



DEBASHISH RANJAN NATH

Assistant Professor

DEPARTMENT OF MECHANICAL ENGINEERING | ASSAM ENGINEERING COLLEGE

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RESEARCH INTEREST

Smart Manufacturing, Optimization, Industrial Robotics

Renewable Energy Resources, Small Hydropower

Indian Knowledge System

SERVICE PROFILE:

Organization	Role / Designation	Duties & Responsibilities	Timeline
Academics (Technical)			
Assam Engineering College (Under Government of Assam)	Assistant Professor (Mechanical Engineering)	Teaching Mechanical Engineering subjects to B.Tech Students: - Welding and Casting Technology (3rd Sem) - Indian Knowledge System (3rd Sem) - Manufacturing Process-I (4th Sem) - Fluid Mechanics-I (4th Sem) - Programming for Problem Solving (2nd Sem) Conduction of Continuous Assessment Tests (CAT) as a Coordinator	February 2025 – Till date
NITS Mirza (Under NEMCARE Group of Institutions)	Assistant Professor (Mechanical Engineering)	Teaching Mechanical Engineering subjects to B.Tech Students: - Industrial Robotics (8th Sem) - Control Engineering (8th Sem) - System Optimization Techniques (7th Sem) - Thermal and Hydroelectric Power Systems (7th Sem) - Machine Tools & Machining (6th Sem) - Fluid Mechanics (4th Sem) - Primary Manufacturing (3rd Sem) - Engineering Mechanics (1st Sem) Conduction of University Examinations as the Assistant Centre In-Charge	January 2017 – January 2019
Jorhat Engineering College (Under AICTE-NEQIP)	Teaching Assistant	Conduction of Mechanical Laboratory classes for BE students	August 2015 – July 2016

Industry (Non-Technical)			
Airports Authority of India (Under Ministry of Civil Aviation, Government of India)	Supervisor (HR)	Associated in the Human Resource Department and dealing with: - Terminal Benefits (Social Securities & Welfare Schemes) - Establishment related matters in SAP-HCM (ERP) - Legal & Court Matters related to Pension - Quasi-judicial matters	January 2019 – February 2025

EDUCATIONAL PROFILE:			
Qualification	Specialization	Institution / Board / University	Timeline
Technical			
Master of Engineering (ME)	Mechanical Engineering (Production and Industrial Engineering)	Jorhat Engineering College (Under Dibrugarh University)	2014 – 2017
Bachelor of Engineering (BE)	Mechanical Engineering	NETES Institute of Technology and Science Mirza (NITS Mirza) (Under Gauhati University)	2010 – 2014
Non-Technical			
Master of Business Administration (MBA)	Human Resource Management	Maniram Dewan School of Management (Under Krishna Kanta Handiqui State Open University)	2019 – 2022
Basic			
Higher Secondary (10+2)	Science	Cotton College (State Board – AHSEC)	2008 – 2010
Matriculation (10)	Assamese & Advanced Mathematics	Disney Land High School (State Board – SEBA)	1997 – 2008

COURSES ATTENDED:			
Title	Date	Organized By	Category & Mode
Introduction to Indian Knowledge System	July 28 to August 01, 2025	National Institute of Technical Teachers' Training & Research (NITTTR) Kolkata Extension Centre Guwahati	Faculty Development Program (Offline)
Subtractive, Additive and Digital Manufacturing	July 07 to July 19, 2025	Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram under Malaviya Mission Teacher Training Programme	Refresher Course (ICT Online)
Advanced Pedagogy	April 07 to April 18, 2025	National Institute of Technical Teachers' Training & Research (NITTTR) Kolkata	Faculty Development Program (ICT Online)
Innovation & Entrepreneurship	April 22 to April 26, 2025	Organised by AICTE & the Ministry of Education's Innovation Cell (MIC) in collaboration with Assam Down Town University (AdtU)	Faculty Development Program (Offline)

ACADEMIC PROJECTS:		
Title	Guide	Remarks
DEVELOPMENT OF A PRODUCTION PLANNING MODEL FOR REFINERY PROFIT OPTIMIZATION	- Dr. Parimal Bakul Baruah, Professor & Head, Department of Mechanical Engineering, Jorhat Engineering College - Mr. Pranjal Jyoti Dutta, Deputy General Manager, Technical Services – Planning, Numaligarh Refinery Limited	M.E. Final Year Project – Jorhat Engineering College (2016-17)
STUDY, DESIGN AND FABRICATION OF COMPRESSED AIR VEHICLE	Mr. Pakiya Kumar, Assistant Professor, Department of Mechanical Engineering, NITS Mirza	B.E. Final Year Project – NITS Mirza (2013-14)
FABRICATION OF A CLUTCH SYSTEM IN A ROBOTIC PLATFORM	- Dr. Anup Kumar Gogoi, Professor, Department of Electronics & Electrical Engineering, IIT Guwahati - Mr. Utpal Saikia, Assistant Professor, Department of Mechanical Engineering, NITS Mirza - Mr. Santonu Gogoi, Assistant Professor, Department of Mechanical Engineering, NITS Mirza	Mini Project – NETES Lab (June 2011)

RESEARCH / TECHNICAL PAPER PUBLICATIONS:	
Conference Proceedings	
- Dutta, S., Nath, D.R. and Das, S., 2017, A study of Waste Heat Recovery Boiler Operation and Maintenance of CCU at Refinery Campus, Proceeding of International Conference on New Frontiers of Engineering, Science, Management and Humanities (ICNFESHM-2017), 21 May, National Institute of Technical Teachers Training and Research (NITTTR), India. ISBN: 978-81-934083-0-8. - Nath, D.R., Dutta, P.J. and Barua, P.B., 2017, Linear Programming Model for Refinery Profit Optimization, Proceedings of the National Conference on Sustainable Mechanical Engineering: Today and Beyond (SMETB), 25-26 March, Tezpur University, India. ISBN: 978-93-84388-11-9.	
Journals	
- Dutta, S., Nath D.R. and Das, S., 2017, A Study of Waste Heat Recovery Boiler Operation and Maintenance of CCU at Refinery Campus, International Journal of Engineering Technology, Management and Applied Sciences (IJETMAS), 5(5), pp. 334-341. ISSN 2349-4476. - Nath, D.R. and Dutta, P., 2016, Production Planning and Optimization of Motor Spirit in Oil Refinery using Linear Programming, International Journal of Engineering Trends and Technology (IJETT), 36(5), pp. 257-260. ISSN: 2231-5381. - Nath, D.R., 2015, Small Hydro Power and its Potentiality in Assam, International Journal of Engineering Trends and Technology (IJETT), 23(8), pp. 391-395. ISSN: 2231-5381.	
Souvenir	
Das, P.P. and Nath, D.R., 2014, Study, Design and Fabrication of Compressed Air Vehicle, Souvenir Rumanthan – Golden Jubilee Celebration Hostel – 6, Assam Engineering College, pp. 55-58.	

INVITED TALKS / LECTURES / RESOURCE PERSON:
AICTE Awareness Workshop on “Smart India Hackathon – 2018” Assam Engineering College, Jalukbari, Assam, India. January 10, 2018

PROFESSIONAL MEMBERSHIP:
- Organization Name: The Institution of Engineers (India) (IEI) - Membership Level/Title: Associate Member (AMIE)

PRESENTATIONS:	
International	
International Conference on New Frontiers of Engineering, Science, Management and Humanities (ICNFESMH-2017) National Institute of Technical Teachers Training & Research (NITTTR), Chandigarh, India (MHRD, Govt. of India). May 21, 2017.	
National	
- National Conference on Sustainable Mechanical Engineering: Today and Beyond (SMETB-2017) Department of Mechanical Engineering, Tezpur University, Assam, India. March 25, 2017. - Technical Session of Golden Jubilee Celebration of Hostel – 6, Assam Engineering College Golden Jubilee Committee of Hostel – 6, Assam Engineering College, Jalukbari, Assam, India. January 11, 2014. - All India Seminar on Green Fuels & Clean Energy Technologies The Institution of Engineers (India), Assam State Centre, Guwahati, Assam, India. December 15, 2013.	
