



Akancha Pandey
Chemical Engineering
Indian Institute of Technology, Bombay
Specialization: Chemical Engineering

10302039
M.Tech.
Female
DOB: 27-10-1988

Examination	University	Institute	Year	CPI / %
Post Graduation	IIT Bombay	IIT Bombay	2012	9.04
Undergraduate Specialization: Chemical Engineering				
Graduation	WBUT	Heritage Institute of Technology, Kolkata	2010	8.70
Intermediate/+2	CBSE	Sunshine Prep/High School, Muzaffarpur	2005	79.20
Matriculation	ICSE	North Point Children's School, Muzaffarpur	2003	79.00

AIR- 78 in GATE-2010 in Chemical Engineering Paper out of 10540 students

ACADEMIC PROJECTS AND SEMINARS

M.Tech. Project

"Flow Characterization and Modeling of Underground Coal Gasification (UCG)"

[Jan'11 – till date]

Guide - Prof. Sanjay Mahajani, Dept. of Chemical Engineering, IIT Bombay

- Working on an ONGC sponsored research project on UCG to determine the operational parameters required for field tests and to determine the flow pattern to help model the UCG cavity
- Designed a tubular reactor system with multiple nozzles and performed experiments to find out Residence Time Distribution(RTD) for different nozzles
- Modeled and validated RTD experiments on tubular reactor using ANSYS Fluent
- Working on process modeling of UCG cavity as a whole incorporating heat transfer, mass transfer and chemical reactions simultaneously
- Planning to extend the RTD studies to more complex UCG cavity shaped geometry

M.Tech. Seminar

"Reactor Engineering Aspects of Coal Gasification"

[Jan'11 – Apr'11]

Guide - Prof. Sanjay Mahajani, Dept. of Chemical Engineering, IIT Bombay

- Reviewed coal gasification process with various steps and reactions involved
- Analyzed three different types of gasifiers mainly – moving bed gasifier, entrained flow gasifier and fluidized bed gasifier
- Studied three models based on these gasifiers and explored recent development in them
- Investigated effect of coal properties on design of a gasifier

B.Tech. Project

"Prediction of Temperature Distribution in a Phase Change Material"

[Aug'09 – May'10]

Guide - Prof. M.N.Biswas, Dept. of Chemical Engineering, Heritage Institute of Technology, Kolkata

- The project was aimed at study of heat transfer in Wax, a Phase Change Material kept inside the annulus of a double pipe heat exchanger
- Performed experiments of Melting and Solidification at different flow rates and temperatures
- Analyzed modes of heat transfer during these processes and radial temperature variations
- Developed a mathematical model in order to determine the temperature distribution in Wax

B.Tech. Seminar

"Cryogenics and Cryogenic Grinding"

[Sep'09]

- Prepared a report on cryogenics, science behind it and its wide range of applications
- Explained Cryogenic Grinding process in detail and its advantages over other grinding processes

INDUSTRIAL EXPOSURE

IOCL, Barauni

[Jun'09 – Jul'09]

- Gained insights into working of an oil refinery, the different processes involved from treatment of crude to processing of final product
- Understood the functioning of various processing units like Atmospheric and Vacuum Distillation Unit, Coker Unit, Fluidized Catalytic Cracking Unit, Sulfur Recovery Unit

ELECTIVE COURSES

Catalysis and Surface Chemistry, Colloid and Interfacial Engineering, Introduction to Systems Biology, Power Generation and Systems Planning

COMPUTER SKILLS

- Programming Language: C, C++
- Software: FLUENT, GAMBIT, MATLAB, AutoCAD

POSITIONS OF RESPONSIBILITY

Student Coordinator, Virtual Labs - a department project sponsored by MHRD

[May'11 – till date]

Guide - Prof. Santosh Noronha, Dept. of Chemical Engineering, IIT Bombay

- Working in a team of 4 coordinators to develop online platform to illustrate and simulate chemical engineering experiments at undergraduate level
- Developed software package on Scilab for modeling the experiments involving chemical engineering principles
- Collected theoretical and experimental data and prepared video tutorials for further assistance

Student Mentor, Student Companion Programme

[Jul'11 – till date]

- Guiding M.Tech. first year students at their academic, co-curricular and personal fronts
- Organized weekly meetings to address their queries and worked on problems faced by them

Organizer, Azeotropy 2011 – Department Technical Festival

[Feb'11 – Mar'11]

- Conceptualized the problem statement for design competition and publicized the event
- Organized Thermocon design event and paper presentation event with over 100 participants

EXTRA-CURRICULAR ACTIVITIES

Sports

- Secured 3rd position (team of 3) in Carom Competition during PG Sports, 2011
- Represented department in Table Tennis and Chess Competitions during PG Sports, 2011
- Completed two week long camps of Basketball and Tennis in Institute, 2011

Cultural

- Lead Actress in Performing Arts Festival (PAF), 2011 – inter-hostel cultural competition of IIT Bombay which won the best script award
- Acted and assisted in directing a play from Chemical Engineering Dept. in PG Cult, 2011
- Acted in inter-hostel Drama General Championship (GC), 2010

Others

- Was an active participant of event “AAKRITI- Build out of Junks” in Dakshh- Annual Technical Festival of Heritage Institute of Technology, Kolkata
- **Interests** - Acting, trekking, playing table tennis, dancing