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Guidelines for Election to the Fellowship (*Indian*) **of INAE**

Category	Citizenship (passport)	Country of residence and Employment	Eligibility criteria	Eligibility Type
	Indian national (holding Indian Passport)	India	The nominee for election as a Fellow (FNAE) shall be an Indian national who has worked and/or maintained a regular position in India for the last five years or more and has significantly contributed to the engineering and technological field in India.	Eligible for Indian Fellowship Category.
II	Person of Indian Origin (holding Foreign Passport and OCI Card)	India	The nominee shall be currently working in India continuously for the last 10 years or more (in the same or multiple organizations or be self-employed) and has significantly contributed to the engineering and technological field in India.	Eligible for Indian Fellowship Category.
V	Foreign national (holding Foreign Passport)	India	The nominee shall be a foreign national holding foreign passport who must be presently working in India continuously for last 10 years or more (in the same or multiple organizations or be self-employed) and has made significant contribution to Engineering and Technology in India	Eligible for Indian Fellowship Category.

Guidelines for Election to the Foreign Fellowship of INAE

Category	Citizenship (passport)	Country of residence and Employment	Eligibility criteria	Eligibility Type
III	Person of Indian Origin (holding Foreign Passport and OCI Card)	Foreign country	The nominee shall be a Person of Indian Origin holding Foreign Passport including OCI who has worked and/or maintained regular position in a foreign country for more than last five years at a stretch and has migrated abroad during last 5-15 years only. It is mandatory for other OCIs who have migrated more than 15 years back to be a Fellow of the Engineering Academy (or Science Academy, if an Engineering Academy does not exist in that country) of his/her country.	Eligible for Foreign Category.
IV	Foreign national (holding Foreign Passport)	Foreign country	The nominee shall be a foreign national holding foreign passport who is working and living abroad and is already a Fellow of the Engineering Academy (or Science Academy, if an Engineering Academy does not exist in that country) of his/her country.	Eligible for Foreign Fellowship Category

^{*}Nominees for Foreign Fellowship should preferably be less than 75 years of age.

Parameters and Criteria for Nomination and Assessment in 3 Categories: (Academic Institutions OR Research & Development OR Industry & Engineering Services)

Academic Institutions:

- 1. Publication (peer reviewed publication, monograph, manual)
- 2. Teaching, training, supervision (course, book, lecture, thesis, report)
- 3. Patent and prototype development (design/demonstration/deployment)
- 4. Peer recognition (awards, prizes, fellowships) and academic distinctions
- 5. Sponsored research, creation of facility, consultancy, industrial collaboration

Research and Development:

- 1. Contribution (individual/group) to R&D projects/innovation
- 2. Industrial collaboration (projects, consultancy, development)
- 3. Sponsored/industry funded research, Patent, Translational research
- 4. Publication (paper, manual, handbook, report), Prototype/pilot operation
- 5. Peer and professional recognition (awards, prizes, fellowships, certification)

Industry & Engineering Services:

- 1. Technology development (individual/group contribution)
- 2. Innovation and leadership in technology development activity
- 3. Individual contribution in innovation, consultancy and development
- 4. Patent, publication, supervision, report, manual, handbook, lectures
- 5. Peer recognition, career achievement, professional distinction and awards

Engineering Sections with Indicative Specializations

Section I: Civil Engineering

Structural Engineering; Construction Engineering; Water Resources Engineering/Hydrology Hydrodynamics; Irrigation & Drainage Engineering; Coastal Engineering; Ocean Structures; Port & Harbour Engineering; Earthquake Engineering; Wind Engineering and Flood Control; Geotechnical Engineering; Transportation Engineering including Railways; Architecture & Planning; Surveying including Remote Sensing & Other Techniques; Agricultural Engineering; Environmental Engineering

Section II: Computer Engineering and Information Technology

Computer Software & Hardware including Algorithms and Data Structures; Programming Methodology and Languages; Database Systems, Parallel Processing; Operating Systems; Artificial Intelligence & Soft Computing including Neural Networks, Genetic Algorithm & Quantum Computing; Speech and Language Recognition; Computer Vision, Image Processing and Pattern Recognition; Automata Theory & Applications

Section III: Mechanical Engineering

Manufacturing and Forming Technologies including Advanced Processing Methods; Production Engineering; Industrial Engineering; Precision Engineering; Foundry and Casting Technology; Welding and Joining; Metrology; Machining; Thermal Science and Engineering including Thermodynamics, Combustion, Heat Transfer, Air-Conditioning & Climatic Control; Design and Analysis of Solids; Thermal and Fluid Mechanical Systems; Machines, Structures and Devices including Kinematics, Mechatronics & Robotics, Micro-Mechanical Systems (MEMS); Tribology; Automobile Engineering; Naval Architecture & Marine Engineering; Vibration Engineering, Acoustics and Noise Prime Movers; Experimental and Computational Stress Analysis for Solids & Fluids; CAD/CAM, CIM; Non destructive evaluation

Section IV: Chemical Engineering

Product/Process Development; Unit Operations and Processes; Heat/Mass Transfer and Transport Phenomena; Process Control & automation; Process Modelling & Simulation; Reaction Engineering and Catalysis; Microfluid and Fluid Dynamics; Property Evaluation; Chemical and Process Safety Analysis; Manufacturing Practices; Corrosion and Electrochemical Engineering; Chemical Technology including Oils, Paper, Petroleum, Leather, Pharmaceuticals, Textiles, Ceramics, Cement and allied fields; Environmental Engineering of Chemical Systems; Nanotechnology in Chemical Engineering

Section V: Electrical Engineering

Power Systems including Generation, Transmission, Distribution and Control; Electrical Machines and Devices; Power Electronics, Drives & Control Systems; High Voltage & Insulation Engineering; Electrical Energy Storage including Super Capacitors; Electrical Traction

Section VI: Electronics and Communication Engineering

Semiconductor Devices including Nanoelectronics, Microelectronics, Infotronics; Communications including Analog, Digital, Wireless, Mobile, Underwater & Space Communication; Optoelectronics & Optical Communications including Lasers & Holography; VLSI and Embedded Systems; Electromagnetics & Microwave Engineering; Consumer Electronics; Electronic Components

Section VII: Aerospace Engineering

Aero & Space Dynamics; Navigation Guidance & Control; Aerospace Structures (Rocket Design, Missile Design, Satellite Design, Aircraft Design and Non-Destructive Evaluation/Testing (NDE/NDT), Composite Structures); Space Transportation Systems including Launch Vehicle Design; Space Engineering; Avionic Systems and Instrumentation; Helicopter Engineering including Design & Analysis; Airworthiness and Safety of Aircraft / Helicopters / Missiles; Flight Simulation & Flight Control; Flight Operation & Maintenance.

Section VIII: Mining, Metallurgical and Materials Engineering

Mineral Exploration; Metallurgical Engineering (Physical / Extractive / Mechanical / Powder Metallurgy); Mineral Processing; Engineering Materials (Metallic, Non-Metallic, Composites and Nanomaterials); Materials Characterization and Evaluation; Joining of materials; Design and development of new materials and techniques; Modeling and simulation of materials and processes; Mining Engineering

Section IX: Energy Engineering

Conventional Energy; Non-Conventional Energy; Nuclear Engineering; Renewable Energy (including Solar, Wind, Tidal; Hydrogen, Fuel Cells, Biomass, Biofuels, Geothermal, etc.; Non-Renewable Energy including Fossil Fuels; Energy Audit & Management

Section X: Interdisciplinary and Special Engineering Fields and Leadership in Academia, R&D and Industry

Mission mode engineering covering more than one section of Engineering as under Section I to IX; Bioengineering/Technology relevant to Chemical Synthesis; Agriculture; Energy; Atmosphere; Food; Medicine and Medical Devices; Biophysics/Mechanics; Marine Resources; Molecular Biology; Ergonomics; Informatics; Forensics; Biomedical Engineering; Environmental Engineering; Climate Change and Global Warming; Waste Management; Recycling; Quality, Reliability & Safety Engineering; Educational Technology; Remote Sensing; Industrial Management

* Note: A nomination may be submitted in One Engineering Section only

Additional Norms for Submitting Nominations for Fellowship

• With respect to choosing the Category in which the nomination is to be submitted and considered viz Academic Institutions / Research & Development /Industry & Engineering Services, it may please be noted that there is a Policy on 'organizational affiliation' versus 'field of contribution' of the nominee; in practice wherein the 'organizational affiliation' would be given preference over 'field of contribution'. A nomination may be submitted in one category only viz Academic Institutions OR Research & Development OR Industry & Engineering Services

For example: A nominee working in R&D field in Industry should be nominated in 'Industry' category **only** and a nominee working in an Academic Institution in R&D field should be nominated in 'Academic Institutions' category **only.**

- There is an Affirmative Policy for increasing the number of women Fellows in INAE by scouting and improving eco-system which should be encouraged.
- A Strategy is adopted to increase suitable nominees from industry.
- Quality of nominee's engineering contributions is of paramount importance.
- The nominee should be above board in terms of ethical and professional conduct.
- If the nominee been nominated to INAE earlier, please ensure that **One Year** has elapsed since the expiry of the validity of the earlier nomination. The validity of a nomination is three years and a fresh nomination can be made only after **One Year**.
- Reprints of papers are <u>Not</u> required to be submitted.

Fellowship Nomination through the INAE Digital Platform – Quick Guide

To send nomination through digital platform Fellows are requested to login to their account created by INAE. The username and password have been created by INAE and shared with individual INAE Fellow. The same username has been registered with the platform hence creation of new username will not be applicable to the system.

In case the login credentials (user id and password) is not known please contact INAE Secretariat through mail at inaeha@inae.in or at 011-26582475: Monday- Friday (10:00 am to 5:00 pm)

Checklist

- 1. INAE Username and password should be known.
- 2. It is essential that the profile page of the proposer (INAE Fellow) and seconder (INAE Fellow) be completed before submitting nominations online.
- 3. For accessing the applications, please use updated version of Google Chrome/ Internet Explorer/ Edge/ Firefox browser.

Please follow the steps as given below:

Step1: Please login to your account by clicking on link: https://www.inae.in/newlogin/ or <u>& Login</u> provided in INAE website Home page, using the login credentials **which have been provided to you**.

Screenshot of login page is given as Fig 1

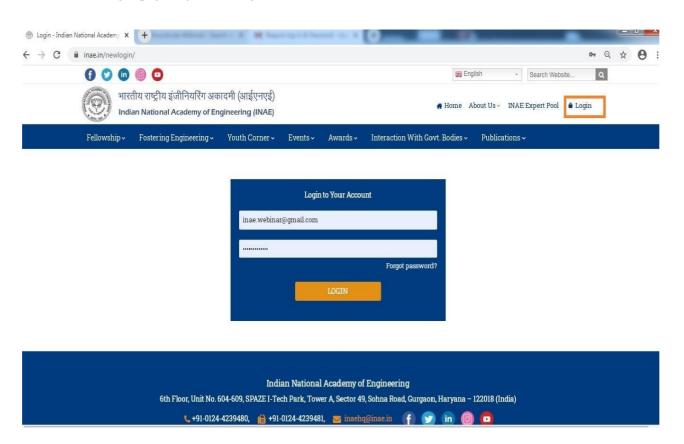


Fig 1: Log in page

There are five phases to be followed to complete the system of online nomination. Skipping any of the phases will render the nomination cycle incomplete.

The phases have been explained below:

Phase I: For Proposer

- 1. After logging in to individual home page
- 2. Click Fellowship Nomination icon in dashboard
- 3. Choose Categories defined under "Indian Fellowship", "Foreign Fellowship"
- 4. The basic information for nominee to be provided as given in the form and then submit
- 5. Acknowledgement received by proposer and a link is sent to the nominee to fill the details (Phase II)

Phase II: For Nominee

- 1. Receives a link through mail
- 2. Clicks the link,
- 3. OTP is generated and sent to mail
- 4. A form is displayed to be filled up
- 5. At the end of the form there are 2 buttons: SAVE and SUBMIT
 - a. SAVE button: Helps to save the form at any point and then come back through the link sent through the initial mail.
 - b. SUBMIT button to finally submit the form
- 6. An acknowledgement mail goes to the nominee and intimation goes to the proposer (phase III)

Phase III: For Proposer

- 1. A mail goes to proposer intimating the proposer about nominee's submission of the form.
- 2. Proposer logs in
- 3. May edit
- 4. Enters proposer's comment
- 5. Chooses seconder (using 'Search for Fellow' option in dashboard)
 - a. Need to provide value for any one field of the search window
 - b. Can choose seconder more than once
- 6. Submits the form
- 7. A mail goes to seconder

Phase IV: For Seconder

- 1. Mail received from INAE with Proposer name
- 2. Seconder logs in
- 3. Enters comment and submits
- 4. Acknowledgement received by seconder through mail and intimation goes to proposer.

Phase V: For Proposer

- 1. Proposer goes through the whole form and submits the form to INAE secretariat
- 2. Acknowledgement mail goes to Proposer.

Please Note: It is essential that the profile page of the proposer (INAE Fellow) and seconder (INAE Fellow) be completed before submitting nominations online.

In case of any issue/difficulty please mail us at inaehq@inae.in or call at or at 011-26582475: Monday- Friday (10:00 am to 5:00 pm)

Frequently Asked Questions (FAQ)

Nomination and Selection Process for Election of Fellows

Q 1 What is the nomination procedure for election to INAE Fellowship?

- A 1 The nomination procedure for election to INAE Fellowship is summarized below.
 - The election to Fellowship and Foreign Fellowship of the Academy is by invitation only.
 - The Nominations for INAE Fellowship/ Foreign Fellowship are invited in January each year and the last date for the receipt of nominations is March 31st of each year subject to no extensions.
 - Each Nominee shall be proposed and seconded only by INAE Fellows, preferably of the same subject domain/discipline, having personal knowledge of the contribution and accomplishment of the Nominee.
 - It is the responsibility of the nominee to identify the proposer and seconder and seek his/her concurrence for the same, since the nominations are by invitation only.
 - Nominations must be submitted online through INAE Digital Platform, however in case of exceptional circumstances the nominations may be submitted through registered email of the proposer (INAE Fellow) on the prescribed format available on INAE website.
 - In case of online submissions, the proposer and seconder may initiate the nomination process online through their log in facility. Subsequently, certain material is required to be filled in by the nominee for which an instruction email will be sent to the nominee once the process is initiated online. (Please refer Quick Guide)

Q 2 What is the selection process/cycle of nominations for election to INAE Fellowship?

A 2 After submission of the nominations either through email or online, the nominations are scrutinized and examined by INAE Expert Committees over a period of six months in a stringent process. The list of the finally selected nominees who have been elected as INAE Fellows is generally released on INAE Website by end September / October each year.

Q 3 What is the next step in case of nominations not selected for election to Fellowship?

A 3 The validity of a nomination is three years and a fresh nomination can be made only after **One Year** Cooling Period. The nominations which have not been selected during each year are carried forward for consideration during the next year and updated particulars are invited on a prescribed format in January of the next year.