



# GNDEC NEWS LETTER

## PRODUCTION ENGINEERING

An autonomous college u/s 2(f) and 12 (B) of UGC Act-1956  
Gill Park, Gill, Road, Ludhiana-141006

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<b>Chief Patron: Dr. M. S. Saini</b> Director	<b>Patron: Dr. J. S. Grewal</b> HoD (P.E)	<b>Mentor: Dr. R. S. Seehra</b> Ex. Principal

### DIRECTOR'S MESSAGE

#### HAPPY NEW YEAR: 2016

The development in the field of technology is witnessed frequently and very rapidly. Guru Nanak Dev Engineering College is trying to offer a platform through which it can apprise its students as well as faculty with all the latest developments, so that they may adjust themselves with all the latest developments took place and likely to take place in near future in the field of technology. It is easy for the people residing in urban area to acquaint themselves with the latest technology development but the need of time is to acquaint rural based people with latest technological developments.



Our Institute, which was established with an aim to aware rural strata with technology know-how and update time to time with all latest technology developments. The institute is striving hard to attain this goal stepping ahead to achieve new heights. Now the prime duties of Engineering institutes is to convert Indian Villages into Technology Villages, which is possible only when we impart education in the field of engineering and technology to most or rural youth, through which we shall also be able to fulfil our mission. Our Country, which comes in the series of Developing Country. Once, we are able to convert present India into Technologically developed India; we will come up in the category of Developed Countries.

This time of year many people create resolutions for the New Year. Because the past year started with a difficult work situation and included a few more difficulties, I think I'll remind myself about the good things from the past year and focus on the potential a brand new year brings.

In this Endeavour the News letter started by Production Engineering Dept. will be highly useful for the upcoming engineers and I wish them "All the Best" for this effort.

**Dr. M.S. Saini**  
**Director, GNDEC, Ldh.**

## FROM MENTOR'S DESK

### MICRO ENGINEERING & NEW-AGE EMPLOYABILITY

**The word Nano was coined by Nario Taniguchi of University of Tokyo in 1974 gave birth to miniaturization of machines.**

The thinking behind this idea was to 'scale down' to nano level of existing technologies for precision and enhanced reliability in mechanisms and machines of systems in process of development for automation, defense, space exploration and bio-medicine applications.



Research oriented nano-tech and bio-tech products were shaped to suit interdisciplinary use. Further research in Nano technology entered into an era of intelligent and smart micro-level machines, named Molecular Nano Technology (MNT). Embedded technology in last decade of 20<sup>th</sup> century gave a new dimension to smart products. This whole creation formed innovative micro technologies such as mechatronics, electronic automobiles, micro-electronics and medical technology.

**Micro engineering products in present scenario such as MEMS, Nano-generators, smart materials, smart medicine, intelligent clothing etc; made California as richest state of America and a place of innovative ideas.**

Engineers are creator of present technological world, continue to shape new world with devotion and enthusiasm. A large number of Genconians (1985-2010)

went to USA and are gracefully employed at senior positions in IT companies, Silicon Valley, Caltrans, Boeing Seattle and Ford Detroit in USA.

Students of all branches are advised that during last semester they must master one or more than one area of micro technologies so as to fit successfully into market pulled employment avenues.

**Awakening call: 'Make in India-2016'. 'Brilliant minds', nothing is impossible, learn to be employed gracefully.**

**Dr. R.S. Seehra  
Ex. Principal, GNDEC, Ldh.**

### EDITOR'S MESSAGE

I am highly obliged by taking over the editorial responsibilities for this *newsletter* w.e.f. January 2016. As the first order of business I would like to express my sincere appreciation to Dr. R.S. Seehra for his efforts and dedication in transforming *newsletter* into a modern and accessible way of communication for the community. Being editor my responsibilities will continue to be the advancement of the success of the *newsletter* by establishing editorial policies that highlight the role of engineering as an integral part of our society. The *newsletter* will continue to be a vehicle for promoting fluent communication among all members of the Academy in all subject areas. Consistent with the revised format and content of engineering, contributions and essays on new technologies, emerging research challenges from members are highly encouraged. This editorial office will look forward to receiving contributions of news, announcements, essays, research projects and academic activities.



## EVENTS

❖ Production engineering department has recently organised two week faculty development programme (sponsored by TEQIP-II) on “Waste management and optimization techniques” from 27<sup>th</sup> Dec, 2015 to 5<sup>th</sup> Jan, 2016. 115 academicians from GNDEC and other institutes have participated.

Glimpse of FDP inauguration:



Program Inauguration

Dr. R.V. Rao serving in NIT, Surat was invited in the FDP organised by department. He delivered a lecture on various algorithms developed by him to solve various engineering problems.



Dr. J.S. Grewal honouring Dr. R.V. Rao

❖ A three days workshop on, “Quality Initiatives in Technical Educational Institutions” at Guru Nanak Dev Engg College, Ludhiana, (sponsored by TEQIP-II) was successfully organised from 24<sup>th</sup> to 26<sup>th</sup> Dec, 2015.

## AWARDS & ACHIEVEMENTS

❖ Patent on “Reduction in cycle time of investment casting process by hybridization of fused deposition modelling, investment casting and vacuum

moulding process” has been accepted by TIFAC (Letter No. T.I. (29)/TIFA/2014).

❖ Patent on “Combination of stir casting, vacuum moulding with ABS pattern based fiber reinforced shell of investment casting for preparing metal matrix composite” has also been accepted by TIFAC (Letter No. T.I.(29)/TIFA/2014).

❖ UGC awarded Prof. Rupinder Singh with Research Award for their research project, ‘Weldability of dissimilar plastic based material by using hybrid filament of fused deposition modelling with friction stir welding’ under Mechanical Engineering. This award consists of salary grant for 02 Years (2016-2018).

❖ Maharashtra State National Award for Outstanding Research Work in Engineering & Technology for the year 2015 at 45<sup>th</sup> Annual Convention of ISTE on 10<sup>th</sup> Jan, 2016 at HVPM’s College of Engineering and Technology, Amravati (Maharashtra) was also awarded to Prof. Rupinder Singh. The award consists of cash prize of Rs.3000/-, a medallion and a citation.

❖ Manufacturing research lab of Production Engineering Department has been cited in the Wohler’s report 2015. Glimpse of Manufacturing Research Lab:



P.E. Research Lab

## RESEARCH GRANTS

❖ Research Grant **Rs 85.24 Lacs** for Production Engineering Department, year 2015-18, for the project, “Polymer waste as fused deposition modelling feedstock filament for industrial applications”

granted by Department of Science and Technology under Technology system development programme.

❖ **Rs 21.03 Lacs** as research grant for the year 2015-18, for the project, “Development of in-house/indigenous composite wire based feed stock filaments of fused deposition modelling for biomedical applications” by SERB, Department of Science and Technology, Government of India has granted.

❖ **Rs 0.60 Lacs** as research grant for the year 2015-16, under Student Project scheme for the project, “Investigations for mechanical properties of Nylon6-SiC-Al<sub>2</sub>O<sub>3</sub> based feedstock filament for fused deposition modelling (FDM)” by Institution of Engineers (India) was awarded and project successfully completed by Dec, 2015.

#### STUDENT ACTIVITIES

❖ Sudhir Kumar (M.Tech, Production, 2014-2016) is working on research problem “Management of plastic by recycling of polymer with reinforcement of metal powder for rapid prototyping application”.



❖ Vinay kumar (M.Tech, Production, 2014-2016) is working on research problem “Experimental investigation for mechanical and metallurgical properties of friction stir welded reinforced ABS and Nylon 6 joints.”



❖ Ranvijay kumar (M.Tech, Production, 2014-2016) is working on research problem “Experimental investigations for mechanical and metallurgical properties of friction welded reinforced dissimilar plastics”.



#### FROM STUDENT EDITOR'S CORNER

I feel honoured to work, as Student Editor, on *newsletter* (Vol. 1(1)) issued by Production Engineering Department.



This *newsletter* aims at creating a new forum for exchange of information on project/research works, student achievements, as well as social causes undertaken by the students. My role is not only to bring a student perspective to editorial team of the *newsletter*; I am also trying to increase student participation by acting as a medium to go through the enquiries mostly related to student. The success of this *newsletter* depends on your response, so I would appreciate your feedback.

#### FROM CAMPUS REPORTER'S POINT

In this very first issue of *newsletter*, it is a moment of great pleasure being a part of this edition. It was great experience being campus reporter. It



becomes opportunity for me to see various activities of students and having their views on campus environment. Also it gives me platform to present my views. At last i would like to thank all team members, who have put their efforts to get this *newsletter* a successful edition.

#### Editorial Board

Dr. Rupinder Singh	Editor
Er. Sunpreet Singh	Student Editor
Er. Narinder Singh	Campus Reporter

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