

# **Dr B R AMBEDKAR NATIONAL INSTITUTE OF TECHNOLOGY, JALANDHAR**

## **Department of INDUSTRIAL & PRODUCTION ENGINEERING**



**2014-2015**





## **Vision**

The Department of Industrial and Production Engineering visualizes to ease human life by the way of designing integrated systems and high end techniques in the areas of Industrial, Production and Manufacturing Technology through effective teaching learning processes at the post graduate and undergraduate level and inculcate the research acumen among the students.

## **Mission**

To impart world class knowledge in the areas of Industrial, Production and Manufacturing Technology by stimulating research and innovation. To make the students productive, flexible and customer oriented so that they can apply engineering skills to design effective systems and procedures in order to make our country competitive.





## *Programme Educational Objectives (PEO)*

To serve the nation by producing qualified and skilled engineers who will:

1. Excel in professional career and/or higher education by acquiring knowledge in Engineering, Computational and Statistical principles.
2. Have the ability to analyze real life problems and develop solutions that are technically sound, economically feasible and socially acceptable.
3. Exhibit professionalism, ethical attitude, communication skills, team work in their profession and adapt to current trends by engaging in lifelong learning.

## *Programme Outcomes (PO)*

A student after acquiring B. Tech. in Industrial and Production engineering is expected to possess the following capabilities:

1. An ability to apply knowledge of Mathematics, Science, Engineering and Management.
2. Shall be able to design the systems through analytical and creative thinking.
3. Shall be able to improve the performance of the system through enhanced productivity within realistic constraints.
4. Shall be able to identify, analyze and solve real life problems.
5. Shall have sufficient knowledge and competence to effectively engage in research and higher education.
6. Shall be able to communicate and lead teams towards effective governance in various organizations at all levels.
7. Shall have strong ethical and professional traits so as to achieve organizational objectives through teamwork.



## Message

I am sure that, today each one of us want to be successful, we all want to progress and reach new heights. But remember, there is no shortcut to success. To attain success, it takes a lot of preparation and character. Everyone likes to win, but how many of us are willing to put in the time and effort to prepare to win. It takes a lot of sacrifice and self-discipline. There is no substitute for hard work.

And as Henry Ford puts it- “The harder you work, the luckier you get”. So, the keywords are **Preparation** and **Hard Work**.

So, my dear students, start preparing from today and success will come running to you.

Thanks & Regards

**Dr. LAKHWINDER PAL SINGH**  
**EDITOR-IN-CHIEF cum TIES Faculty Advisor**  
Industrial and Production Engineering Department

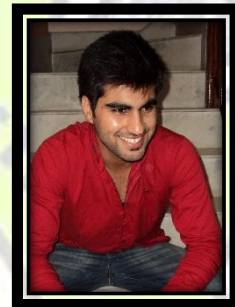


# Editorial Board

**Dr. Lakhwinder Pal Singh**  
**EDITOR-IN-CHIEF**

**Student Editor Board**

**Sushant Bhalla**  
2<sup>nd</sup> Year, IPE



**Nitin Kumar**  
2<sup>nd</sup> Year, IPE



**Mehak**  
2<sup>nd</sup> Year, IPE



**Anubhav Nagar**  
2<sup>nd</sup> Year, IPE







## Message

I look forward with a new zeal and optimism to lead NITJ to greater heights of success. The enthusiasm, vigour and positive attitude among the faculty members and the students of IPE department is truly commendable. I hope that the department of Industrial and Production Engineering will focus primarily on grooming the students and enhancing their academic and inter personal skill sets and finally making them a better human being and the leaders of the Indian Industry.

I appeal to all the staff and students of IPE to work in a team as "None of us is as strong as all of us".

Thanks & Regards  
**Professor (Dr.) I K Bhatt**  
Director NIT, Jalandhar





## Message

I extend my heartiest congratulations to the students, faculty, research scholars and alumni of Industrial and Production Department. I would also like to use this opportunity to appreciate the dedication and perseverance put in by the development team for this magazine. Publishing this magazine is the right platform for students to expose their hidden talent and untapped abilities.

I, once again, congratulate everybody with a promise to cultivate cherished values among students and to promote team spirit, and above all, an increasing passion for discovery and resourcefulness.

Thanks & Regards

**Prof. R K Bansal**

HOD, Industrial and Production Engineering Department





## Message

The road to success—while worth every step—is long and there are times along the way when you need a pick-me-up. No matter where your inspiration comes from, remember that seeking encouragement from external sources is a valid and natural part of the success process.

Behind every success story are the people who helped to make it happen, and this isn't necessarily exclusive to the people connected personally to your life. There are countless individuals in the public eye who, through their actions, serve as inspirations. Be they actors, authors, innovators, or business leaders, these people exemplify success in every aspect of their lives—not simply their achievements.

Thanks & Regards

**Dr. R K Garg**

Industrial and Production Engineering Department







## Message

The most valuable thing an experience person has is their experience. People make mistakes, learn from them, and adapt their life around them to become better people. Those people would then tell tales to others to help teach those lessons so that others would not have to make the same mistakes.

So, learn from others as well and improve yourself in every aspect possible.

Thanks & Regards  
**Dr. Arvind Bhardwaj**

Industrial and Production Engineering Department





## Message

“You’re not going to get very far in life based on what you already know. You’re going to advance in life by what you’re going to learn after you leave here.”<sup>4</sup>

Education doesn’t stop after you graduate from college. It doesn’t stop after you finish your MBA or PhD either. Munger says, “Wisdom acquisition is a moral duty. It’s not just something you do to advance in life.”

It’s a moral duty because it’s only through continuous learning that we can add to the vast knowledge of mankind.

Thanks & Regards

**Dr. Ajay Gupta**

Industrial and Production Engineering Department





## Message

There is nothing wrong with making mistakes.  
Mistakes are part of life and essential for growth.  
It's like that saying

“Happiness comes through good judgement,  
good judgement comes through experience and experience comes through bad  
judgement”

But there is something very wrong with making the same mistake over and over  
again.

So, learn from your mistakes and improve yourself.

I feel great to be a student of Industrial and Production Engineering Department.

Thanks & Regards

**Baljeet Singh**

Class Representative

2012-2016 Batch

Industrial and Production Engineering Department





# 7 P's of Goal Setting

**1. Passionate:** Are you fervently interested in what you intend to do? Not only that, are you able to do it easily and better than other people? Your goal is your inspiration and aspiration.

**2. Positive mind-set:** A positive mental attitude is essential to realize your objectives. You will look at things on bright side and work diligently towards your goals.

**3. Practical:** Is it achievable? Your goals should be specific, measurable, attainable, realistic and time-bound. When you have many goals, set priority for each goal and work accordingly so that you are not overwhelmed.

**4. Put in writing:** Written goals are powerful tools. It is precise, clear and written in positive terms. It spells out in great details the task for each stage and the completion dates. You will be kept posted to do your daily task because you notice it every day.

**5. Plan:** You set yearly, monthly, weekly and daily tasks. Your plan is road map. You follow accordingly to get what you want in life.

**6. Pay the price:** A goal is not a goal when you can get something easily. It involves time and tremendous effort. It takes blood, sweat and tears to reach your goal.

**7. Perseverance:** Do not be disheartened by setbacks along the way. Look at failures and problems as valuable lessons to learn. There is no overnight success. It can take many years to achieve your goals.



– Sushant Bhalla  
2<sup>nd</sup> Year, IPE

# DRESS TO IMPRESS

Whether we like it or not, at some point, our days of staying up until 3 a.m. and sleeping until noon will be over, and we'll all have to go out and get real-people jobs. I know, I know, it's a scary thought. But when that day does come, we'll most likely have to interview for that real-person job. And while your sweat pants and favourite tee may be appropriate collegiate wear, this get-up is typically frowned upon in the professional world.



While your attire may vary slightly depending on the type of job you're interviewing for, there are a few things that you can count on. Ladies, it's always a good idea to minimize your make-up, jewellery and perfume. While you hope to make a good impression, you want the employer to remember you for your skills not for your fragrance or abundance of eye-liner. And for you guys, a clean shave and well-manicured nails will show that you spent more than the usual 6 minutes getting ready.

For business professional jobs "nothing more casual than a three-piece suit" is appropriate. The same holds true for men interviewing for a corporate position. For interviews outside of the corporate world, a suit is not mandatory. Still, your appearance should still be neat and well-put together. Slacks, dress shoes and either a sweater or button down shirt will make a good impression. But just wearing the clothing isn't enough. It's important to make sure the pieces fit you, match and are ironed when necessary.

If you're interviewing for a position in fashion or art where creativity is part of the job description, it's acceptable to make a statement about your personal style with your clothing, hairstyle and make-up. That being said, remember you do want to be hired. A funky scarf, bag or other accessory might showcase your individuality without overwhelming your interviewer. Guys, if these suggestions don't appeal to you, try adding a touch of colour with a bright coloured tie or handkerchief or wearing a pair of stylish glasses.

While a snazzy outfit won't compensate for a lack of knowledge or skills, being presentable will show an employer that you are confident and are taking the interview seriously.



– Mehak Mahajan  
2<sup>nd</sup> Year, IPE

# THE SLUM DOLL

Not far from the palatial architecture,  
there is a rickety structure.  
In one of the itty-bitty rooms,  
where the rays of sun never knock the doors,  
a little girl sleeps in her raggedy clothes.  
A face that is pale is of her mother,  
she is the only for the little one and there is no other.  
Affluence is a word that wouldn't be heard,  
but she wants to fly high like a free bird.  
The dream is to fly in an aeroplane,  
but the fields are large and there'd be no rain.  
A transistor radio bought on pittance,  
sings an old song and the girl cuddles the kitten.  
She squats on the floor and scribbles in her notebook,  
unaware of the day when she'll have just food to cook.  
The smile would wane but she does not know,  
she is happy as a slum doll, don't let her grow



— Anubhav Nagar  
2<sup>nd</sup> Year, IPE

NIT JALANDHAR



# Make in India

Make in India is an initiative of the government of India to encourage companies to invest in the manufacturing sector in India. It was launched by Prime Minister, Narendra Modi on 25 September 2014.

The major objectives behind the initiative is to focus on 25 sectors of the economy for job creation and skill enhancement. Some of these sectors are: automobile, chemicals, IT, pharmaceuticals, textile, railways, auto components, design manufacturing, aviation, leather, tourism, hospitality, ports, mining, bio-technology and electronics.

The initiative hopes to increase growth and tax revenue and also aims at high quality standards and minimizing the impact on the environment. The initiative hopes to attract capital and technological investment in India.



— Amit Kumar Verma  
2<sup>nd</sup> Year, IPE

NIT JALANDHAR

# LET'S JUST PROMISE TODAY!

Change is law of nature. Things are changing so as relations are changing. Meaning of love has changed, yes it has changed. It's sad, definition of love has changed drastically. Love is defined as love of a lover or a beloved. What about love of a father, a mother? Is it not love? It is a purest form of love but we are forgetting this. Whenever advice comes from a father we say he interferes, but when it comes from a lover it is care. Strange na! I know people after reading this will say what a crap; "I am not like this". Wait and think for a while if you are not then there must be someone around you doing this. But somewhere you may be. We deny things which make us uncomfortable. Because we want to satisfy our ego. We want to feel good. We often hear people saying "Oh my father doesn't understand me?" have you ever asked yourself if you understand your father? The answer is NO because we are selfish. It's all about "I". It's so foolish we don't even want our parents to expect anything from us but yes we expect everything from them. We think twice before doing anything for them but they never. They are always there to hold us when we fall. It's so strange every time we are in difficult situation, they are there to support us, and they never complain when we are busy in our stuff and don't have time for them. Why we are full of complaints? We complaint about everything from not making our favourite dish to from not providing us with luxury. A son will often complaint "what have u done for us? You could not even build a good house in all these years. I just want to ask one question to all and to myself as well, is it only his duty to build a big house, to buy a big car? Why can't we just tell them thank you for everything you have done for us. We complain everyday but we forget to say thank you every day. Saying thank you is much easier than complaining in long sentences. We must realize our mistakes before it's too late. So, why not to promise one thing today we will say thank you for every little thing they have done for us. Things will just change after this. And this time this change will be for good. Change which is the law of nature. So why not to change the bad things in us. Let's just promise ourselves that we will never shout at them even if we have to explain them something ten times because they never did when we were learning. Promise to make their world unique and beautiful, to make them feel that heaven is here in this physical world and they are part of it. Today look at your mom, hug her and tell her that she is the most beautiful women in the world. She is your world and then feel the change, feel the magic of these words. Things will change. **Let's just promise today**, if it's not today then it's never Thank you dad and mom for everything. Thank you for being there with me even when I was wrong and u knew. Thank you for giving me this beautiful life.



– Manish Yadav  
2<sup>nd</sup> Year, IPE

# Summon me tonight

Summon me tonight, my friend.  
I'll come with a glock,  
just give it a fine shot.  
An altruistic act, no murder it is,  
for dead I am but straight I sit.  
Go on, blow off the temple,  
throw away the thoughts so ample.  
I'm rummaging the inferiority elements from within,  
and filling the ocean of vapidty.  
Ready to dive and ready to drown,  
there's no better place that I've found.  
Down I'll go but don't you commiserate,  
I was the farmer who sowed the seeds of greed and hate.  
Tousled is the life, seems nothing to furl.  
Call crickets to serenade for my beloved girl.  
Yesterday I was shining in the scorching sun,  
today I'm facing the dark side of the moon.  
The sun would again show tomorrow,  
but day after tomorrow,  
I'd again see the ocean of sorrow.  
The wheel of joy and the wheel of jolt would roll on for eternity,  
it seems better to die than to search for serenity.  
I'll not be reprimanded again,  
the pain won't augment but wane.  
Robust is the clutch of guilts on my heart,  
resolutions would compensate only a snippet part.  
I've got a scowling face for you to see,  
ease the pain and fulfil the plea.  
Get the pennant by killing the demon inside,  
Summon me tonight.



— Anubhav Nagar  
2<sup>nd</sup> Year, IPE



# Achievements

1. Team Autorex competed for the Shell Eco-marathon, ASIA. The vehicle set the record of 300km/l.
2. Team Mowgli had researched hard on the technology and has come up with the use of LITHIUM ION BATTERIES which helped the car to deliver the mileage of approximately 65km/kWh.
3. Team DAKSH Efficycle participated in SAENIS and cleared 61 technical tests, dimension tests, brake tests, figure 8 test and design validation and innovation tests first time ever in the history of NITJ.
4. Team DAKSH, Technical team of Industrial & Production Engg. Of NIT Jalandhar represented India under the category of Diesel Prototype in Shell Eco Marathon Asia 2014 in Manila.
5. Students have been to various industries for educational visits.



## **FACULTY-PROFILE OF INDUSTRIAL & PRODUCTION ENGINEERING**

Name: **DR. RAJIV KUMAR GARG**

Professional Experience: 27 Years Teaching Experience

Research Interests: Change Management & Maintenance Management



Name: **DR. ARVIND BHARDWAJ**

Professional Experience: 25 Years Teaching Experience One year Industry Experience

Research Interests: Technology Management & Supply Chain Management



Name: **Prof. RAJ KUMAR BANSAL**

Professional Experience: 25 Years Teaching Experience

Research Interests: Quality Management



Name: **Dr. SARBJIT SINGH**

Professional Experience: 19 Years Teaching Experience

Research Interests: Environmental Planning and Control



Name: **DR. VISHAL SANTOSH SHARMA**

Professional Experience: 19 Years Teaching Experience

Research Interests: Metal Cutting & Tool Wear



Name: **Dr. AJAY GUPTA**

Professional Experience: 20 Years Teaching Experience

Research Interests: Optimization of Production Systems



Name: **Dr. ANISH SACHDEVA**

Professional Experience: 18 Years Teaching Experience

Research Interests: Reliability and Maintenance, Supply Chain Management



Name: **Dr. LAKHWINDER PAL SINGH**

Professional Experience: 14 Years Teaching Experience

Research Interests: Human Factors Engineering, Supply Chain Management, Occupational Health and Safety, Ergonomics



Name: **Dr. SHAILENDRA SINGH BHADAURIA**

Professional Experience: 7.5 Years Teaching Experience

Research Interests: Solid Mechanics, Fracture Mechanics, Experimental Stress Analysis, Finite Element Analysis, Optimization Techniques





# Glimpse



