

# **National Institute of Wind Energy, Chennai (NIWE)- Academic Associate Programme (AAP)**

## **Internship programme for UG/ PG students**

National Institute of Wind Energy (NIWE), Chennai is an Autonomous Research Institution under the Ministry of New and Renewable Energy, Govt. of India, serves as a technical focal point for wind power development in India, for promoting and accelerating the pace of utilization of wind energy and support the growing wind power sector in the country. The objective is to develop and strengthen the facilities and capabilities; evolve strategies; and promote, conduct, coordinate, and support research and development programmes to achieve and maintain reliable and cost-effective technology in wind power systems.

### **NIWE- Academic Associate Programme (AAP)**

The programme aims to encourage students and provide an opportunity to choose renewable energy as their career option. To create awareness and interest in the field of renewable energy research among the young talented Sciences, Management and Engineering students NIWE invites applications from the eligible candidates for the **"NIWE- Academic Associate Programme" (NIWE-AAP)**. The duration of the Internship will be two weeks to six months. NIWE-AAP will provide opportunities for the students/post studies students/ Lecturers/Professors to work with scientists/engineers on NIWE's projects.

### **Eligibility Criteria**

- Indian national candidates pursuing their degree B.E. / B.Tech / M.E. / M.Tech / MS / M.Sc./ MBA /M.Com/ MCA/ B.Com/BBA/B.Sc/ with an minimum 60% in the university examinations in all the semesters.
- Candidates who have completed their UG/PG degree with minimum of 60% in all the semesters may also apply for internships within two years from the date of award of their degrees.
- Lecturers/Professors having good academic i.e. with a minimum 60% in the university examinations record with relevant background useful to NIWE activities are also eligible to apply.
- Master Degree foreign candidates with at equivalent to 60% of marks are eligible for this internship. In this case, Interns have to get clearance from MEA/MHA as the case may be. However, they may interact with Division Head, R&D and RDAF and seek his assistance before applying to MEA/MHA.

### **Domains/ Areas available for Internship in NIWE**

1. Mechanical design and analysis
2. Wind turbine Blade aerodynamics
3. Structural engineering
4. Power system and power quality

## 5. Power electronics

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6. Meteorology
  7. Machine Learning /AI and data analysis
  8. Data communication and networks
  9. Signal Processing and communications
  10. Embedded systems and H/W development
  11. Wind power forecasting & Software tool development
  12. Research in wind resource assessment
  13. Solar energy and Solar power forecasting
  14. Energy storage
  15. Finance, Administration, Management and related areas
  16. Others relevant to Hybrid systems

**Features of Internship Programme**

No. of interns	Number of interns can vary depending on the applications and requirement of NIWE. However, the total number of interns to be engaged shall not exceed 25 at any point of time.
Mode of application	Interested candidates may apply as per the format available in NIWE's website before 15 <sup>th</sup> of every month for internship likely to commence from the subsequent month.
Enrolment	Enrolment for internship shall be kept open throughout the year and offered based on the Project requirements.
Duration	The internship would be for a minimum duration of two weeks and for a maximum duration of 6 months.
Remuneration	<b>unpaid basis</b>
Stay/Accommodation	Interns have to make their own arrangements for stay / accommodation at their own expenses.
Logistic support	Interns will be provided with the necessary office logistics supports i.e. work space, stationery, internet connectivity and facility for photocopying. They will need to have their own laptop.
Deliverables	At the end of the internship, the Interns will be required to submit a report on the areas of internship/study to R&D/RDAF.

Certificate of internship	Certificates will be issued on satisfactory completion of their internship and on submission and acceptance of the reports along with the report, performance certificate issued by respective Division Head. Students who discontinue the internship would not be awarded any certificate.
General information	<ul style="list-style-type: none"> <li>➤ Internship programme shall not be construed as an employment or the assurance of any employment with NIWE.</li> <li>➤ NIWE reserves the right to engage interns as per their discretion.</li> <li>➤ An intern would be required to work from within NIWE's office and undertake/ participate in various activities.</li> <li>➤ Daily attendance will be mandatory to obtain necessary certificate.</li> </ul>

## How to apply

Applicants need to fill out an online application form which is available on the **NIWE official website** / Annexure I along with area of interest and Bonafide Certificate as per Annexure II from the concerned department Head/Principal indicating the permission to undergo the internship at NIWE during the stipulated period wherever necessary. The hard copy of the same shall be forwarded to NIWE.

## Selection Procedure

1. All the applications received under the NIWE- AAP are scrutinized under the R&D and RDAF division of NIWE and the intern applications are forwarded to the domain specific divisions to support the division Activities by proper intimation through Administration.
2. The R&D division may conduct a personal interaction / interview in respect of S&T areas either through face to face interview or electronic media (phone, skype, etc.) with the applicant and also verify original documents. With regard to Non-Technical Areas Division Head [F&A] shall recommend the applicants for internship.
3. The decision of the Head, R&D and RDAF division shall be final and binding and no queries shall be entertained after the completion of the selection process. Applicants are advised to apply at least 15 days before the intended date of start of the internship.
4. The decision of retaining the candidate as intern in the same department for the stipulated period is bounded in the interest of the Division Head/ Scientist.

5. Depending upon the number of applications, NIWE reserves the right to select or reject the candidate according to the requests from the Departments/Division.
6. Any unauthorized presentation/publication of the results of the project (during and after), independently by the student/internal guide of college, with/without external guide's name as co-author and without any explicit permission/approval from Director General, NIWE will not be acceptable under any circumstances. It is mandatory to include the external guide's name from NIWE as the second Co-author. Violations in this regard will be considered as a serious matter of indiscipline and may lead to blacklisting of the College/Institution for future allotment of internships/ projects.

7. Every intern/ project student will be asked to sign a declaration in accordance with the NIWE's Data Protection Policy during their enrolment of the course. NIWE reserves the right to take legal action against anyone violating this prohibition by disclosure/ unauthorized access towards resource data.
8. Interns with 80 % & above attendance only will be awarded with NIWE- AAP certificate.

### **Information to Interns**

- The Sexual Harassment at Workplace (Prevention, Prohibition& Redressal) Act enacted by the Parliament of India is followed by the Institute.
- As per Section 4 of the Act, an Internal Complaints Committee is constituted in NIWE by Director General for such functions as laid down in Chapters IV & V of the Act.
- The constitution of the Committee is notified to all staff member of NIWE.
- The staff members / women interns / students have the freedom to make written complaints or share their views on this forum confidentially.
- If a complaint is received, it shall be taken seriously and investigated fully, impartially and promptly, with appropriate action being taken in lines with the Supreme Court guidelines.
- Secrecy of any such complaint will be maintained and necessary action will be taken.
- The code of conduct for trainees / students (who do not belong to NIWE) will also be guided by NIWE rules for this purpose and respective coordinators are requested to keep them informed.
- Following are some of the do's and don'ts to be strictly adhered to by students/interns as indicated by the Division head at the time of joining
  - Dress code shall be formal. Wearing of jeans, shorts, T-shirts are strictly prohibited. Dupattas and Lab-coats/over-coats [wherever necessary] shall be worn at the work place. Nonconformance to the laid-out rules and as informed by the division heads/external guide shall be treated as strictly and students/trainees are liable to be discontinued with appropriate fore-warning
  - Disposal of solid wastes shall be in conformance with the rules of the institute
  - Any stay/ duty beyond office hours / official holidays, non-working days shall be with approval of the Division Head with due intimation to F&A/Security.
  - During these stays it shall be ensured that NO single woman student/intern is allowed to work in lonely atmosphere.
  - Interns shall be required to execute an agreement as per Annexure -3 on receipt of acceptance from NIWE in a Non Judicial stamp paper of Rs.20/- or above.

### **Logistics**

Interns are responsible for their own logistics and will be required to have their own laptops. NIWE will be providing working Space and internet facility.

### **Communication Channels**

All applications to be addressed to the Division Head, R&D and RDAF, NIWE, 657/1A2, Velachery Tambaram Road, Pallikaranai, Chennai 600 100. Email id: [mclavanya@niwe.res.in](mailto:mclavanya@niwe.res.in)

## **ANNEXURE I**

<b>APPLICATION FOR INTERNSHIP WITH NATIONAL INSTITUTE OF WIND ENERGY- INTERNSHIP -STUDENT/POST STUDIES STUDENT/OTHERS [PLEASE STRIKE OUT WHICHEVER IS NOT APPLICABLE ]</b>					
1	Name	Reeth S Kawad			
2	Date of Birth	28.09.2003			
3	Gender (Male / Female/ Other)	Female			
4	Permanent Address	28 SPR House, EVK Sampath Road, Vepery, Chennai 600007			
5	Current Address	28 SPR House, EVK Sampath Road, Vepery, Chennai 600007			
6	E-Mail Address	<a href="mailto:kawad@usc.edu">kawad@usc.edu</a>			
7	Tel. No.	7299047308			
8	Educational Qualifications (+2 onwards)				
	Name of the Course	School/College/Board	Year	Subjects	Percentage of Marks
	BS Mechanical Engineering	University of Southern California	Ongoing, expected graduation: 2026		Current GPA: 3.67/4
9.	Whether pursuing/completed course in	Pursuing Mechanical engineering			

10	Knowledge of Software tools if any (please specify)	CAD and CAM: Solidworks, Fusion 360, NX Electronic hardware design: kiCAD Programming: python, MATLAB, Arduino programming
12	Internship/Work Experience, if any	<p>Intern, Goonj, Chennai</p> <ul style="list-style-type: none"> <li>• Conducted material collection drives all over the city, by contacting 25+ schools, colleges, and societies</li> <li>• Devised strategies to work with transgender communities, and sex workers, to gain rights and acceptance in the society</li> <li>• Documented lives of employees emerging from diverse backgrounds at the processing unit, to highlight their struggle in life</li> </ul> <p>Intern, SPR Constructions Pvt Ltd, Chennai</p> <ul style="list-style-type: none"> <li>• Shadowed the Managing Director for 2 months (3 days/week, 5 hours/day) to routine site visits, checkup meetings with other teams like the marketing team, accountants, architects, and engineers</li> <li>• Inspected 4 lands for a bio-resort project and researched methods to sustain lands' using renewable energy systems, especially windmills VOLUNTEER</li> </ul>
13	Areas of interest	<ol style="list-style-type: none"> <li>1. Renewable energy harvesting and storage</li> <li>2. mechanical design and analysis of machines</li> </ol>
14	Awards / Achievements/ papers presented / Published	
15	Details of extracurricular activities	<p>Vehicle dynamics and powertrain member of USC Formula Racing team: I have been a member for 5 months. Have assembled the wheel package, and designed the fuel drain system.</p> <p>Placed first in IEEE's HackIoT- for fabricating a prototype of a smart alarm clock which tracks the sleep cycle of the user and sets of the alarm accordingly.</p>

		<p>Placed second in ASBME's Makeathon- for addressing the prompt "Device to prevent falls in older people" by making a walker cum cane.</p> <p>Built a 2 DoF Arduino Car which can be controlled by the phone using Bluetooth.</p>
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16	Proposed topic(s) on which Internship is proposed.	<p><b>1. Next-Generation Wind Turbine Technologies:</b> This research topic aims to explore novel designs and concepts for wind turbines. It may involve investigating innovative turbine configurations, such as vertical-axis wind turbines (VAWTs) or hybrid systems, to improve energy capture, reduce costs, and address specific environmental and geographical challenges.</p> <p><b>2. Wind Energy and Energy Storage Innovations:</b> focuses on integrating energy storage technologies with wind energy systems. It may involve exploring advanced energy storage solutions such as flow batteries, compressed air energy storage (CAES), or hybrid energy storage systems to enhance grid stability, enable dispatchable wind power, and facilitate energy trading.</p> <p><b>3. Offshore Wind Farms:</b> To investigate the unique challenges and opportunities of offshore wind farms. It may include studying offshore wind turbine foundations, floating wind turbines, subsea cable systems, and marine environmental impacts. The research aims to contribute to the development of reliable and cost-effective offshore wind energy systems.</p> <p><b>4. Wind Turbine Noise and Vibration Control:</b> This research focuses on mitigating noise and vibration generated by wind turbines. It may involve studying aerodynamic noise, mechanical vibrations, structural dynamics, and the development of noise reduction techniques. The research aims to address noise-related concerns and enhance the social acceptance of wind energy projects.</p> <p><b>5. Wind blade Aerodynamics:</b> to enhance the efficiency, power generation capacity and structural integrity of wind energy systems. Use simulations (CFD) to optimize profile of wind blades. To study and develop techniques for load control and mitigation of wind turbine blades, and investigate active control methods such as individual pitch control and adaptive structures to improve the load distribution.</p>
17	Specify the duration for which applicant intend to do Internship	6 weeks. July 3- August 13



18	Any other additional relevant Information	
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I have carefully read the NIWE - AAP Internship Guidelines/ the rules and regulations and hereby undertake to abide by them and understand that if at any stage if found to be ineligible or commit misconduct, my candidature will be cancelled forthwith.

Encls: Photo copy of self attested address proof  
And ID Proof

Place: Chennai

Date:  
15.06.2023

  
(Signature of the Applicant)

**ANNEXURE – III****AGREEMENT – [ NIWE-AAP]**

This internship agreement is between Reeth S Kawad ("intern"), and NATIONAL INSTITUTE OF WIND ENERGY (hereafter called as NIWE). The purpose of this internship is for the Intern to learn about the functionalities at the NIWE and gain experience and insight about the working.

The term of the Internship starts on July 3, 2023 and ends on August 13, 2023 No stipend will be paid to the Intern.

Conditions of the Agreement:

- The Internship may be terminated by NIWE for sufficient reasons.
- The Internship is for learning and training purpose only and it doesn't promise or guarantee permanent employment with NIWE.
- The Intern does not replace or displace any employee of NIWE.
- The learning during the training is for express benefit of the Intern.
- The Intern will be supervised and guided for better learning.
- NIWE does not stand liable for any injury or health condition that may arise during the course of Internship.

I, Reeth S Kawad (Name of the "Intern"), acknowledge that I have been given an opportunity to experience the professional world. I have understood the scope of work that will be covered in the internship and I am confident that I can meet and shoulder the responsibilities that have been described in a professional manner within the time limits. I also acknowledge that the purpose of this Internship is for academic and Education. My performance will be evaluated on the criteria of Internship.

- My ability to deliver performance depends on ability to report on time, ability to achieve the targets within the deadlines, ability to be a proactive learner, ability to interact with supervisor and co-workers to learn better.
- My ability to learn different things during the course of Internship, as indicated by my caliber to fulfil the scope of my work, to develop new skills etc.:
- Evaluation done by my supervisor.
- A formal written report that has to be submitted the last day of finishing the Internship, describing my learning experience in the Internship.

I accept the internship, which has been awarded to me by NIWE and I understand the following points mentioned below:

- NIWE will not be held responsible for any accidental injury or due to any other natural calamities, indisposition.
  - NIWE will not pay for travelling to and fro from the place of work.
  - I will be observing all the rules and regulations, directives and procedures of the NIWE:
1. Will maintain confidentiality of all unpublished information made known to me by the department of the office during my internship. Will not publish any reports or papers using information that was obtained during this period, both during the internship and also after completing it.
  2. Not to engage in any activity that would adversely affect the NIWE or the receiving department and refrain from any activity that is not in accordance with the objectives of the NIWE.
  3. To submit a written application in case of illness or any other kind of emergency which prevent me from completing my internship.
  4. To complete the internship reports at the completion of internship and to submit it to my supervisor who has been mentoring my internship. I agree that I shall maintain the decorum needed and would strictly abide by the details mentioned in the "Information to Interns" as may be amended from time to time.

**Intern's Signature**

**Name** Reeth S Kawad



**Address Email id Mobile No. Date:**

28 SPR House, EVK Sampath Road, Vepery, Chennai: 600007

[kawad@usc.edu](mailto:kawad@usc.edu)

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15.06.2023