

Memorandum of Understanding

Between

Don Bosco College of Engineering

And

National Institute of Technology, Goa

This Memorandum of Understanding (hereinafter referred to as "MoU") is executed at Fatorda - Goa on the 4th Day of the month of November in the year 2019.

By & between

Don Bosco College of Engineering, Fatorda, Goa [hereinafter referred to as DBCE] having its registered office at Fatorda – Goa represented through its Director Rev. Fr. Kinley D'Cruz which expression shall, unless inconsistent with the context or meaning thereof, be deemed to include its subsidiaries, nominees, successors and permitted assigns) of the First Part; and

The National Institute of Technology, Goa [hereinafter referred to as NITG], Farmagudi, Ponda, Goa 403401, on the other part (who for the purpose of this MoU are hereinafter individually referred to as 'Party' and collectively referred to as the 'Parties')

Whereas DBCE is an Engineering Institute belonging to the Fatorda Salesian Society was established with the primary objective of rendering selfless and dedicated service to higher education in the Industrial & Engineering fields. Since inception we have been focusing in educating the Young.

Whereas, NITG is an institution of national importance which offers B.Tech. programmes in Computer Science and Engineering, Electronics and Communication Engineering, Electrical and Electronics Engineering, Mechanical Engineering and Civil

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Engineering. In subsequent years, NITG will offer programmes at undergraduate, graduate and PhD level covering the whole spectrum of Engineering, Technology, Science, Management and Humanities.

Whereas, it has been considered expedient to agree in writing to participate jointly in undertaking research and academic projects as per the expertise and logistics available with the Parties.

Article 1. Objectives

- 1.1 To undertake joint research projects
- 1.2 Publications and Patents
- 1.3 Knowledge Sharing
- 1.4 Placement & Internships

Article 2. Areas of Research Cooperation

- 2.1 Image Processing
- 2.2 Artificial Intelligence
- 2.3 Thermography
- 2.4 Remote Sensing
- 2.5 GIS
- 2.6 Robotics
- 2.7 Communication Engineering
- 2.8 VLSI
- 2.9 Signal Processing
- 2.10 Machine learning,
- 2.11 Social Media Mining
- 2.12 Software Defined Network and 5G
- 2.13 Brain-Computer Interface



- 2.14 Cryptography and Information Security
- 2.15 Data Science
- 2.16 Blockchain/DLT for Social Goods
- 2.17 Wireless Sensor Networks
- 2.18 Manufacturing Technology
- 2.19 Engineering Design and Automation
- 2.20 Thermal Analysis
- 2.21 Finite Element modeling
- 2.22 Water Resources
- 2.23 Transportation
- 2.24 Structural Engineering
- 2.25 City and Building Planning
- 2.26 Photonics
- 2.27 Electron Paramagnetic Resonance Spectroscopy and Organic Free Radicals
- 2.28 Convectional Problems
- 2.29 Bio-medical Imaging, Inverse problems and Numerical Optimization
- 2.30 Mathematical Biology, Finite Element Methods & Partial Differential Equations
- 2.31 Power Electronic applications to Power Systems
- 2.32 Renewable Energy and Smart Grids
- 2.33 Control Systems and Digital Signal Processing

Article 3. Forms of Cooperation

- 3.1 Joint research projects and publications
- 3.2 Academic projects
- 3.3 Seminars and lectures on topics of mutual interest and relevance
- 3.4 Technology transfers
- 3.5 Workshops, Skill based training sessions and Internships



Article 4. Exchange of Information and Research Samples

4.1 The term "information" includes scientific or technical data, results and/or methods of investigation, and other information intended to be provided, exchanged or arising under the objectives identified under Article 1. The Parties shall take all measures to protect the secrecy of and avoid disclosure and unauthorized use of the information which is confidential and outside the public domain.

Article 5. Publications and Intellectual Property Rights


- 5.1 Any research publications and intellectual property rights arising out of the academic- and joint research projects shall be jointly published and, when patented, will be jointly and equally owned by DBCE and NITG.
- 5.2 The procedural formalities for securing and maintaining the intellectual property rights shall be the responsibility of NITG and the expenditure incurred thereof shall be borne jointly and equally by DBCE and NITG.
- 5.3 The upfront fee and royalty accrued from licensing of any intellectual property arising from this collaboration to other Party[ies] shall be shared between the Parties, the terms and conditions of which shall be the subject matter of a separate agreement between the Parties.
- 5.4 The Parties shall not assign any rights and obligations to any third Party[ies] without consent of the other party.

Article 6. Implementation

6.1 The Parties agree to constitute a Management Committee as follows:


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From DBCE	From NITG
Dr. Varsha Turkar [Co – Convener] [HOD – Dept. of Electronics and Telecommunication Engineering, DBCE]	Dr. B. Venugopal Reddy [Convener] Dean (R &C) NITG
Prof. Ajit Salunke [HOD – Dept. of Mechanical Engineering, DBCE]	Dr. Sarani Ghosal Mondal Dean IRAA, NITG
Dr. Shwetha Prasanna [HOD – Dept. of Civil Engineering, DBCE]	Dr. Saidi Reddy Parne Dean FW, NITG
Prof. Gaurang Patkar [HOD – Dept. of Computer Engineering, DBCE]	Dr. Vasantha M H Registrar, NITG

- 6.2 The Management Committee shall meet at least once in a year either at DBCE or NITG to review the progress.
- 6.3 Based on the education, training and research requirements of students, project assistants and staff, the management committee shall, in consultation with the faculty, decide on topics and the mode of cooperation for each of the academic years during the tenure of this cooperation.
- 6.4 The convener and co-convener shall be the contact persons for all the cooperation and other related issues identified in this understanding.

Article 7. Finance

- 7.1 Each Party shall bear the respective costs of carrying out the obligations under this agreement. Neither Party shall make a claim against the other Party for any expenditure unless such expenditure has been agreed upon in writing between the Parties.

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Article 8. General Provisions

- 8.1 The access to research instrumentation- and other enabling facilities at the Parties work place(s) shall be in compliance with the respective party's norms and regulations.
- 8.2 The Parties shall not use any of the confidential information which is required to be held in confidence for any purpose other than performance of their obligations under this understanding.
- 8.3 The implementation of the areas- and forms of cooperation identified under Articles 2 and 3 shall be subject to the availability and convenience of scientists, faculties and infrastructure facilities available at the Parties work places.
- 8.4 The Party organizing an item of work shall have the nodal responsibility for mobilizing resources and the conduct of such works.
- 8.5 There shall be exchange visits by faculty members and students for academic and research purposes.
- 8.6 NITG offers to permit up to 5 students per year, ranging for a period of 2 to 6 months, to work on thesis based programmes/Internships under the joint supervision of NITG and DBCE staff either as full project students or for Internship programmes. DBCE shall arrange to send the applications of short-listed candidates, not exceeding 5 students per faculty, through the DBCE Coordinators identified under Article 6.1. The NITG procedures governing such students' placement shall be applicable.
- 8.7 NITG shall, on prior intimation, allow the few nominated staff and students of DBCE to participate in its special lectures/classes/workshop.
- 8.8 All questions related to this understanding arising during its term shall be settled by the Parties by mutual agreement. The disagreements at the operating level shall

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be forwarded to the respective higher officials for appropriate resolution failing which an arbitrator of mutual acceptance may be identified.

- 8.9 Nothing in this understanding is intended to affect other cooperation or collaboration between the Parties.
- 8.10 All the collaboration activities pursuant to this agreement shall be conducted in accordance with the laws and regulations governing DBCE and NITG.

Article 9. Entry into Effect and Termination

- 9.1 This agreement shall be valid for a period of **five** years. The parties may extend the term of this agreement for additional periods as desired under mutually agreeable terms and conditions which shall be done in writing and signed by the parties.
- 9.2 The parties shall be entitled to terminate the agreement in case of breach by any of the parties in not adhering to stipulation provided herein after giving notice of thirty days to cure such breach and the party having failed and neglected to rectify the breach thereof after the notice.
- 9.3 No such early termination of this agreement, whether mutual or unilateral, shall affect the obligations of the parties under this agreement entered into pursuant to this understanding which obligations shall survive any such termination.

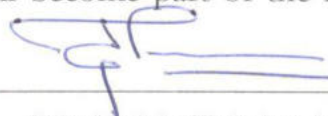
Article 10. Amendments

- 10.1 This MoU represents the entire understanding between the Parties and supersedes any and all understandings either oral or written hitherto with respect to the subject matter of this understanding.
- 10.2 No amendment or modification of the MoU shall be valid unless the same is made in writing by both the Parties and specifically stating the same to be an amendment of the MoU. The modifications shall become part of the MoU and

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shall be effective from the date on which they are executed unless otherwise agreed to.

Article 11. Assignment

11.1 This MoU is based on the professional competence and expertise of each Party and hence neither Party shall transfer or assign this agreement or rights or obligations arising hereunder, either wholly or in part, to any third party.

Article 12. Non-exclusivity

12.1 The relationship of the Parties under this understanding shall be non-exclusive and both Parties are free to pursue other agreements or collaborations of any kind. However, when entering into a particular education, training and research agreement, the participants may agree to limit each Party's right to collaborate with others on that subject.

This MoU has been executed in two originals, one of which has been retained by DBCE and the other by NITG.

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In witness whereof, the Parties have executed this MoU and represent that they approve, accept and agree to the terms contained herein.

For and on behalf of

Don Bosco College of Engineering, Goa



Name: Rev Fr. Kinley D'Cruz

Title : Director

stamp



In the presence



Name : Dr. Neena Panandikar

Title : Principal

Address: Fatorda, Margao, Goa

For and on behalf of

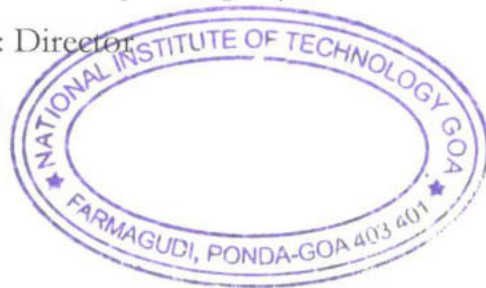
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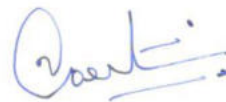
Name: Dr. Gopal Mugeraya

Title : Director

stamp



In the presence



Name: Dr. Vasantha M H

Title : Registrar

Address: NITG, Farmagudi, Ponda, Goa.

