Ashutosh Singh

Chemical Science and Technology (B.Tech)
Indian Institute of Technology Patna
UG(3rd year)

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Educational Details:

Educational Qualifications	Year	Institute	CPI/%
B.Tech (Chemical Science and Technology)	2013-present	IIT Patna	8.21 (upto 4th semester)
Intermediate (Class 12th) Central Board of secondary Education	2013	DAV Public School, Punjab	83.4%
Matriculation (Class 10th) Indian Certificate of Secondary Education	2011	Little Flower Senior Sec. School,Punjab	95.6%

**CPI – Cumulative Performance Index (Scale of 10)*

Scholastic Achievements:

- Currently holding **1st position** in the Chemical Science and Technology, IIT Patna.
- Secured an all India rank of 5661 among 1.5 lakh students in the prestigious JEE Advance (Joint Entrance Exam) which in turn were selected from 14 lakh students that appeared in JEE Mains.
- Secured 3rd rank in school and stood 3rd at the district level in class 10th at higher secondary level
- Currently working as a **Student Coordinator of Training and Placement Cell** of IIT Patna.

Summer Training:

- Underwent vocational training at **SATIA PAPER MILLS LIMITED (May,2015-June,2015)**
  - Observed the throughout step by step processes involved in paper manufacturing in both paper and pulp industry and use of various techniques and paper quality testing equipment employed in the laboratory.
  - Gained personal experience while working in Chemical Recovery Plant which has enabled to economize on consumption of chemicals like NaOH and simultaneously achieve the prescribed standards of effluent discharge (*Kraft Recovery Process).*

Projects Undertaken/Ongoing Projects:

- '**DNA-Nanotechnology**' **(July,2015 - Present)** (*Project Guide*- Dr. Prolay Das)

    - The goal of the project is to synthesize DNA-organic hybrid molecular blocks to create self-assembled nanostructures for various applications including drug delivery and molecular electronics.

- I have worked on some small projects as a part of my curriculum that involves the synthesis of many important compounds like aspirin, biginelli products,nanoparticles(silver,manganese dioxide),coumarine, methyl orange and their characterization by UV-Vis,I R and ^{1}H-NMR techniques.

- Undertook some mini projects like 'Demonstration of Non-Newtonian Fluids' under the guidance of Dr. Manabendra Pathak and also successfully built 'Hydraulic Arm' by making the use of hydraulic force in syringes for mechanical operation(*self driven project*).

Technical Skills:

- **Programming Languages** : C, Java.
- **Soft-wares known**: AUTOCAD, MATLAB (Basics)
- Know about the use of different spectroscopic methods like *NMR, IR, UV-Vis etc.*

Courses Undertaken :

Core : Organic Chemistry , Biochemistry and Biotechnology , Medicinal Chemistry , Polymer Chemistry , Inorganic Chemistry , Industrial Chemistry,Analytical Techniques in Chemistry, Chemical Process Calculations, Fluid Mechanics, Process Control and Instrumentation , Heat and Mass Transfer, Chemical Thermodynamics and Kinetics.

Others: Numerical Methods, Introduction to C , Object Oriented Programming and Data Structures, Microeconomics.

Areas of Interest:

- Interested in Biochemistry , Organic chemistry, Nanoscience.
- I would like to carry out research in the field of biochemistry and molecular biology, particularly on technologies that can be implemented in the advancement of health sciences.

Extra-curricular Activities:

- Member and co-founder of '**THRESHOLD CLUB**', a club dedicated for laying out the importance of both chemical science and engineering in the modern world and to highlight the major breakthrough made in these fields. Also worked as organizer of various events in the annual technocultural and Technical fest of IIT Patna.

Declaration:

I hereby declare that all the information given above is true to the best of my knowledge.

Ashutosh Singh