admitted in the first year of that batch and admitted in 2<sup>nd</sup> year})$

via lateral entry and separate division, if applicable)

Item	Latest Year of Graduation, LYG (2022 - 23)	Latest Year of Graduation minus 1, LYGm1 (2021 -22)	Latest Year of Graduation minus 2, LYGm2 (2020 - 21)
Number of students admitted in the corresponding First Year + admitted in 2 <sup>nd</sup> year via lateral entry separate division, if applicable.	186	204	231
Number of students who have graduated without backlogs in the stipulated period	73	104	110
Success Index (SI)	0.39	0.51	0.48
Average Success Index	<b>0.46</b>		

### B3.2. Success rate with backlog in stipulated period of study

$SI = (\text{Number of students who graduated from the program with backlog in the stipulated period of course duration}) / (\text{Number of students admitted in the first year of that batch and admitted in 2<sup>nd</sup> year via lateral entry and separate division, if applicable})$

Item	LYG (CAYm4) (2022 -23)	LYGm1(CAYm5) (2021 - 22)	LYGm2 (CAYm6) (2020 - 21)
Number of students admitted in the corresponding First Year + admitted in 2 <sup>nd</sup> year via lateral entry and separate division, if applicable.	186	204	231
Number of students who have graduated with backlogs in the stipulated period.	127	181	173
Success Index (SI)	0.68	0.89	0.75
Average Success Index	<b>0.77</b>		

### B3.3. First Year Academic Performance

$\text{Academic Performance} = ((\text{Mean of 1<sup>st</sup> Year Grade Point Average of all successful Students on a 10 point scale}) \text{ or } (\text{Mean of the percentage of marks in First Year of all successful students}/10)) \times (\text{number of})$

successful students/number of students appeared in the examination)

Successful students are those who are permitted to proceed to the second year.

<b>Academic Performance</b>	<b>CAYm1 (2022 -23)</b>	<b>CAYm2 (2021 -22)</b>	<b>CAYm3 (2020 - 21)</b>
Mean of CGPA or Mean Percentage of all successful students (X)	7.92	6.98	7.05
Total no. of successful students (Y)	63	84	118
Total no. of students appeared in the examination (Z)	63	85	120
API = $X * (Y/Z)$	API=7.92	API=6.9	API=6.93
Average API = $(AP1 + AP2 + AP3)/3$	<b>7.25</b>		

#### **B3.4. Academic Performance in Second Year**

*API = ((Mean of 2<sup>nd</sup> Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Second Year/10)) x (number of successful students/number of students appeared in the examination)*

Successful students are those who are permitted to proceed to the Third year.

<b>Academic Performance</b>	<b>CAYm1 (2022 -23)</b>	<b>CAYm2 (2021 -22)</b>	<b>CAYm3 (2020 -21)</b>
Mean of CGPA or Mean Percentage of all successful students (X)	7.33	7.36	7.44
Total no. of successful students (Y)	73	97	153
Total no. of students appeared in the examination (Z)	76	101	155
API = $X * (Y/Z)$	API = 7.04	API = 7.07	API = 7.34
Average API = $(AP1 + AP2 + AP3)/3$	<b>7.15</b>		

#### **B3.5. Academic Performance in Third Year**

*API = ((Mean of 3<sup>rd</sup> Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Third Year/10)) x (number of successful*

students/number of students appeared in the examination)

Successful students are those who are permitted to proceed to the final year.

<b>Academic Performance</b>	<b>CAYm1 (2022 -23)</b>	<b>CAYm2 (2021 -22)</b>	<b>CAYm3 (2020 -21)</b>
Mean of CGPA or Mean Percentage of all successful students(X).	7.19	7.59	7.5
Total no. of successful students (Y).	94	145	189
Total no. of students appeared in the examination (Z).	97	153	191
API = $x * (Y/Z)$	API=6.96	API = 7.19	API = 7.42
Average API = $(AP1 + AP2 + AP3)/3$	<b>7.19</b>		

### B3.6. Placement, Higher Studies and Entrepreneurship

<b>Item</b>	<b>CAYm1 (2022 -23)</b>	<b>CAYm2 (2021 - 22)</b>	<b>CAYm3 (2020 - 21)</b>
Total No. of Final Year Students (N)	145	189	181
No. of students placed in companies or Government Sector (x).	84	102	64
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y).	29	30	38
No. of students turned entrepreneur in engineering/technology (z)	2	3	3
$x + y + z =$	115	135	105
Placement Index : $(x + y + z )/N$	<b>0.79</b>	<b>0.71</b>	<b>0.58</b>
Average placement= $(P1 + P2 + P3)/3$	<b>0.69</b>		

## PART C. Criterion wise Compliance Status

<b>S.N.</b>	<b>Criteria</b>	<b>Observations made by NBA</b>	<b>Compliance Status</b>
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		(During the last accreditation visit)	(Action taken by the institution)
<b>1</b>	<b>Vision, Mission &amp; PEOs</b>		
1.1.	Formulation	The Department has properly formulated the vision, mission and PEOs	Vision, Mission, PEOs and Dissemination are retained as recommended by NBA peer team.
1.2.	Dissemination	Dissemination of process of vision /mission/PEOs is proper.	
1.3.	Assessment	Proper justification needed for the mapping PEOs with Mission of the Department	<ul style="list-style-type: none"> <li>• PEOs have been framed in alignment with NEP policy</li> <li>• PEO mapping with the Mission of the Department was discussed in BOS and Minutes of the Meeting (MOM) are available in the BOS file.</li> <li>• Justification for the process of defining PEO is disseminated through the academic syllabus handbook.</li> <li>• The mapping of PEOs has taken a new dimension to the new NEP-based curriculum which categorizes the courses emphasized on hands-on practical approaches.</li> </ul>
1.4.	Any other observations of the NBA	-	-
<b>2</b>	<b>Course outcome and Program Outcomes</b>		
2.1.	Formulation	Stake holder's feedback has not been documented.	<ul style="list-style-type: none"> <li>• As suggested by the NBA committee members the stake holders feedback on CO PO mapping and curriculum framework is documented.</li> <li>• The course outcomes and program outcomes are mapped based on the advice received from the stake holders. This has been documented in the Board of Studies file</li> <li>• The points were also discussed with the Program Assessment Committee (PAC) and Department Advisory Board (DAB) and documented in the respective files.</li> <li>• Graduate Exit survey analysis is reported.</li> </ul>
		Industry interaction is not documented	<b>The following documents for the industry interaction are maintained</b> <ul style="list-style-type: none"> <li>• Details of Center of Excellence (COE):MOU, Internship, expert lecture and webinar documents are maintained</li> <li>• Industry expert lecture file is maintained</li> <li>• Development programs for faculties file is maintained</li> <li>• Faculty training from industry file is maintained</li> </ul>

2.2.	Mapping	The process requires proper documentation for attaining COs and PO's	<ul style="list-style-type: none"> <li>Continuous Internal Evaluation (CIE), alternative assessment, quiz and other evaluation process the rubrics have been framed as discussed in PAC and DAB and approved.</li> <li>CO, PO attainment is automated through Contineo software. So that the attainment is flawless.</li> </ul>
2.3.	Any other observations of the NBA	Teaching learning process: The quality of teaching needs to be improved and implementation of student feedback should be maintained	<b>The Process followed to ensure the quality of Teaching:</b> <ul style="list-style-type: none"> <li>Regular Classroom audit: From the office of the Dean-Academics, regular classroom visits are undertaken, as part of an initiative to assess and evaluate the teaching pedagogies employed by the faculty members.</li> <li>Innovative teaching process and Teaching aids: The faculty members are actively incorporating state-of-the-art Information and Communications Technology (ICT) tools to enhance and modernize their teaching pedagogy.</li> <li>Promoting experiential Learning: The faculty members are actively embracing strategies which encompass a diverse range of modalities, including the utilization of physical models, online videos, and live experimental setups during instructional sessions.</li> </ul>
<b>3.</b>	<b>Curriculum Design, if applicable</b>		
3.1.	Process to identify the gap, if applicable and action taken thereof	Articulation matrix tables are not properly done following OBE (point wise)	<ul style="list-style-type: none"> <li>The articulation matrix is reframed based on the course content, advice from the stakeholders and his recorded in PAC,DAB and approved in regulatory bodies</li> <li>Justification of all the courses for CO PO mapping is discussed and ratified, approved by Program Assessment Committee (PAC), Department Advisory Board (DAB), Board of Studies (BoS).</li> <li>It has been incorporated and approved by the BoS members and updated in the BoS Minutes of Meeting.</li> </ul>
3.2.	Curriculum Structure & Component (as applicable)	All CO's are not covered in curriculum process	<ul style="list-style-type: none"> <li>The Curriculum is revised based on the new NEP model.</li> <li>The revised curriculum ensures that all the Course outcomes and program outcomes along with PEO's are mapped and justified.</li> </ul>
3.3.	Any other observations of the NBA	CO attainment calculation is not properly carried out	<ul style="list-style-type: none"> <li>For the evaluation and assessment of CO's and PO's, multiple rubrics are used.</li> <li>Attainment of POs/PSOs through a course is calculated as Sum of product of CO attainment and CO-PO mapping by sum of weight contributed in CO-PO mapping.</li> <li>After calculating course-wise PO attainment for each level of assessment for eight semesters, Program-wise attainment is calculated for different levels of assessment.</li> <li>Also, the entire process is automated by software tool called Contineo. This enables us to calculate the attainment in a systematic way.</li> </ul>



Weakness / Areas of improvement		
	Observed during last visit	Action taken to overcome
1.	Success rate of student is very less	<b>Measures for improving the success rate:</b> <ul style="list-style-type: none"> <li>Faculty members conduct extra coaching classes for the students, based on their needs.</li> <li>Students with backlogs are motivated to clear all courses and obtain good result, to improve the success rate.</li> <li>There is an improvement in the success rate without backlogs.</li> </ul>

Concerns		
	Observed during last visit	Action taken to overcome
1	Participation of stake holders and industry are missing in curriculum design	<ul style="list-style-type: none"> <li>In every BOS meeting inputs are taken from stake holders.</li> <li>Three industrial centers of excellence Lab are established in the department with certified training to faculty members.</li> <li>Faculty members have undergone certified training from industry for the open elective courses.</li> <li>In addition, expert lectures are organized only by the industrial experts.</li> </ul> <p><b><u>Stakeholders involvement in curriculum Design:</u></b></p> <ul style="list-style-type: none"> <li>The curriculum is designed in consultation with Industrial experts.</li> <li>Based on the stakeholder's inputs, new courses are added in the curriculum.</li> <li>Enhancement courses which provide the platform for skill development.</li> <li>Faculty members undergo certified training for handling the Industry supported courses and labs.</li> </ul> <p><b><u>Action is taken to improve stakeholder's involvement:</u></b></p> <ul style="list-style-type: none"> <li>The resource person for guest lectures and expert lectures is taken from the Industry</li> </ul>

		<ul style="list-style-type: none"> <li>• The number of Events conducted has increased in core Subjects as well as in the latest trends in engineering.</li> <li>• The students are motivated to participate in Hackathons and project exhibitions conducted by industries and renowned institutes.</li> <li>• The students and faculty are encouraged to complete the industry-ready certification courses.</li> <li>• Interdisciplinary projects and internships are encouraged among students, for which problem statements are defined by industry experts.</li> </ul>												
2	The curriculum is not well balanced considering all specialization	<p>Aligning with the new NEP policy Ability Enhancement Course, Emerging Technology course and Engineering Science course have been introduced considering all specializations through which the syllabus is framed and documented.</p> <table border="1"> <thead> <tr> <th>Specialization</th> <th>No. of Courses (2<sup>nd</sup> to 4<sup>th</sup> Year)</th> </tr> </thead> <tbody> <tr> <td>Design</td> <td>11</td> </tr> <tr> <td>Materials Science</td> <td>6</td> </tr> <tr> <td>Manufacturing</td> <td>18</td> </tr> <tr> <td>Thermal</td> <td>11</td> </tr> <tr> <td>Others</td> <td>10</td> </tr> </tbody> </table> <p>Based on the specialization courses offered in the curriculum, the faculties with the specific specializations are available to educate the students.</p>	Specialization	No. of Courses (2 <sup>nd</sup> to 4 <sup>th</sup> Year)	Design	11	Materials Science	6	Manufacturing	18	Thermal	11	Others	10
Specialization	No. of Courses (2 <sup>nd</sup> to 4 <sup>th</sup> Year)													
Design	11													
Materials Science	6													
Manufacturing	18													
Thermal	11													
Others	10													
3	Understanding of outcome-based education is not up to the mark. awareness is less among the stake holders	<ul style="list-style-type: none"> <li>• At the commencement of every semester, BOS Chairman conducts Orientation programs to the students.</li> <li>• Awareness is provided by the Head of the department about OBE, vision, mission, PEOs, POs and COs, in parent teacher meeting as well.</li> <li>• In addition, the faculty members present the syllabus during the classes, providing the insight of respective course outcomes.</li> <li>• Faculty members are encouraged to take up the OBE NPTEL courses.</li> <li>• During the induction program for the new faculty members, the importance is OBE</li> </ul>												

			is communicated.	
4	Faculty members have less publication in reputed SCI journal		<b>Actions/Measures to improve the quality of publications:</b> <ul style="list-style-type: none"> <li>• All faculty members have published Journal Papers in Q1, Q2, Q3, Q4, SCI journals in the present cycle. This contributes towards the self-appraisal of each faculty member.</li> <li>• Faculty members are encouraged to collaborate among researchers, both within our institution and with external partners.</li> <li>• Faculty development programs are conducted in the institution through the department of R&amp;D, focusing on research methodologies, paper writing, and publication strategies.</li> <li>• This is reflected by the fact that there are more than 150 SCI Journals published by the faculties.</li> </ul>	
5	Faculty requires interaction with external academic community		<ul style="list-style-type: none"> <li>• Faculties have attended Faculty Development Programs at Other Educational Institutions.</li> <li>• Faculties are attending Workshops, Short Term Training Programs (STTP), Global Initiative of Academic Networks (GIAN) Course, arranged by premier institutes, such as IIT's and NIT's.</li> <li>• Faculties are also interacting with other scientific communities, such as medical researchers to gain knowledge and conduct research to support the R and D activities. Based on this, a new Course known as the "Bio-Inspired Design and Innovation" was introduced in the curriculum. A new "Centre of Excellence", has also been established, on Bio-Mechanical Engineering Sciences.</li> <li>• Through Institution's Innovation Cell (IIC) cell the faculty members of the department have given guest lectures at other educational institutions.</li> <li>• Research papers are published by collaborating with external academicians.</li> </ul>	

	6	students require more professional exposure in terms of activities and participation	<ul style="list-style-type: none"> <li>• Every year students participate in International Machine Tool Exhibition, organized by International Machine Tool Manufacturer's Association (IMTMA)</li> <li>• Scheduled industry visits to technology centers at 2 visits per semester.</li> <li>• Industry expert MOOC courses are mandatory for professional electives.</li> <li>• As per the new NEP policy students carry out internships in reputed companies.</li> <li>• The students are motivated to participate in Hackathon and project exhibitions conducted by industries and renowned institutes.</li> <li>• The students are encouraged to complete the industry ready certification courses.</li> </ul>	
	7	Quality of admitted students is declining	<p><b>The quality of admitted students is enhanced as per the following actions taken:</b></p> <ul style="list-style-type: none"> <li>• Scholarship is provided to meritorious students.</li> <li>• Co-curricular as well as Extra-curricular student achievements are duly recognized and appreciated.</li> <li>• The courses introduced with the help of Industry sponsored labs, facilitate the students in obtaining placements as well as global certification.</li> </ul>	
	8	The target setting for PO attainment, gap analysis and action taken require improvement	<p><b>Refined process was implemented and followed in the department:</b></p> <ul style="list-style-type: none"> <li>• For each course within the program, Course Outcomes (COs) are assessed using a variety of assessment methods.</li> <li>• The calculation of CO attainment involves qualitative analysis by course instructors, who use defined thresholds and CO targets to determine whether the COs have been met or not.</li> <li>• Course coordinators report the CO attainment value, action plan for improvement, and recommendations for accomplishing CO targets.</li> <li>• At the end of the program for a particular batch, Program Outcomes (POs) and Program Specific Outcomes (PSOs) are</li> </ul>	

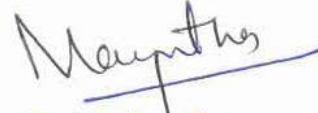
			<p>assessed, with 80% weight given to direct assessment and 20% to indirect assessment, conducted through surveys of graduates, alumni, and employers.</p> <ul style="list-style-type: none"> <li>• The department frames survey questions to indirectly measure POs/PSOs.</li> <li>• Thorough analysis of these attainment levels informs the identification and implementation of action plans for subsequent batches.</li> <li>• Rubrics are utilized for the evaluation and assessment of COs, POs, and PSOs, facilitating a comprehensive and structured approach to monitoring and improving the program's educational outcomes.</li> </ul>	
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## Declaration

It is hereby declared that information provided in this Compliance Report is factually correct.  
I understand and agree that an appropriate action against the Institute will be initiated by the  
NBA (which may include debarring the institution for three years), in case any false  
statement/information is observed during the assessment of the compliance report.

Date: 28.12.2023

Place: Bengaluru



Dr. Manjunatha

Principal

Dr. Manjunatha  
Principal

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



**[www.newhorizonindia.edu](http://www.newhorizonindia.edu)**

Ring Road, Bellandur Post, Near Marathahalli,  
Bengaluru, Karnataka 560103, India.

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