



## **ANNUAL REPORT**

2014-15

**GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA**  
**(An Autonomous College u/s 2 (f) and 12 (B) of UGC Act, 1956)**

## **In Retrospect**

Nankana Sahib Education Trust was founded in the memory of the most sacred and historic temple of Nankana Sahib, birth place of Guru Nanak Dev Ji. The leadership of Shiromani Gurudwara Parbhandak Committee, Amritsar, a premier organization of Universal Brotherhood and the main force behind the mission of ‘Removal of Economic Backwardness through Technology’ gave dynamism to the Technical Education at National level by starting Polytechnic in 1953 and Guru Nanak Dev Engineering College, Ludhiana in 1956. A commitment of new enthusiasm by the Trust to uplift the weaker section of rural India by admitting 70% students every year was made to the Nation on 8<sup>th</sup> April, 1956, the day when the foundation stone of the College building was laid by Late Dr. Rajendra Prasad, the first President of India. Nearly 25000 graduate engineers have passed out from the College during the last 55 years, and are at present successfully employed/ are entrepreneurs in India and abroad

### **1. Academic Programs**

At the time of inception, degree courses were offered in three conventional disciplines, i.e Civil, Electrical and Mechanical. Then diversified degree courses in Electronics & Communication Engineering, Production Engineering, Computer Science & Engineering, and Information Technology were introduced to meet the changing requirements of industry in the country. A Post-graduate full-time course in Production Engineering and Part-Time courses in other disciplines (one offered by each department) were started in early eighties. Presently, the following courses at UG & PG level are being offered in the college.

#### **a) Detail of various courses including QIP Centre**

##### **i. B.Tech. (First Shift)**

<b>Branch</b>	<b>Intake</b>
Civil Engineering	120
Mechanical Engineering	120
Electrical Engineering	90

Electronics & Communication Engineering	90
Computer Science & Engineering	90
Information Technology	90
Production Engineering	45
<b>Total</b>	<b>645</b>

**ii. B.Tech. (Second Shift)**

<b>Branch</b>	<b>Intake</b>
Civil Engineering	60
Computer Science & Engineering	60
Mechanical Engineering	60
<b>Total</b>	<b>180</b>

**iii. M.Tech. (Full-Time) AICTE Approved**

<b>Branch</b>	<b>Intake</b>
Industrial Engineering	25
Power Engineering	25
Production Engineering	25
Structural Engineering	25
Computer Science & Engineering	18
Geo-Technical Engineering	25
Environmental Science & Engineering	18
Electronics & Communication Engineering	18
<b>Total</b>	<b>179</b>

**iv. M.Tech. (Part-Time) AICTE Approved**

<b>Branch</b>	<b>Intake</b>
Electrical Engineering	13
Electronics & Communication Engineering	13
Industrial Engineering	13

Production Engineering	13
Soil Mechanics & Foundation Engineering	13
<b>Total</b>	<b>65</b>

**v. M.Tech. (Part-Time) PTU Regional Centre**

<b>Branch</b>	<b>Intake</b>
Computer Science & Engineering	25
Information Technology	25
Electronics & Communication Engineering	25
<b>Total</b>	<b>75</b>

**vi. MBA**

<b>Branch</b>	<b>Intake</b>
Masters in Business Administration	60

**vii. MCA**

<b>Branch</b>	<b>Intake</b>
Masters in Computer Applications	60

**viii. Ph.D. under QIP**

<b>Branch</b>	<b>Intake</b>
Civil Engg.	2
Mechanical Engineering	2
Electrical Engineering	2

**b) Total No. of students on College Rolls:**

<b>i.</b>	M.Tech.	:	438
<b>ii.</b>	B.Tech.	:	3914
<b>iii.</b>	MBA	:	106
<b>iv.</b>	MCA	:	99

## **2. Accreditations**

The college has been accredited by the following Academic Bodies/Corporate Houses:

- a) All undergraduate Courses are accredited by NBA under TIER-I (Washington Accord)
- b) The College is NAAC (A Grade) and TCS Grade 'B' Accredited
- c) ISO 9001: 2008

## **3. Foreign Collaborations**

The college has entered into Academic Collaborations and Exchange Programmes for Student and Faculty with a number of foreign Universities/Colleges. The MOUs in place include:

- a) Collaboration with Waikato Institute of Technology, New Zealand.
- b) Cambridge University, UK, through SGPC.
- c) San Jose State University, USA.

## **4. Infrastructure**

### **a) Academic**

In order to provide congenial academic milieu to the students, smart class-rooms, updated labs, adequately equipped Workshops, modern Seminar Halls, air conditioned reading room in the Library with access to the internet and the Computer Centre have been provided.

### **b) Central Library**

The institution has a well-established Air Conditioned Central Library having rich collection of 91124 books, 408 online books, 140 print Journals, 19984 online journals, 4500 back volume journals since 1945. It has departmental libraries in all the departments, thus catering to the needs of Undergraduate, Post Graduate students

and faculty. The main library has a working area of around 1611 sq. mtrs. There is a separate Welfare Section in the Library for the financially weaker sections of the students. The books are classified according to DDC 23rd latest edition through Web Dewey service. Library is fully computerized with E-Granthalaya software package which is an integrated multi-user library management system those supports all in-house operations of the Library. On-line Public Access Catalogue facility is available at the Reference Desk on the Ground Floor of the Library. Library collection can also be accessed through Web OPAC at any terminal on the Campus Network. The reference collection of the Library is continuously updated and augmented with the acquisition of CD-ROM databases and access to on-line databases on Internet. Library is also connected with DELNET for inter library loan and document delivery services. Central Library is going to setup Institutional Repository services with D-space Digital Library software. Through this service research work will be accessible easily

**c) Sports**

An outdoor stadium, indoor gymnasium, sprawling playgrounds and a swimming pool are the special features to draw students towards sports activities.

**d) Residential**

Apart from the newly constructed multistoried hostel with the facility of an elevator, the college has two additional hostels for boys and an exclusive hostel for girls. The facility for accommodation on the campus for teaching and non-teaching staff is also provided for.

**e) Cafes/Canteens**

The three cafes on the campus, besides the canteen offer a variety of snacks/eatables at affordable rates to the students and the staff. This unique feature that draws the attention of the visitors to the college.

**f) Guest House**

The Alumni of the college who are spread all over the globe and occupy vantage positions have pooled their resources to construct a modern and well equipped guest house on the college campus.

**g) Gurudwara**

Besides the intellectual stuff which is dished out to the students in class rooms/labs/library, the students are motivated to seek spiritual consolation in the holy percents of the temple for prayers.

**Ranking of the Institute**

In view of the consistent academic and research attainments of the faculty and students, the college has been highly ranked by different credible sources in the media. Some of these are listed below:

- a) Guru Nanak Dev Engineering College has been named by the Ministry of Human Resource Development in its 'well performing institute's' list and hence the MHRD has given an additional Rs. 5 crore apart from the grant already given under the second phase of the Technical Education Quality Improvement Programme (TEQIP). The college is the only engineering college in the state to have been included in the well performing institute's list. 190 institutions were selected after rigorous screening throughout the country including centrally funded institution such as NITs in the first phase. The government of India based on the World Bank report of audit, selected 51 institutes throughout the country including 11 centrally funded institutes, 17 private institutes and 23 government aided institutes.
- b) **“Best Engineering College” in Punjab State in the ranking of Top 100 Engineering institutes in India (Source: Times of India Dated 16.6.2015).**
- c) Following rankings during **CSR-GHRDC Engineering College Survey 2015(Source CSR Edition July 2015):**
- d) **Ranked First position in Punjab and Eighth position in India amongst “Ranking of Top Engineering College of Eminence”.**
- e) **Ranked First position in Punjab State amongst “Ranking of Top 15 Engineering Colleges by State”**
- f) **Ranked 22<sup>nd</sup> position in “Top 25 Engineering Colleges ranked by Faculty, Research, Consultancy, EDP & Other Programmes”**
- g) **34<sup>th</sup> position among the rankings of Top 100 Engineering College of India (Source Outlook July 2015 Edition)**

- h) Research Paper entitled “Bearing Capacity of ....Fly Ash Slope” by Dr. J.N.Jha, HOD(CE), Dr. K.S.Gill, Associate Prof.(CE)and others has been adjudged as the **best paper** and Dr. J.N.Jha, HOD(CE) conferred **IGS-Shri B.N.Gupta Biennial Award**.
- i) ISTE Best Teacher Award 2015 to Dr. Y.S.Brar, EE, Dr. Rupinder Singh, PE, Prof. Arvind Dhingra, EE
- j) Dr. J N Jha has been awarded with Best Teacher award by PTU Jalandhar

## 5. Faculty Details

### a) Current Number (Designation Wise)

i. Professors	:	14
ii. Associate Professors	:	25
iii. Assistant Professors	:	172

### b) Current Number (Qualification Wise)

i. Ph.D.	:	40
ii. Post Graduate (M.Tech/MBA/MCA/Others)	:	167
iii. Graduate (B.Tech./B.E./Others)	:	2

## 6. Research Activities

### a) Research Projects Awarded

Faculty of the college are actively involved in research. Number of research projects have been awarded to faculty members by DST, SERB, IE(I) & UGC. The total research grant received for last year was over rs.1 crore.

### b) Research Publications

International Journal	45
National Journal	51
International Conference	84
National Conference	44



## 7. Travel Grants

### a) TEQIP/UGC

Following members of the faculty availed travel grant under TEQIP-II/UGC:  
Pf. Prem Singh, Dr. Sehijpal Singh, Prof. Raninder Kaur

## 8. Conferences/Seminars/Workshops Organised

Besides the above, all departments have been involved in holding workshops, FDPs. The prominent workshops being:

### **Civil Engineering Department** organized

- Organized three international events (**International workshop on Forensic Geotechnical Engineering** in 2014, **4<sup>th</sup> Terzaghi Oration** in 2014 and **International UKIERI Congress** in 2015).
- Organised three National events **Geotechnical Engineering Practice and Sustainable Infrastructure Development (GEPSID)** in 2014, **Soil Clay Mineralogy and Physico-Chemical Mechanisms Governing the Fine Grained Soil Behaviour** in 2014, **Workshop on Numerical and Physical Modeling** in 2015 and training program **Geotechnical Investigations and Ground Improvement with Geosynthetics for Structural and Construction Engineers** in 2015.

### **Mechanical Engineering Department** organized

- a) **International conference** on research and innovations in mechanical engineering, 24-26<sup>th</sup> October 2013
- b) Two weeks **Faculty Development Program** on “Finite Element Method and its Application” sponsored by AICTE, New Delhi was organized from 31<sup>st</sup>, October to 13<sup>th</sup> November, 2013.
- c) Signed **MoU with FICO** for better industry institute interaction, 3<sup>rd</sup> Feb 2016

### **Electronics and Communication Engineering Department** organized

- **e-vision'14** on 25th Nov'14.
- Two day **workshop on VLSI Design** on 14th and 15th September

### **Information Technology Department** organized

- Two one week TEQIP-II sponsored Faculty Development Programme/ Short Term Course on titles “Computational Research Methodologies in Information Securities” and

:Latest Trends in Information and Communication Technologies” during 06-10.01.2014 and 04-08.10.2014 respectively.

**Production engineering Department** organized

- Two week faculty development programme on, “Waste management and optimization techniques” at Guru Nanak Dev Engg College, Ludhiana, (sponsored by TEQIP-II) from Dec.27, 2015-Jan.05, 2016.

**9. Academic Distinctions/Awards Won by Faculty**

**a) PhDs awarded**

Four of the faculty members were awarded PhD degree during the year 2014-15 with following details:

S.No.	Name of staff member	Department
1	Dr. Akshay Girdhar	IT
2	Dr. Amit Kamra	IT
3	Dr. Baljeet Kaur	ECE
4	Dr.Manpreet Singh	CSE
5	Dr.Ajay Shiv Sharma	CSE

**b) Any other awards and recognitions (Best Teacher/Best Paper etc.)**

- Research Paper entitled “Bearing Capacity of ....Fly Ash Slope” by Dr. J.N.Jha, HOD(CE), Dr. K.S.Gill, Associate Prof.(CE)and others has been adjudged as the **best paper** and Dr. J.N.Jha, HOD(CE) will be conferred **IGS-Shri B.N.Gupta Biennial Award**.
- ISTE Best Teacher Award 2014 to Er.Jaswinder Singh,EE & Er. Arvind Dhingra, EE
- Dr. Rupinder Singh, PE department won **UGC Research Award for year 2016-2018** for the research project, ‘Weldability of dissimilar plastic based material by using hybrid filament of fused deposition modelling with friction stir welding’ under Mechanical Engineering. The award consists of salary grant for 02 Years.
- **Maharashtra State National Award for Outstanding Research Work in Engineering & Technology for the year 2015** at 45th Annual Convention of ISTE on 10th Jan, 2016

at HVPM's College of Engineering and Technology, Amravati (Maharashtra). The award consists of cash prize, a medallion and a citation.

- **Best paper award** during 5th International conference and exhibition on additive manufacturing technologies-AM2015, Global additive manufacturing summit, Sep. 7-8, 2015, Bangalore, India for paper, "Mathematical modeling for surface hardness in FDM assisted vacuum moulding of Al-SiC metal matrix composite".

## **10. Developmental Activities**

- a) A50kWp grid connected Solar Power plant has been installed on roof top of MBA block.
- b) FM community radio station with tuning frequency of 90.8MHz has been started in the college.
- c) A new lab is under construction in the production engineering department.
- d) New class rooms, drawing halls and Laboratory area have been added to spruce up the infrastructure.

## **11. Testing and Consultancy Services**

### **a) Consultancy Services Offered**

- i. Structural Design
- ii. Soil Investigation
- iii. Material Testing
- iv. Surveying
- v. Energy Auditing
- vi. Motor Testing
- vii. Pump testing
- viii. Coaching classes

## **Revenue Earned**

The College provided consultancy to Industry, Government Organizations and Various Departments during 2015-16 and earned Rs.1,03,16,752/- (up to 31.1.2016)

as Consultancy Fee. Civil Engineering Department was a major contributor towards Consultancy Services.

## **12. Training and Placement Record**

The Training and Placement Cell received the Award of Honor for "Best College with Excellent Job Avenues". This award has been given on 17th Foundation Day of Punjab Technical University, Kapurthala. This is the second consecutive year that the Training and Placement cell has received this award. The GNDEC got this award after leaving behind 400 PTU Affiliated Colleges.

The highest Salary Package offered to our student was Rs 18.00 lac per annum and average package was Rs3.10 lacs per annum. The students have received stipend of Rs.90,000/- per month for six months training. Mass recruiters viz. TCS, Infosys and Accenture have visited the college for campus recruitment..

## **13. Techno-Cultural Events Organized**

### **a) GENESIS**

Genesis is the annual cultural extravaganza of the institute. It is organized every year. This year, Genesis 2016 is scheduled in the month of March on 2<sup>nd</sup> and 3<sup>rd</sup>, 2016 in which various technical and cultural events were organized. A star performance will also be arranged during the event.

### **b) ATHARVA**

The annual technical fest of the institution is named Atharva. It is organized every year. This year the theme of the event was "Be the Change". The event was attended by over 1500 students from colleges in and around Ludhiana.

## **14. Student Achievements**

### **a) Result analysis**

Our students have been performing consistently well in the university examinations. Number of UG and PG students have passed with distinctions in all departments.

## **b) PG Assistantship**

In order to encourage/motivate Graduate Students to prosecute Higher Studies, Teaching Assistantship to the tune of Rs 8000/- pm per student has been granted to 48 students out of TEQIP-II Grants in 2012-13 and 76 students in 2013-14.

## **c) Engineering Feats**

Our ECE student Ms. Kritee Saxena participated in World Engineering Education Forum and Global student Forum held at European School of economics, Florence, Italy in September, 2015.

Mr. Shubham Kapoor, Student of B.Tech. (IT, Batch: 2012-2016, Uni. Roll No. 1244016) has been selected for foreign internship at KARLSRUHE. Germany.

Team GENSONIC participated in the SAE SUPRA 2015, which is a national level event held this time at Madras Motor Sports Race Track, Chennai from 15-19 July 2015. The Team acquired 10th All India Rank in the Overall Ranking. A total of 167 teams came for the final round.

**BAJA SAE INDIA 2014** was held at Pithampur Indore NATRIP Testing Facility by ARAI. Our team (SILENT MESHERS) got **14<sup>th</sup> all India Rank and 6<sup>th</sup> in endurance round.**

ASSERTIVE CREW participated in the first E-Bike competition held at LPU Jalandhar organized by Imperial Society of Innovative Engineers. They bagged the cash prize and brought laurels to the college.

**International Cycle Expo 2014** was held at Govt. College for women Ludhiana on 28-30 March 2014, where Effi-cycle prepared by our students team was displayed. During the exhibition, one of our team members PUNEET MADHAV was placed an International company Holland mechanics Yangzhou, China.

SILENT MESHERS participated in the final event at Pithampur (MP) in February 2015 and got second position in the state. The 25 member team had to face a crucial vehicle breakdown during the event, but still managed to get a better rank this time.

Team GENSONIC participated in the national level event SAE SUPRA 2015, at Madras Motor Sports Race Track, Chennai from 15-19 July 2015. The Team acquired **10<sup>th</sup> All India Rank in the Overall Ranking out of 167 teams.**

SAE team i.e. SILENT MESHERS participated in the final event at Pithampur (MP) in February 2016, got **2<sup>nd</sup> position in the state** and got **2<sup>nd</sup> position in North Zone** during February 2016

A team of students ASSERTIVE CREW got **2<sup>nd</sup> position all over India and cash prize of Rs 50000** during an event “Hybrid Vehicle Racing Challenge” at RTM International circuit, Bhopal on 25-27<sup>th</sup> January 2016 organised by Imperial Society of Innovative Engineers.

#### d) Sports

Sports have always been strength for the institution. This year too we have excelled in Sports. The main achievements include podium positions in both individual and team events. We have bagged the PTU men and Women overall trophy for number of years consecutively.

Our students have represented IKG PTU in various tournaments at inter university level. Some major sports events organized by us are:

1. PTU Inter-college Zonal and Inter-zonal Football Competition in Oct.'2014.
2. PTU Inter-college Swimming in Aug.'2014.
3. PTU Cricket Trials, Camp and subsequent inter-varsity participation in Oct.2014.
4. PTU Football camp and subsequent intervarsity participation in Nov. 2014
5. PTU Inter-college Cricket Zonal (Zone:C & D) Tournament in Feb.2015.
6. Ms. Mandeep Kaur, Student of B.Tech. (IT, Batch: 2012-2016, Uni. Roll No. 1243985) has been awarded as best athlete of the college for the last three years. She has won many medals in inter-university competitions (in athletics and handball).
7. Balpreet kaur (Batch2012) won 1<sup>st</sup> position in *Javelin Throw* event in 55<sup>th</sup> Annual Athletics Meet held in February 2015
8. Harmanjot Singh of 3<sup>rd</sup> year got positions as given below in 55<sup>th</sup> Annual Athletics Meet held in February 2015: 100 m Event (3<sup>rd</sup> Position), Long Jump Event (1<sup>st</sup> Position), Triple Jump Event (1<sup>st</sup> Position), ***Harmanjot Singh Declared Second Best Athlete***

### 15. Student Forums/Bodies/Activities

#### a) NSS

Blood donation is an annual activity. This year, the NSS unit of the college organized an annual blood donation camp in which over 500 volunteer students donated blood. The volunteers also participated in tree plantation drives in which over 1000 trees

were planted on the campus. An inspirational lecture by Dr. Rajwant Singh of Ecosikh Foundation, USA was organized. Besides, the volunteers participated in the Sports Day Parade, Drug de-addiction rally and Campus Cleanliness Drive.

**b) NCC**

The NCC Unit of the college comprises 79 boys and 27 girls. The cadets attended the mandatory NCC Training Camps. Two of the cadets have been awarded academic scholarships to the tune of Rs 10,000/- each. More than a dozen cadets have qualified NCC-C Certificate which is a gateway to entry into Armed Forces in the Officer Cadre

**c) Students Chapters'**

The college has well established and vibrant students chapters of various national level organizations viz. ISTE, SCIE, SAE. In addition to these, we have various clubs to hone the students personality which include photography club, cultural club.

## **16. College Magazine**

With a view to inculcate the creative writing skills of the students, the College Magazine spread over three sections in English, Hindi and Punjabi is brought out each year. It provides a platform to the students to demonstrate the art of narration of stories, anecdotes, poems and readable jokes apart from the articles bordering on technical subjects and matters of common interests to the students. Each section of the magazine has student editors on the board which is supervised by the senior teachers who hone the skills of the budding writers. The pictorial magazine provides graphic details about various events and activities organized by different departments/clubs/societies etc.



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## **1. In Retrospect**

Nankana Sahib Education Trust was founded in the memory of the most sacred and historic temple of Nankana Sahib, birth place of Guru Nanak Dev Ji. The leadership of Shiromani Gurudwara Parbhandak Committee, Amritsar, a premier organization of Universal Brotherhood and the main force behind the mission of ‘Removal of Economic Backwardness through Technology’ gave dynamism to the Technical Education at National level by starting Polytechnic in 1953 and Guru Nanak Dev Engineering College, Ludhiana in 1956. A commitment of new enthusiasm by the Trust to uplift the weaker section of rural India by admitting 70% students every year was made to the Nation on 8<sup>th</sup> April, 1956, the day when the foundation stone of the College building was laid by Late Dr. Rajendra Prasad, the first President of India. Nearly 35000 graduate engineers have passed out from the College during the last 55 years, and are at present successfully employed/ are entrepreneurs in India and abroad

## **2. Academic Programs**

At the time of inception, degree course was offered in Civil Engg. & consequently then Electrical and Mechanical Engg. in next year. Then diversified degree courses in Electronics & Communication Engineering, Production Engineering, Computer Science & Engineering, and Information Technology were introduced to meet the changing requirements of industry in the country. A Post-graduate full-time course in Production Engineering and Part-Time courses in other disciplines (one offered by each department) were started in early eighties. Presently, the following courses at UG & PG level are being offered in the college.

### **a) Detail of various courses including QIP Centre**

i.	B.Tech. (First Shift)	645
ii.	B.Tech. (Second Shift)	180
iii.	M.Tech. (Full Time) AICTE approved	179
iv.	M.Tech. (Part-Time) AICTE Approved	65
v.	M.Tech. (Part-Time) PTU Reg.Centre	75
vi.	MBA	60
vii.	MCA	60

**b) Total No. of students on College Rolls:**

i.	M.Tech.	:	338
ii.	B.Tech.	:	3886
iii.	MBA	:	94
iv.	MCA	:	56

**3. A) Accreditations**

The college has been accredited by the following Academic Bodies/Corporate Houses:

- a) Undergraduate Courses are accredited by NBA under TIER-I (Washington Accord)
- b) The College is NAAC (A Grade) and TCS Grade 'B' Accredited
- c) ISO 9001: 2015

**3. B) Autonomy**

The College has been granted autonomy under 2 (f) and 12 (B) of UGC Act, 1956 in 2012. The college modifies the syllabi on need-basis, incorporates required new Courses, conduct examination, prepares results independently.

**4. Foreign Collaborations**

The college has entered into Academic Collaborations and Exchange Programmes for Student and Faculty with a number of foreign Universities/Colleges. The MOUs in place include:

- a) Collaboration with Waikato Institute of Technology, New Zealand.
- b) Cambridge University, UK, through SGPC.
- c) San Jose State University, USA.

**5. Infrastructure****a) Academic**

In order to provide congenial academic milieu to the students, smart class-rooms, updated labs, adequately equipped Workshops, modern Seminar Halls, air

conditioned reading room in the Library with access to the internet and the Computer Centre have been provided. The college has Wi-Fi facility in campus area.

**b) Central Library**

The institution has a well-established Air Conditioned Central Library having rich collection of 91124 books, 518 online books, 140 print Journals, 19987 online journals, 4500 back volume journals since 1945. College has departmental libraries in all the departments, thus catering to the needs of Undergraduate, Post Graduate students and faculty. The main library has a working area of around 1611 sq. mtrs. There is a separate Welfare Section in the Library for the financially weaker sections of the students. The books are classified according to DDC 23rd latest edition through Web Dewey service. Library is fully computerized with E-Granthalaya software package which is an integrated multi-user library management system those supports all in-house operations of the Library. On-line Public Access Catalogue facility is available at the Reference Desk on the Ground Floor of the Library. Library collection can also be accessed through Web OPAC at any terminal on the Campus Network. The reference collection of the Library is continuously updated and augmented with the acquisition of CD-ROM databases and access to on-line databases on Internet. Library is also connected with DELNET for inter library loan and document delivery services. Central Library is going to setup Institutional Repository services with D-space Digital Library software. Through this service research work will be accessible easily

**c) Sports**

The institution has an outdoor stadium with pavilion attached comprising of 400m grassy track and a cricket pitch. The complex comprises of indoor gymnasium, table tennis hall, billiard room & guest rooms. We have well maintained playgrounds and a swimming pool for the students to develop various dimensions of wellness. We provide a competitive, safe and enjoyable atmosphere that encourages teamwork, leadership development and a life long pattern of positive activity.

**d) Residential**

Apart from the newly constructed multistoried hostel with the facility of an elevator, the college has two additional hostels for boys and an exclusive hostel for girls. The facility for accommodation on the campus for teaching and non-teaching staff is also provided for.

**e) Cafes/Canteens**

The three cafes on the campus, besides the canteen offer a variety of snacks/eatables at affordable rates to the students and the staff. This unique feature that draws the attention of the visitors to the college.

**f) Guest House**

The Alumni of the college who are spread all over the globe and occupy vantage positions have pooled their resources to construct a modern and well equipped guest house on the college campus.

**g) Gurudwara**

Besides the intellectual stuff which is dished out to the students in class rooms/labs/library, the students are motivated to seek spiritual consolation in the holy precepts of the temple for prayers.

**Ranking of the Institute**

In view of the consistent academic and research attainments of the faculty and students, the college has been highly ranked by different credible sources in the media. Some of these are listed below:

- **Outstanding Engineering Institute North Award” by ABP News.**

**The Week-Hansa Research Survey 2016**

- **First position in North India among the category of “Top Engineering College**

- **Eighty one Position** in the category of **Top National Engineering College** among NITs, IITs, Central Universities.

### **CSR-GHRDC**

- **Second Position** in the category of “**Top Engineering Colleges of Eminence** among North India”
- **Second Position** in the category of “**Top Engineering Colleges ranked by State (Punjab)**”

### **OUTLOOK**

- **Ist position** in **Northern India** as a **College** and **35<sup>th</sup> position** among **Top 100 Engineering Colleges at National Level** among IITs, NITs and Universities

#### **6. Faculty Details**

##### **a) Current Number (Designation Wise)**

<b>i.</b>	Professors	:	23
<b>ii.</b>	Associate Professors	:	17
<b>iii.</b>	Assistant Professors	:	177

##### **b) Current Number (Qualification Wise)**

<b>i.</b>	Ph.D.	:	43
<b>ii.</b>	Post Graduate (M.Tech/MBA/MCA/Others)	:	172
<b>iii.</b>	Graduate (B.Tech./B.E./Others)	:	2

#### **7. Research Activities**

##### **a) Research Projects Awarded**

Faculty of the college are actively involved in research. Number of research projects have been awarded to faculty members by DST, SERB, IE(I) & UGC. The total research grant received for last year was over Rs.1 crore.

##### **b) Research Publications**

Journal/Conference Publications	2015	2016
International Journal	108	105

National Journal	18	06
International Conference	57	76
National Conference	12	20

## **8. Travel Grants**

### **a) TEQIP/UGC**

The ongoing TEQIP II programme is coming to an end on 31<sup>st</sup> March, 2017. The college has been highly appreciated and rated amongst the top performing college in the country for implementation of TEQIP II programme. 22 Faculty members were sponsored travel grant by TEQIP II/UGC.

Based upon our stellar performance in TEQIP II, we have been shortlisted to act as Mentor Institute in TEQIP III.

## **9. Conferences/Seminars/Workshops Organised**

Besides the above, all departments have been involved in holding workshops, FDPs. The prominent workshops being:

### **Civil Engineering Department**

- Training Program on "Geotechnical Investigations and Ground Improvement with Geosynthesis for Structural and Construction Engineers" on 9-10 December, 2015
- Workshop on "Producing Elegant Technical Research Reports Efficiently" on 19-20<sup>th</sup> January 2016
- Solid Waste Management in Indian Cities- Issues and Concerns from 23-27<sup>th</sup> August, 2016

### **Mechanical Engineering Department**

- Workshop on "Product Design and Development" on 13<sup>th</sup> October, 2015
- Workshop on "Solar Energy Based Technologies" on 30-31<sup>st</sup> October, 2015
- Program on industry-institute-interaction cum felicitation program on 9<sup>th</sup> November, 2015
- Meeting of III Cell "Improve Industry & Institutes connection and participation of Local industries in practical training of student/faculty on 3<sup>rd</sup> February, 2016
- FDP on "Research Methods for Engineers" on 31<sup>st</sup> May to 4<sup>th</sup> June, 2016

### **Computer Science & Engineering**

- Workshop on "Emerging Technologies in Data Analytics" under TEQIP-II on 9<sup>th</sup> April, 2016
- Two Week FDP on "Computing tools to facilitate multidisciplinary research" on 16<sup>th</sup> to 27<sup>th</sup> May, 2016

### **Electronics and Communication Engineering Department**

- Two Week FDP on "Technology and Management for Electronic Product Design" on 2-13<sup>rd</sup> May, 2016
- Two day workshop on Industry Institute Interaction on 3-4 August, 2016

### **Production engineering Department**

- FDP on "Waste Management and Optimization Techniques" on 27<sup>th</sup> December to 5<sup>th</sup> January, 2016

## **10. Academic Distinctions/Awards Won by Faculty**

### **a) PhDs awarded**

Four of the faculty members were awarded PhD degree during the year 2015-16 with following details:

<b>S.No.</b>	<b>Name of staff member</b>	<b>Department</b>
1	Dr. Navneet Singh Bhangu	Electrical Engg
2	Dr. Balwinder Singh Dhaliwal	ECE
3	Dr. Inderjit Singh Dhanoa	MCA

### **b) Any other awards and recognitions (Best Teacher/Best Paper etc.)**

- Research Award to Dr. Rupinder Singh, PE from ISTE "K.Arumugam National Award for Innovative Work in Engg. & Technology for year 2016.
- ISTE Best Teachers (Section) Award to Prof. Arvind Dhingra, EE and Dr. Harwinder Singh, ME

## **11. Developmental Activities**

- A150kWp grid connected Solar Power plant is in pipeline.
- Extension of Civil Engg. lab is in progress
- Extension of Production Engg. Lab
- The Electronics & Comm. Engg. Department has established a Industry Sponsored Advanced Communication Lab in which equipment has been given by Videocon Telecom Limited. The company shall also give periodic training in telecom field to students in the Lab. They shall also sponsor students to industrial training & Placement.

## **12. Testing and Consultancy Services**

### **a) Consultancy Services Offered**

- i.** Structural Design
- ii.** Soil Investigation
- iii.** Material Testing
- iv.** Surveying
- v.** Energy Auditing
- vi.** Motor Testing
- vii.** Pump testing
- viii.** Coaching classes

### **Revenue Earned**

The College provided consultancy to Industry, Government Organizations and Various Departments during 2015-16 and earned Rs.1,22,08,719/- as Consultancy Fee. Civil Engineering Department was a major contributor towards Consultancy Services.

## **13. Training and Placement Record**

The Training and Placement Cell received the Award of Honor for “Best College with Excellent Job Avenues”. This award has been given on 17<sup>th</sup> Foundation Day of Punjab Technical University, Kapurthala. This is the second consecutive year that the Training and Placements cell has received this award. The GNDEC got this award after leaving behind 400 PTU Affiliated Colleges. There is TCS accreditation for all branches (UG&PG) and MoU has been signed with Infosys.

The highest Salary Package offered to our students was Rs.6.9 lac per annum and average package was Rs. 3.10 lacs per annum. The students have received stipend of Rs.18,000/- per month for six months training. Mass recruiters viz. TCS, Infosys and Accenture have visited the college for campus recruitment.

## **14. Techno-Cultural Events Organized**

### **a) GENESIS**

Genesis is the annual cultural extravaganza of the institute. It is organized every year. Genesis 2016 was organized in the month of March on 3<sup>rd</sup> and 4<sup>th</sup> in which various technical and cultural events were organized. A star performance was also being



arranged during the event. This year, Genesis 2017 is scheduled on 6<sup>th</sup> and 7<sup>th</sup> March, 2017.

#### **b) MINI TECHFEST**

The annual technical Mini fest of the institution was organized in month of October 2016. The event was attended by over 1700 students from colleges in and around Ludhiana.

### **15. Student Achievements**

#### **a) Result analysis**

Our students have been performing consistently well in the university examinations. Number of UG and PG students have passed with distinctions in all departments.

#### **b)Extra Curricular Achievements**

The College Bhangra team has attained First position in National Youth Festival at Kohlapur (Maharashtra).

Two students of college presented Technical Paper at Annual National Convention of Institute of Engineers (I) held at Pune.

#### **c) Sports**

Sports have always been a strength for the institution. In session (2015-16) too we have bagged **PTU Overall Combine Men & Women Championship Trophy** and are proud to win it consecutively for the fourteenth times.

Thirty two students of our college represented IKG PTU in various tournaments at Inter-varsity level. Our boys teams namely Cricket & Hockey and girls team Lawn tennis, Handball, Volleyball & Athletics won the PTU Championship trophies.

Some major sports events organized by us are:-

1. PTU Inter-college Lawn tennis Tournament in Sept.2015
2. PTU Inter-college Zonal Football Tournament in Oct.2015
3. PTU Inter-college Hockey Tournament in Nov.2015
4. PTU Inter-college Zonal Cricket Tournament in Feb.-March 2016
5. Apart from various Intra-murals we organize College Annual Athletic Meet as mega event.

- A) Mandeep Kaur of D4 IT and Simran Singh of D3ME were declared college Best Athlete
- B) Ishpinder Singh of D4 ME brought laurels to college by becoming Bronze medalist in North Zone Inter-varsity Chess Tournament and qualified for All India.
- C) Harsumeet Singh Of D3ME performed meritoriously for gaining rank in first six at All India Shooting Competition.
- D) Sukwinder pal Singh of M.Tech (Env.) secured 4<sup>th</sup> place in All India Power lifting Competition.

Mandeep Kaur of D4IT gave a record breaking performance in Long jump & our boys relay team comprising of Chandan Sharma, Simran Singh ,Harsharan Singh and Mandeep

## **16. Student Forums/Bodies/Activities**

### **a) NSS**

Blood donation is an annual activity. This year, the NSS unit of the college organized an annual blood donation camp in which over 500 volunteer students donated blood. The volunteers also participated in tree plantation drives in which over 1000 trees were planted on the campus. Besides, the volunteers participated in the Sports Day Parade, Drug de-addiction rally and Campus Cleanliness Drive.

### **b) NCC**

The NCC Unit of the college comprises 79 boys and 27 girls. The cadets attended the mandatory NCC Training Camps. More than a dozen cadets have qualified NCC-C Certificate which is a gateway to entry into Armed Forces in the Officer Cadre. Yoga Day was celebrated. A camp comprising of 10 days at State level was organized in which 500 cadets participated. Two cadets were shortlisted for SSB Examination. Ten NCC cadets have attended the Advance Academic leadership Camp at Chandigarh. Two NCC cadets were shortlisted for Republic Day Camp.

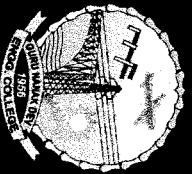
### **c) Students Chapters'**

The college has well established and vibrant students chapters of various national level organizations viz. ISTE, SCIE, SAE. In addition to these, we have various clubs to hone the students personality which include photography club, cultural club.

### **17. College Magazine**

With a view to inculcate the creative writing skills of the students, the College Magazine spread over three sections in English, Hindi and Punjabi is brought out each year. It provides a platform to the students to demonstrate the art of narration of stories, anecdotes, poems and readable jokes apart from the articles bordering on technical subjects and matters of common interests to the students. Each section of the magazine has student editors on the board which is supervised by the senior teachers who hone the skills of the budding writers. The pictorial magazine provides graphic details about various events and activities organized by different departments/clubs/societies etc.

# ANNUAL REPORT 2017-18



**GURU NANAK DEV ENGINEERING COLLEGE**



Honorable Smt. Harsimrat Kaur  
Processing Industries, Govt of In  
President, SGPC & Nankana  
S.Maheshinder Singh Grewal, E  
Sharnjit Singh Dhillon, Ex-Minist  
trustees of NSET, Dr. Ajay K. Sha  
Technical University, Dr.Shalendra  
Singh Sidhu, Additional Director,  
Punjab, Dr. Buta Singh Sidhu,  
University, Bathinda, Members of G  
distinguished guests, ladies &  
heartiest welcome at Guru Nanak  
It is my proud privilege to welcome  
first visit in the premises of GNDE  
thank her for gracefully consenting  
the convocation address to our G  
professional, social and personal p

I feel immense pleasure to present annual report of GNDEC at the convocation.

## 1. IN RETROSPECT

Nankana Sahib Education Trust was founded in the memory of the most sacred and historic place Sri Nankana Sahib, the birth place of Guru Nanak Dev Ji. NSET with active support of SGPC leadership, Punjab Govt, and Panchyat of Village Gill conceived and developed this college with the mission of Removal of Economic Backwardness through Technology". A commitment of new enthusiasm by the Trust to uplift the weaker section of rural India by admitting 70% students belonging to rural area was made to the Nation on 8th April, 1956. The foundation stone of the College building was laid by Late Dr. Rajendra Prasad, the first President of India. Nearly 35000 graduate engineers have passed out from the College during the last more than 60 years. The alumni of GNDEC is playing significant role at national and international level in top organizations and companies.

## 2. ACADEMIC PROGRAMS

At the time of inception, degree course was offered in Civil Engg. & consequently Electrical and Mechanical Engg. in the next year. Then diversified degree courses in Electronics & Communication Engineering, Production Engineering, Computer Science & Engineering, and Information Technology were introduced to meet the changing requirements of industry in the country. A Post-graduate full-time course in Production Engineering and Part-Time courses in other disciplines (one offered by each department) were started in early

eighties. Presently, the following courses college.

Detail of various courses and number of

- I. B.Tech. (First Shift + Second Shift)
  - ii. M.Tech. (Full Time) AICTE
  - iii. M.Tech. (Part-Time) AICTE
  - iv. MBA
  - v. MCA
  - vi. Ph.D (under QIP centre)
- UG= 825; PG= 364; Ph.D.= 06; Tc

## 3. Accreditations

The college has been accredited by the Houses:

- a) Six Undergraduate Courses (i.e. Engineering, Electronics & Communication Technology, Civil Engg and Electrical (Washington Accord)
- b) Five Post graduate courses are accredited (Washington Accord)
- c) The College is accredited by NAAC (Grade A)
- d) The College is accredited by Tata Engineers (India).

#### 4. ACADEMIC AUTONOMY

The College has been granted academic autonomy under 2 (f) and 12 (B) of UGC Act, 1956 in 2012. Under this autonomy, the college can develop and modify its own syllabi on need-basis, incorporate new courses, conduct examination, prepares results independently but degree is awarded by IKG Punjab Technical University.

#### 5. FOREIGN COLLABORATIONS

The college has entered into Academic Collaborations and Exchange Programmes for Student and Faculty with a number of foreign Universities/Colleges. The MOUs in place include:

- a) Waikato Institute of Technology, New Zealand.
- b) Cambridge University, UK.
- c) San Jose State University, USA.
- d) UCT - the Arctic University of Norway

#### 6. INFRASTRUCTURE

##### a) Academic

In order to provide congenial academic milieu to the students, smart class-rooms, updated labs, adequately equipped Workshops, modern Seminar Halls, air conditioned reading room in the Library with access to the internet, departmental computer laboratories and a central Computer Centre have been provided. The

college has Wi-Fi facility in whole campus.

##### b) Central Library

The institution has a well-established Academic collection of around 95000 books, 850 online journals. College has departmental catering to the needs of Undergraduate main library has a working area of arc Welfare Section in the Library for the first. The books are classified according to DD service. Library is fully computerized with is an integrated multi-user library management house operations of the Library. On-line available at the Reference Desk. Library Web OPAC at any terminal on the Campus the Library is continuously updated and ROM databases and access to on-line connected with DELNET for inter library Central Library is going to setup Institutional Digital Library software. Through this easily, E-Journals worth Rs. 50 Lac are subscribed.

##### c) Sports

The institution has an outdoor stadium with grassy track and a cricket pitch. The college

table tennis hall, billiard room & guest rooms. We have well maintained Hockey, Football, Badminton, Lawn Tennis playgrounds and a swimming pool for the students to develop various dimensions of wellness. We provide a competitive, safe and enjoyable atmosphere that encourages teamwork, leadership development and a life long pattern of positive activity.

#### **d) Residential**

Apart from the newly constructed multistoried hostel with the facility of an elevator, the college has two additional hostels for boys and an exclusive hostel for girls. The facility for accommodation on the campus for teaching and non-teaching staff is also provided for.

#### **e) Cafes/Canteens**

The three cafes on the campus, besides the canteen offer a variety of snacks/eatables at affordable rates to the students and the staff.

#### **f) Guest House**

The Alumni of the college who are spread all over the globe and occupy vantage positions have pooled their resources to construct a modern and well equipped guest house on the college campus.

#### **g) Gurudwara**

Besides the intellectual stuff which is dished out to the students in class rooms/labs/library, the students are motivated to seek spiritual consolation in the holy premises college Gurudwara. The foundation stone of Gurudwara sahib was laid by great Sant Isher Singh Ji in 1962.

### **7. RANKING OF THE INSTITUTE**

In view of the consistent academic and students, the college has been highly media. Some of these are listed below:

- Rankings achieved in survey conducted
- 12th Position (National level) and 2 Engineering Colleges of Eminence.

- 2nd position in category of Top Engineering Colleges
- 25th position in category of Top Placements, USP, Social Responsibility
- Rankings achieved in survey conducted
- 82nd position in category of Top Engineering Colleges
- 33rd position in category of Top Engineering Colleges
- 3rd position in category of Top Placements, USP, Social Responsibility

Ranked at 42nd position in All India Engineering Colleges by Dainik Jagran.

College is the only institution in India ranking for 2017

### **8. FACULTY DETAILS**

#### **a) Current Number (Designation with**



i. Professors faculty)	29 (including Adjunct
ii. Associate Professors	18
iii. Assistant Professors	185

**b) Current Number (Qualification Wise)**

i. Ph.D.	55
ii. Post Graduate (M.Tech/MBA/MCA/Others)	175
iii. Graduate (B.Tech./B.E./Others)	2

**9. RESEARCH ACTIVITIES**

**a) Research Projects Awarded**

- The Faculty of our institution are actively involved in research. A considerable number of research projects have been awarded to faculty members by DST, SERB, IET(I) & UGC. The total research grant received for last year was over Rs.1 crore.
- Three research projects worth Rs.50,00,000/- along with consultancy projects worth Rs.1,70,500/- were received by Mechanical Engineering department.
- MODROBS grant Rs. 44.00 Lacs
- Research grant of Rs 26.69 lacs were received by Production Engineering Department.

**b) Research Publications**

Journal/Conference Publications	2016	2017
---------------------------------	------	------

International Journal
National Journal
International Conference
National Conference

**10. TRAVEL GRANTS**

**TEQIP/UGC**

The Technical education Quality Improvement Program (TEQIP) is a Government of India sponsored by Government of India college has been highly appreciated performing colleges in the co program. 22 Faculty members were International Conferences by TEQIP Academic programs Organized Besides the above, all department workshops, FDPs. A total of three workshops/FDPs were organized.

BRANCH	CONFERENCE
Civil	
Mechanical	1
Electrical	
ECE	1
CSE	
IT	
Production Engg.	1
Total	3



## 11. ACADEMIC DISTINCTIONS/AWARDS WON BY FACULTY

### a) PhDs awarded

Four of the faculty members were awarded PhD degree during the year 2016-17

with following details:

Dr. Arvind Dhingra, EE

Dr. Gurdeepak Singh, Civil

Dr. Puneet Pal Singh Cheema, Civil

Dr. Narwant Singh Grewal, ECE

### b) Awards and recognitions

ISTE Best Teachers (Section) Award to Prof. Arvind Dhingra, EE and

Dr. Parminder Singh, CSE.

- Information technology department received Rs.4,50,000/- as grant under QEEE and Rs.6,90,000/- from AICTE.

- Best Paper award to Dr. Amanpreet Kaur Sodhi at 20th Punjab Science Congress.

## 12. DEVELOPMENTAL ACTIVITIES

- Extension of Civil Engg. lab completed with an addition of 4500sq.ft area to meet increased requirement of concrete lab and environment lab.

- Mechanical Engineering department signed MoUs with CSIR(COE-FM), and Jyoti Ceramics Ltd., Nashik. These will provide increased exposure to the students and faculty.

- Extension of Production Engg. Lab completed. Research scholars now get

added facilities for carrying out the

- 150kWp Solar PV grid connected

saving of Rs.1,20,000/- per month

- Energy Audit of the college  
Recommendations made are being  
reduction of energy consumption.

## 13. TESTING AND CONSULTANCY

- Consultancy Services Offered

i. Structural Design

ii. Soil Investigation

iii. Material Testing

iv. Surveying

v. Energy Auditing

vi. Motor Testing

vii. Pump testing

### Revenue Earned

The College provided consultancy to  
Various Departments during 2016  
Consultancy Fee.

## 14. TRAINING AND PLACEMENT

The Training and Placement Cell rec  
with Excellent Job Avenues". This aw



of Punjab Technical University, Kapurthala. This is the second consecutive year that the Training and Placements cell has received this award. The GNDEC got this award after leaving behind 400 PTU Affiliated Colleges. There is TCS accreditation for all branches (UG&PG) and MoU has been signed with Infosys. The highest Salary Package offered to our students was Rs.6.9 lac per annum and average package was Rs. 3.10 lacs per annum. The students have received stipend of Rs.18,000/- per month for six months training. Mass recruiters viz. TCS, Infosys and Accenture, WIPRO, Mahindra & Mahindra, SML-ISOZU, Nestle, Thermax were prominent companies. We are happy to report that over 70% of the eligible students got placements.

## 15. EVENTS ORGANIZED

- a. Anand Utsav – 2018, a techno-cultural function was organized in March, 2018. The event saw over 20 colleges from north of the country participating in various technical events. The mega events including Robo Racing, Bridge modelling. The cultural events had the traditional folk dance, folk song competitions. A cultural evening by S. Kanwar Grewal renowned Punjabi sufi singer was also organized.
- a. Annual Alumni meet, Silver jubilee batch and Golden Jubilee batch alumni meets were organized in Nov.2017, Dec.2017 and Feb 2018 respectively.
- b. Annual Athletic meet was organized in Feb 2018
- c. 62nd Foundation day of the college was celebrated on 8th April 2018
- d. Raunak Mela-2018 organized by college FM radio (90.8 MHz) team on the



eve of Baisakhi

## 16. STUDENT ACHIEVEMENTS

### a) Result analysis

Our students have been performing examinations. The overall pass percentage of the students graduating with honours students have passed with distinction admission to prestigious IIMs. GATE/CAT/GRE examination. Under for NBA accredited institutions approved work visa.

### b. Extra Curricular Achievements

The college Bhangra team represented South Asian Universities Youth Festival Ganpat University, Mehsana, Gujarat. The students of our institution participated in two students of our college presented at the Convention of Institute of Engineers, India. The college team for all India SAE prize. Anand Utsav was organized from 1st to 3rd April 2018. Various technical events including 4 mega events were organized.

were given to the winners. The technical activities were organized on inter-college basis wherein 20 colleges from North India participated. On the cultural side, competitions in Folk dance, vocal singing, dances, clay art, fine art exhibition were organized.

### c. Sports

Sports has always been strength for the institution. In session (2016-17), we have bagged PTU Overall Combine Men & Women Championship Trophy and are proud to win it consecutively for the fourteenth times.

Thirty two students of our college represented IKG PTU in various tournaments at Inter-varsity level. Our Boys Teams namely cycling, swimming, Hockey, Lawn tennis, Hockey & Athletics and Girls Teams chess, Lawn tennis, cross country, cycling & Athletics won the PTU Championship trophies.

Harshveer Singh, D2 CSE was selected for Asian games squad for roller skating. He is also attending trials for World cup event.

Apart from various Intra-murals we organize College Annual Athletic Meet as mega event.

- a) Mandeep Singh of D4 ME and Gurwinder Kaur of D3CSE were declared college Best Athlete
- b) Prabhdeepak Singh, D4 ME was adjudged PTU Best Swimmer..
- c) Harshveer Singh, D2 CSE was PTU best cyclist.
- d) Sahbjeet Singh, D4 ECE was PTU best athlete.

## 17. STUDENT FORUMS/BODIES

### a) NSS

Blood donation is an annual activity organized an annual blood donation students donated blood. The volunteers participated in the Sport Campus Cleanliness Drive.

### b) NCC

The NCC Unit of the college commenced the mandatory NCC Training attended the mandatory NCC Training qualified NCC-C Certificate which is Officer Cadre. Yoga Day was celebrated level was organized in which 50 shortlisted for SSB Examination. The Academic leadership Camp at Chander Republic Day Camp.

### c) Students Chapters

The college has well established national level organizations viz. IS have various clubs to hone the photography club and cultural club



## 18. COLLEGE MAGAZINE

With a view to inculcate the creative writing skills of the students, the College Magazine spread over three sections in English, Hindi and Punjabi is brought out each year. It provides a platform to the students to demonstrate the art of narration of stories, anecdotes, poems and readable jokes apart from the articles bordering on technical subjects and matters of common interests to the students. Each section of the magazine has Student Editors on the board which is supervised by the senior teachers who hone the skills of the budding writers. The pictorial magazine provides graphic details about various events and activities organized by different departments/clubs/societies etc.

In the end I pray that the ALMIGHTY may bless us with more strength and wisdom so that we can excel further in academics and the overall development of our students.



## **ANNUAL REPORT**

2018-19

**GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA**

**(An Autonomous College u/s 2 (f) and 12 (B) of UGC Act, 1956)**

## **1. In Retrospect**

Nankana Sahib Education Trust was founded in the memory of the most sacred and historic place Sri Nankana Sahib, the birth place of Guru Nanak Dev Ji. NSET with active support of SGPC leadership, Punjab Govt, and Panchayat of Village Gill conceived and developed this college with the mission of ‘Removal of Economic Backwardness through Technology’. A commitment of new enthusiasm by the Trust to uplift the weaker section of rural India by admitting 70% students belonging to rural area was made to the Nation on 8<sup>th</sup> April, 1956. The foundation stone of the College building was laid by Late Dr. Rajendra Prasad, the first President of India. Nearly 37000 graduate engineers have graduated from the College during the last more than 63 years. The alumni of GNDEC is playing significant role at national and international level in top organizations and companies.

## **2. Academic Programs**

At the time of inception, Bachelor’s degree course was offered in Civil Engg. & subsequently similar courses in Electrical Engg. and Mechanical Engg. came in line the very next year. Then diversified degree courses in Electronics & Communication Engineering, Production Engineering, Computer Science & Engineering, and Information Technology were introduced to meet the changing requirements of industry in the country. A full time Post-graduate course in Production Engineering and Part-Time courses in other disciplines (one offered by each department) were started in early eighties. Presently, the following courses at UG & PG level are being offered in the college.

### **Detail of various courses and number of seats**

i. B.Tech. (First Shift + Second Shift)	825
ii. M.Tech. (Full Time) AICTE	179
iii. M.Tech. (Part-Time) AICTE	65
iv. MBA	60
v. MCA	60
vi. Ph.D (under QIP centre)	06

UG= 825; PG= 364; Ph.D.=06; Total intake: 1195

### **3. Accreditations**

The college has been accredited by the following Academic Bodies/Corporate Houses:

- a)* All Undergraduate courses are accredited by IEI
- b)* The undergraduate course in Information Technology is accredited by NBA under TIER-I (Washington Accord)
- c)* Five Post graduate courses are accredited by NBA under TIER-I
- d)* The College is accredited by NAAC (A Grade)
- e)* The College is accredited by Tata Consultancy Services and Institution of Engineers (India).

### **4. Academic Autonomy**

The College has been granted academic autonomy under 2 (f) and 12 (B) of UGC Act, 1956 in 2012 which has been further extended till 2022-23. Under this autonomy, the college can take need based independent decisions to develop and modify its own syllabi, incorporate new courses, conduct examination, prepare results independently. The degree is awarded by IKG Punjab Technical University.

### **5. Foreign Collaborations**

The college has entered into Academic Collaborations and Exchange Programmes for Student and Faculty with a number of foreign Universities/Colleges. The MOUs in place include:

- a)* Waikato Institute of Technology, New Zealand.
- b)* Cambridge University, UK.
- c)* San Jose State University, USA.
- d)* UCT- the Arctic University of Norway

### **6. Infrastructure**

#### **a) Academic**

In order to provide congenial academic milieu to the students, smart class-rooms, updated labs, adequately equipped Workshops, modern Seminar Halls, air conditioned reading room in the Library with access to the internet, departmental computer laboratories and a central Computer Centre form an integral part of college infrastructure. The college has Wi-Fi facility in whole campus area.



**b) Central Library**

The institution has a well-established Air Conditioned Central Library having rich collection of around 95000 books, 3700 online books, 140 print Journals, 20000 online journals. College has departmental libraries in all the departments, catering to the academic needs of Undergraduate, Post Graduate students and faculty. The main library has a working area of around 1800 m<sup>2</sup>. There is a separate Welfare Section in the Library dedicated to provide books to the financially weaker sections of the students. The books are classified according to DDC 23rd latest edition through Web Dewey service. Library is fully computerized with E-Granthalaya software package which is an integrated multi-user library management system supporting all in-house operations of the Library. On-line Public Access Catalogue facility is available at the Reference Desk. Library collection can also be accessed through Web OPAC at any terminal on the Campus Network. The reference collection of the Library is continuously updated and augmented with the acquisition of CD-ROM databases and access to on-line databases on Internet. Library is also connected with DELNET for inter library loan and document delivery services. Central Library is going to setup Institutional Repository services with D-space Digital Library software. Through this service research work will be accessible easily. E-Journals worth Rs. 50 Lac are subscribed every year.

**c) Sports**

The institution has an outdoor stadium with attached pavilion comprising of 400m grassy track and a cricket pitch. The complex comprises of indoor gymnasium, table tennis hall, billiard room & guest rooms. We have well maintained Hockey, Football, Badminton, Lawn Tennis playgrounds and a swimming pool for the students to develop various dimensions of wellness. We provide a competitive, safe and enjoyable atmosphere that encourages teamwork, leadership development and a life-long pattern of positive activity.

**d) Residential**

Apart from the newly constructed multistoried hostel with the facility of an elevator, the college has two additional hostels for boys and an exclusive hostel for girls. The facility for accommodation on the campus for teaching and non-teaching staff is also provided.

**e) Cafes/Canteens**

The three cafes on the campus, besides a canteen offer a variety of snacks/eatables at affordable rates to the students and the staff.

**f) Guest House**

The Alumni of the college who are spread all over the globe and occupy vantage positions have pooled their resources to construct a modern and well equipped guest house in the college campus.

**g) Gurudwara**

Besides the intellectual stuff which is dished out to the students in class rooms/labs/library, the students are motivated to seek spiritual consolation in the holy premises of college Gurudwara. The foundation stone of Gurudwara sahib was laid by great Sant Isher Singh Ji in 1962.

**7. Ranking of the Institute**

In view of the consistent academic and research attainments of the faculty and students, the college has been highly ranked by various credible sources in the media. Some of these are listed below:

- 1st position (State), 19th (India), 239th (Region-wise-Asia) in UI Green Metric World University rankings
- Overall 100th position (ranking including IITs, NITs, Universities) in Times Engineering Institute Ranking Survey & 2nd position in the State of Punjab.
- 24th position in CSR-GHRDC Engineering College Survey

**8. Faculty Details**

**a) Current Number (Designation Wise)**

<i>i.</i> Professors	:	28
<i>ii.</i> Associate Professors	:	19
<i>iii.</i> Assistant Professors	:	179

**b) Current Number (Qualification Wise)**

- |   |   |     |
|---|---|-----|
| <i>i.</i> Ph.D.                                   | : | 58  |
| <i>ii.</i> Post Graduate (M.Tech/MBA/MCA/Others): |   | 168 |

**9. Research Activities**

**a) Research Projects Awarded**

- The Faculty of our institution is actively involved in research. A considerable number of research projects grants worth approximately Rs.2.00 crores have been awarded to faculty members by DST, SERB, IE(I) & UGC.
- Using the 3D printing technique in the Manufacturing Research Center, a model of human heart was created which helped one of the leading heart surgeons of the city to perform a critical surgery with minimal blood loss and in a fraction of time as compared to open surgery. Some other collaborative project on bi- medical Engg are in the process
- Research initiatives in the areas of Smart grid technology, Road safety, Non-conventional energy, automation, Computer aided manufacturing, Image processing are in progress.

**b) Research Publications**

International Journal	168
National Journal	32
International Conference	109
National Conference	31

**10. Travel Grants**

**TEQIP/UGC**

The Technical education Quality Improvement Program (TEQIP-II) sponsored by Government of India was completed in 2017. The college was highly appreciated and rated amongst the top performing colleges in the country for implementation of TEQIP II program. 22 Faculty members were sponsored for presenting papers at International Conferences by TEQIP II/UGC.

MHRD has recently granted TEQIP-III to GNDEC.

### **Academic programs Organized**

All departments have taken initiative to hold workshops, FDPs. A total of three conferences including one international conference, nine seminars and ten workshops/FDPs were organized. Seven Faculty development programs under QIP were organized by the departments on new and innovative techniques in respective domains. One program on Non- Conventional Energy Resources and Green Buildings was organized by Civil Engineering Department in technical collaboration with NITTTR, Chandigarh. Electronics & Communications Engineering Department organized AICTE sponsored FDP on Antenna Technology.

Science & Technology Entrepreneurs' Park (STEP): To promote the culture of entrepreneurship 11 Entrepreneurship Awareness Camps, 2 Entrepreneurs Development programs and one Women Entrepreneurship Development program were conducted in the last year. STEP has given flip start to around 22 start-ups in last five years. At present 11 odd first generation incubators are running their enterprises in the premises of STEP.

## **11. Academic Distinctions/Awards Won by Faculty**

### **a) PhDs awarded**

Four of the faculty members were awarded PhD degrees during the year 2017-18 with following details:

Dr. Randhir Singh, A.Sc.

Dr. Prashant Garg, Civil

Dr. Jagdeep Singh, Production Engg.

Dr. Inderpreet Kaur, Civil

Dr. Rajvir Kaur, A.Sc.

Dr. H.S.Dhall, MBA

### **b) Awards and recognitions**

- ISTE Section Best student Award in 2018 awarded to Mr. Saravpreet Singh Arora, Mr. Shriansh Bansal

- ISTE Best Teacher Award won by Dr. Arvind Dhingra, EE, Dr. Jasmaninder Singh Grewal, PE
- ISTE Best Student Chapter All India-2018
- IJSTR Best Engineering Faculty Award to Dr. Arvind Dhingra
- Two copyrights were awarded to Dr. Harwinder Singh, Professor, Mechanical Engineering.

## **12. Developmental Activities**

- a)* Addition of Computer facilities in all Departments
- b)* Addition of BIM Lab in Civil Engg. Department
- c)* Eight patents filed by the faculty.
- d)* Research centre in Manufacturing Practices was set up
- e)* A government sponsored project on Road safety was initiated.
- f)* Students IEEE chapter has been initiated at college.

## **13. Testing and Consultancy Services**

### **a) Consultancy Services Offered**

- i.* Structural Design
- ii.* Soil Investigation
- iii.* Material Testing
- iv.* Surveying
- v.* Energy Auditing
- vi.* Motor Testing
- vii.* Pump testing

### **Revenue Earned**

The College provided consultancy to Industry, Government Organizations and Various Departments during 2017-18 worth Rs. 1 Crore.

## **14. Training and Placement Record**

Continuing with the excellent record of placements, the Training and placement cell of the college was instrumental in getting all eligible graduates placed. More than 20 companies

visited the campus for recruitment and around 350 students are placed till date. The major companies visiting the campus were Infosys, Accenture, TCS, Cummins, Saint Gobain, Thermax, Trident, BYJU's, Hewlett Packard, Jaro. The annual package offered varied from Rs.5.5 lacs to Rs 15 lakh per annum.

## **15. Events Organized**

- a. Two weeks Induction program for 2018 admission batch was organized as per new guidelines of AICTE.
- b. Besides annual Alumni meet, Silver jubilee batch and Golden Jubilee batch alumni meets were organized in Nov.2018 and Dec.2018 respectively.
- c. Annual Athletic meet was organized in Feb 2019
- d. Annual Technical Fest of the college along with ISTE Student National Convention was held in the month of November 2018.
- e. National Electrical Engg. Conference in association with Institution of Engineers was conducted in the month of November 2018
- f. An International Conference by Civil Engg. Department was organized in November 2018.
- g. Civil Engineering Department organized UKIERI conference at Jointly with NIT, Jalandhar.
- h. AICTE granted Unnat Bharat Program and Marg Darhsak program in the current year

## **16. Student Achievements**

### **a. Academic Result**

Our students have been performing consistently well in the university examinations. The overall pass percentage last year was around 88% with 35% of the students graduating with distinction. 07 students got admission to prestigious IIMs. More than 72 students have cleared GATE/CAT/GRE examination. Under the work visa provision of Australian Govt. for NBA accredited programs, approximately 70 students have already got work visa.

### **b. Extra/Co- Curricular Achievements**

Eighteen teams of students of our institution participated in National level Smart India Hackathon, 2019 event.

Students of our college have been shortlisted as finalists for Robo design competition E-Yantra to be held at IIT, Mumbai.

Our students made innovative project on “Automated wheel chair” which received wide spread accolades from all quarters.

### **c. Sports**

Sports have always been the strength for the institution. In session (17-18) our college bagged PTU Over all Combined Men & Women Championship Trophy and are proud to win it consecutively for the sixteenth times.

Thirty five students of our college represented IKG PTU in various tournaments at All India/North Zone Inter-varsity level and one student of our college won medals in Roller skating events and Cycling events at Senior Open Nationals organised by respective Federations. Our girl's teams namely Cross-country, Cycling and boys team namely Badminton, Hockey, Cycling bagged the PTU Inter-college Championship Trophies.

Harshveer Singh of D3 CSE represented India in Asian Games in Roller Skating at Palembang(Jakarta) in 2018 and is also selected for India Camp in Cycling Event. He was declared PTU Best Cyclist among boys and Gurwinder Kaur of D4 CSE among girls.

The Intra-murals in various games are organised evenly during both semesters. The College Athletic Meet and Prize Distribution Function is an Annual Mega Event in which Vinod Kumar of D4 ME and Gurwinder Kaur of D4CSE were declared College Best Athlete and Sukhdeep Kaur of D4ECE and Paramveer Singh of D2 ECE were declared College 2nd Best Athlete.

The college gymnasium has been strengthened with addition of new Building and equipment.

## **17. Student Forums/Bodies/Activities**

### **a) NSS**

Blood donation is an annual activity. This year, the NSS unit of the college organized an annual blood donation camp in which over 150 volunteer students donated blood.

The volunteers also participated in tree plantation drives in which over 550 trees were planted on the campus. Besides, the volunteers participated in the Sports Day Parade, Drug de-addiction rally and Campus Cleanliness Drive.

Besides this the NSS units of the college collaborated with Eco-Sikh foundation for tree plantation, Nadar foundation for social work in villages.

Students of the college are running an NGO Abha which is promoting education for rural and poor students by providing them books and teachers.

#### **b) NCC**

The NCC Unit of the college comprises 306 cadets for Army and 35 cadets for air wing. The cadets attended the mandatory NCC Training Camps. More than a dozen cadets have qualified NCC-C Certificate which is a gateway to entry into Armed Forces in the Officer Cadre. Yoga Day was celebrated. Two ten days' camps at State level were organized in which 500 cadets participated. Two cadets were selected through SSB Examination for commissioning in the armed forces. Two NCC cadets were shortlisted for Republic Day Camp.

#### **c) Students Chapters**

The college has well established and vibrant students chapters of various national level organizations viz. IEEE, ISTE, SCIE, SAE, CSI. In addition to these, we have various clubs to hone the personality & skills of the students which include photography club and cultural club.

### **18. College Magazine**

With a view to inculcate the creative writing skills of the students, the College Magazine spread over three sections in English, Hindi and Punjabi is brought out each year. It provides a platform to the students to demonstrate the art of narration of stories, anecdotes, poems and readable jokes apart from the articles bordering on technical subjects and matters of common interests to the students. Each section of the magazine has Student Editors on the board who are supervised by the senior teachers for honing the



skills of the budding writers. The pictorial magazine provides graphic details about various events and activities organized by different departments/clubs/societies etc.

In the end I pray that the ALMIGHTY may bless us with more strength and wisdom so that we can excel further in academics and become instrumental in the overall development of our students.