Hemant Bansal   100020071

Chemical Engineering   UG Third Year (B.Tech.)

Indian Institute of Technology, Bombay   Male

Specialization: None   DOB: 13-12-1992

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	8.11
Intermediate/+2	C.B.S.E.	Bal Mandir Model Sen. Sec. School	2010	86.00
Matriculation	C.B.S.E.	Bal Mandir Model Sen. Sec. School	2008	87.00

SCHOLASTIC ACHIEVEMENTS

- Secured an All India Rank **773** in IIT-JEE '10 given by about 4,72,000 aspirants
- Secured an All India Rank **1128** and State Rank **50** in AIEEE '10 given by about 10,00,000 aspirants
- Passed the 46th Annual **All India UN Information Test** conducted by the Council for UN Information

PROJECT ACCOMPLISHMENTS

Liquid Emulsion Membrane: - Summer Project   [May '12 – Present]

Guide: Prof. Vinay Juvekar (Dept. of Chemical Engineering)

Metal ions from their dilute aqueous solution are extracted and transferred to another aqueous medium through the immiscible oil phase separating the two aqueous media. A stable W/O emulsion is stirred in metal aqueous solution thereby resulting in formation of W/O/W double emulsion where oil phase acts as liquid membrane.

- Conducted numerous laboratory runs to formulate a standard procedure to prepare a stable W/O emulsion and then to carry out extraction
- Awaiting **research-paper publication** for my work
- Participated in poster presentation in Under Graduate Research Symposium '12

Biosynth: [Mar '11 – Present]

Guide: Prof. Sanjay Mahajani (Dept. of Chemical Engineering)

A student's initiative of installing a self-sustained Biodiesel producing plant at an institute level in India

Research and Development

- Currently holding the post of **Manager** leading a team of 19 students
- **Performed a comparative LCA** (Life-cycle assessment) on biodiesel and diesel which was presented in Industrial Green Chemistry World 2011
- Working on an ion exchange resin to neutralize the acidified methanol

Designing and Production

- Conducted a department-wide **seminar on design of Pumps and Pipes**
- Involved in plant commissioning and first ever **plant run** producing 100 litres of Biodiesel

C++ Course Project: [Aug '10 - Nov '10]

Guide: Prof. D.B. Phatak (Dept. of Computer Science & Engineering)

- Designed an interactive two player **Snakes and Ladders game** using EzWindows involving advanced C++ coding for the algorithm and graphics
- Part of the team making algorithm for obtaining random values from an animated dice

INTERNSHIP AND WORK EXPERIENCE

In-Plant training at HPCL-Mittal Energy Limited (HMEL) Refinery [Dec '11]

Guide : Prof. Devendra Jangle (PPU plant Supervisor)

- Visited **Polypropylene Production Unit** and examined the technologies and production processes used
- Prepared a report on the **Kinetics of the Propylene Polymerization** suggesting appropriate measures to reduce the reaction time

Ekjaa: [Dec '11]

Social organization which helps NGOs by connecting them with funding agencies

- Identified the NGOs working in the field of **Rural Development** and performed a comparative study of the social impact created by the working models employed by them
- Came up with the new potential ideas and created a social development model to resolve the issue

Industrial Visit to Rashtriya Chemicals and Fertilizers (RCF) Ltd.: [Feb '11]

Guide: Prof. Vinjamur Madhu, Prof. Sanjay Mahajani (Dept. of Chemical Engineering)

- Visited the **Sulphuric Acid Plant** and understood the technologies and production processes involved
- Prepared a report detailing the full process including mass and energy balances

POSITION OF RESPONSIBILITY

Department Alumni and Seminar Secretary: [May '12 – Present]

- Responsible for organizing industrial perspective lectures conducted by highly experienced IIT Bombay alumni to provide an industrial flavour to the students
- Participated in **Phonathon** event reaching out to various alumni through telephonic conversations
- Organized Resume Making, Group Discussion and Personal Interview sessions

Computer Secretary, Hostel 3: [May '11 - Apr '12]

- Organized workshops on LATEX, MATLAB, basic LINUX introduction for hostel inmates
- Maintained the LAN and Computer room of the Hostel

EXTRA-CURRICULAR ACTIVITIES

- Built a remote controlled **wireless car** for the 'Trackmania' event organized by the Technic Club
- Visited rural areas, Khopoli and Tata (around Mumbai) as a part of **National Services Scheme**
- Participated in PAF (Performing Arts Festival) of Hostel 3 which secured 2nd position in the institute

TECHNICAL SKILLS

- Programming Languages: C, C++
- Comprehensive knowledge of Scilab, MATLAB