

**Advertisement for the Recruitment of Research Assistants under Center of Excellence (COE) in Systems Biology and Bio-medical Engineering , TEQIP, Phase-III Programme**

Applications are invited from the eligible candidates for the **Research Assistantships** in the following research areas under the Center of Excellence (COE) in Systems Biology and Bio-medical Engineering, TEQIP, Phase-III funded by MHRD:

- 1. Theme of the research:** Modeling and fabrication of micro-fluidic channels for integrated biosensors.

**Essential criteria:** Doctoral degree in Science/ Engineering with sound knowledge in device design and transport modeling and adequate experience in MatLab programming.

**Desirable criteria:** The candidate should have good understanding of device physics, Mathematical Modeling of devices / Nanostructures/ Sensors along with the familiarity of biosensors and micro-fluidics. Preference will be given to the candidates having background knowledge of device fabrication and patterning.
- 2. Theme of the research:** Design and Development of Artificial Pancreas System.

**Essential criteria:** First Class Master's degree in Engineering / Science (Electrical, Instrumentation, Electronics, Computer Science, Mathematics, Physics, Bio-Physics or equivalent). Sound programming skill with C/ Python/ Matlab.

**Desirable criteria:** Sound knowledge of Control Theory is required. Knowledge of System Biology will be an additional advantage.
- 3. Theme of the research:** Cardiovascular signal analysis for early detection of health disorders.

**Essential criteria:** First class Masters' degree in Engineering/Science in Electrical/ Computer/ Electronics/ Instrumentation. The candidate must have first class / division throughout the academic career.

**Desirable:** Sound knowledge in medical measurements and medical signal analysis. Preference will be given to the candidates having previous experience in the relevant areas such as publications.
- 4. Theme of the research:** Unraveling the design principle of biological systems (from single biomolecule to plant cellular physiology).

**Essential criteria:** First Class Master's degree in Engineering / Science (Electrical, Electronics, Computer Science, Mathematics, Physics, Chemistry, Bio-Physics or equivalent).

Sound programming skill in Python or Expertise to handle Plant growth Chamber .

**Desirable criteria:** Knowledge of Evolutionary Biology/ Systems Biology will be an additional advantage.

5. **Theme of the Research:** Design of Smart and Automated Healthcare System for Early Detection of Diseases.

**Essential Criteria:** First Class Master's degree in Engineering (Electronics and Communications, Computer Science, Electrical, Instrumentation or equivalent). Sound programming skill with C/ MATLAB.

**Desirable criteria:** Sound knowledge in image processing techniques, pattern recognition will be an additional advantage.

6. **Theme of the Research:** Application of biomedical imaging and functionalized nanoparticles for disease detection and therapeutics

**Essential criteria:** First class Masters' degree in Optics and Optoelectronics /Electronics/ Instrumentation. The candidate must have good academic record throughout the academic career.

**Desirable criteria:** Sound knowledge in characterization techniques in nanoscience and nanotechnology and image analysis using MATLAB or Python. Preference will be given to the candidates having previous experience in the relevant areas.

7. **Theme of the Research::** Detection of Vital Body Parameters through Smart Sensing and Computer Aided Diagnosis

**Essential criteria:** First class Masters' degree in Engineering/Science (Information Technology, Computer Science, and Engineering, Electronics or equivalent). Knowledge of CST Microwave Studio/ Knowledge of Matlab/Python

**Desirable criteria:** Sound knowledge in digital signal processing/image processing/machine learning/wireless communication. Preference will be given to the candidates having previous experience in the relevant areas such as publications.

8. **Theme of the Research:** Modeling and verification

**Essential criteria:** Masters' degree/ Bachelor Degree in Engineering/Science (Computer Science and Engineering, or MCA) followed by M.Tech in Computer Science and Engineering or equivalent for all the courses mentioned.

**Desirable criteria:** Background knowledge and/or experience in Statistical methods.

**Last Date of Receiving Application: 10<sup>th</sup> August, 2018 (till 2 p.m.)**

**Address for submitting application:** TEQIP Office Room No. 204,  
Technology Campus, University of Calcutta  
JD-2, Sector-III, Saltlake City, Kolkata-106

**Tenure:** Till the project ends.

**Place of Interview:** The detail will be informed through TEQIP Website ([www.cuteqip.net](http://www.cuteqip.net))

**How to apply:** The **Candidates should submit filled up form including a brief resume.** The Original academic certificates should be produced to verify at the time of interview. The candidates also have to carry the photocopies of the necessary testimonials on the day of interview.



UNIVERSITY OF CALCUTTA

Application Form for the research assistants under Center of Excellence (COE) in Systems  
Biology and Bio-medical Engineering, TEQIP, Phase-III

1	Name	:				
2	Date of Birth	:				
3	Father/Husband's name	:				
4	Marital status	:				
5	Whether SC/ST/OBC/PH	:				
6	Nationality	:				
7	Address for communication	:				
8	E-mail ID	:				
9	Phone no(s).	:				
10	Whether NET/GATE/ RET Qualified	:				
11	Academic profile					
	Examination passed	Year	Board/University	Subjects	Div./Class /Grade	%Marks
12	Past Research Experience (if any):					
<hr/> <i>Full signature of applicant</i>						
<ul style="list-style-type: none"><li>• Candidates selected on the basis of this application will be called for an interview.</li><li>• Incomplete applications will not be considered.</li></ul>						