2015

Annual Quality Assurance Report

Batish

Thapar Institute of Engineering & Technology, Patiala

12/30/2015

The Annual Quality Assurance Report (AQAR) of the IQAC - 2015

All NAAC accredited institutions will submit an annual self-reviewed progress report to NAAC, through its IQAC. The report is to detail the tangible results achieved in key areas, specifically identified by the institutional IQAC at the beginning of the academic year. The AQAR will detail the results of the perspective plan worked out by the IQAC. *(Note: The AQAR period would be the Academic Year. For example, July 1, 2012 to June 30, 2013)*

Part – A

AQAR for the year *(for example 2013-14)* 2014-15

1. Details of the Institution

1.1 Name of the Institution	Thapar Institute of Engineering and Technology University
1.2 Address Line 1	Patiala
Address Line 2	Punjab
City/Town	Patiala
State	Punjab
Pin Code	147004
Institution e-mail address	dopa@thapar.edu
Contact Nos.	8288008126
Name of the Head of the Institution:	Prof. Prakash Gopalan
Tel. No. with STD Code:	0175 2393001

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Name of the IQAC Co-ordinator: Dr Ajay Batish

Mobile: 9815604119

IQAC e-mail address: abatish@thapar.edu

1.3 **NAAC Track ID** *(For ex. MHCOGN 18879)*

OR

1.4 **NAAC Executive Committee No. & Date:** EC_50_RAR_15 dated September 30, 2009

(For Example EC/32/A&A/143 dated 3-5-2004. This EC no. is available in the right corner- bottom of your institution's Accreditation Certificate)

1.5 Website address: www.thapar.edu

Web-link of the AQAR:

For ex. http://www.ladykeanecollege.edu.in/AQAR2012-13.doc

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1st Cycle	B++		2002	5 years
2	2nd Cycle	A	3.15	2009	5 years
3	3rd Cycle				
4	4th Cycle				

1.7 Date of Establishment of IQAC : DD/MM/YYYY 04/12/2009

1.8 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC (*(for example AQAR 2010-11submitted to NAAC on 12-10-2011)*

i. **AQAR 2012-13 submitted to NAAC on 11/10/2013**
ii. **AQAR_2013-14 Submitted to NAAC on 30/12/2014**
iii. AQAR_____ _____ (DD/MM/YYYY)
iv. AQAR_____ _____ (DD/MM/YYYY)

1.9 Institutional Status

University State ☐ Central ☐ Deemed ☑ Private ☐

Affiliated College Yes ☐ No ☑

Constituent College Yes ☐ No ☑

Autonomous college of UGC Yes ☐ No ☑

Regulatory Agency approved Institution Yes ☑ No ☐

(e.g. AICTE, BCI, MCI, PCI, NCI)

Type of Institution Co-education ☑ Men ☐ Women ☐

Urban ☑ Rural ☐ Tribal ☐

Financial Status Grant-in-aid ☐ UGC 2(f) ☐ UGC 12B ☐

Grant-in-aid + Self Financing ☑ Totally Self-financing ☐

1.10 Type of Faculty/Programme

Arts ☐ Science ☑ Commerce ☐ Law ☐ PEI (Phys Edu) ☐

TEI (Edu) ☐ Engineering ☑ Health Science ☐ Management ☑

Others (Specify) .

1.11 Name of the Affiliating University *(for the Colleges)* NA

1.12 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc

Autonomy by State/Central Govt. / University	Deemed University		
University with Potential for Excellence		UGC-CPE	
DST Star Scheme		UGC-CE	
UGC-Special Assistance Programme	√	DST-FIST	√
UGC-Innovative PG programmes		Any other (*Specify*)	TEQIP - II
UGC-COP Programmes			

2. IQAC Composition and Activities

2.1 No. of Teachers	8
2.2 No. of Administrative/Technical staff	1
2.3 No. of students	0
2.4 No. of Management representatives	1
2.5 No. of Alumni	2
2. 6 No. of any other stakeholder and Community representatives	0
2.7 No. of Employers/ Industrialists	0
2.8 No. of other External Experts	3
2.9 Total No. of members	15
2.10 No. of IQAC meetings held	2

2	√

2.11 No. of meetings with various stakeholders: No. Faculty

Non-Teaching Staff Students √ Alumni √ Others

2.12 Has IQAC received any funding from UGC during the year? Yes No √

If yes, mention the amount

2.13 Seminars and Conferences (only quality related)

(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

Total Nos. 2 International National State Institution Level 2

(ii) Themes Quality Improvement & Contemporization

2.14 Significant Activities and contributions made by IQAC

Attached as annexure-I, II, III, IV, V and VI

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year *

Plan of Action	Achievements
Attached as annexure II, III, IV, and V	

* *Attach the Academic Calendar of the year as Annexure.* **(Academic calendar is attached as *annexure-VII*)**

2.15 Whether the AQAR was placed in statutory body Yes √ No

Management √ Syndicate Any other body

Provide the details of the action taken

Attached as annexure II

Part – B

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD	All Disciplines	Nil	All	All
PG	29	4		
UG	13	11	All	All
PG Diploma				
Advanced Diploma				
Diploma				
Certificate				
Others				
Total	42	15		

Interdisciplinary	6			
Innovative				

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options
(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	All
Trimester	NIL
Annual	Nil

1.3 Feedback from stakeholders* ***(On all aspects)*** Alumni √ Parents ☐ Employers √ Students √

Mode of feedback : Online √ Manual ☐ Co-operating schools (for PEI) ☐

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

The curriculum of the undergraduate engineering programs has been harmonized in line with Trinity College Dublin (TCD) where all students are exposed to TCD harmonized curriculum with greater emphasis on research inspired and project led teaching through the contemporisation programme. Trinity had formed a committee for the purpose and the following team participated in the meetings:

TCD Delegation

1. Brian Foley
2. Jeremy Jones
3. Ciaran Simms
4. Henry Rice
5. Dermot O'Dwyer
6. Edmund Lalor
7. Michael Brady
8. Donal O'Mahon

The first joint meeting of the curriculum harmonization was held on March 12, 2015 from 12.00 noon to 2.00 pm in the Library of the Museum Building. A proposed scheme of modules to be offered at TU (based on discussions between the five member TU team), harmonized with TCD, from July 2015 onwards was presented to the TCD team. Prior to this the TU had their meeting on March 7 followed by another one on March 11. Some of the prompt questions which we decided to discuss with TCD team were as under:

1. *Should we offer Mechanics as a common course to everyone at TU?*
   This was included as a prompt question because of the strong recommendation from Dr Cairne Simms, Director of UG teaching in School of Engineering to include this as a common course. The same was echoed by Prof Henry Rice. We decided to put up this for discussion to gather views of Prof Jeremy Jones, Head School of CS & Stats, Prof Brian Foley, Head School of Engineering and their other colleagues. As per data gathered by our colleagues (TU team), much of the course curriculum of mechanics is covered in class 11 in schools as per the CBSE curriculum. So, the question was do we really need it?

   Response to prompt question 1:

   The whole discussion was based on the premise of offering two years of general engineering, providing students with a firm grounding in the principles common to all disciplines, followed by two years of specialisation. This way the graduates will have a broad-based understanding of the whole discipline and a detailed knowledge of their chosen specialist area. The aim is that graduates will be able to continuously train themselves, to adapt and move into related or newly emerging areas as their careers develop after graduation.
   In this context, the TCD team emphasised the importance of teaching Mechanics to every discipline during the first year to give a wholesome rounded engineering education to the students. Prof Jones gave examples of how computer engineers could serve in setting up of computer systems in cars or planes or many other such applications. Prof Foley echoed similar sentiments. Although, Dr Cairne Simms who is the Director of UG programs at TCD could not be present during the meeting, we had already elicited his views which strongly favour teaching of Mechanics. Based on the discussion, Mechanics has been added to the course scheme for July 2015.

2. *Can we offer Experimental Methods and Manufacturing Processes as a choice between various disciplines?*
   There was a view amongst the five of us that there can be a possibility of offering either Experimental Methods or Manufacturing Processes as a choice between different disciplines. It was felt that Civil, Mechanical can opt for Manufacturing Processes whereas CS and ECE can opt for Experimental Methods. We decided to elicit TCD team's view on this.
   Response to prompt question 2:

There was a discussion on prompt question no 2 listed above and after a very informed intellectual discussion, it was decided that Experimental Methods be dropped and all students undertake a course on Manufacturing Processes primarily because we have created such an excellent infrastructure in the Workshop and it will be complete waste of available resources if this course is not offered to all. Prof Brian also commented that as per his understanding and his impression during his visit to TU in November 2014, the students value this course a lot.

3. *Where do the humanities courses fit in this scheme?*
   We had proposed a course on Communication Skills for our students in our earlier scheme. Dr Cairne and his colleagues had commented that communication skills and attainment of its learning outcomes should be a part of every course and should not be necessarily delivered as a specially taught course.

   Response to prompt question 3:
   During the meeting it was decided that the syllabus for the course "Introduction to Engineering" be suitably modified to include Communication Skills and Technical Report writing. This course would have 2 lectures and 2 lab hours per week totalling to 60 hours of contact time in a semester.

   Another humanities course "Humanities for Engineers" or suitably titled will be offered during the first two years which will also include human values, ethics and organizational behaviour.

4. *What would be covered in the Introduction to Professional Engineering Course?*
   We offered this course for the first time in 2014. Most departments, I guess other than CS, offered a broad view of the various discipline streams with several faculty of the department engaging a few lectures. CS had very structured syllabi for this course. The TCD curriculum is vastly different and is offered in a very innovative way.

   Response to prompt question 4:
   The changes proposed in Introduction to Engineering course are already included in Response to question 3.

5. *How are the common courses in Maths and Sciences delivered?*
   We got a feedback from our colleagues in SMCA on Maths 1 offered at TCD is basic and most of it is covered in 10+1 or +2. We were keen to seek opinion of TCD counterparts on this matter.

   Response to prompt question 5:
   We have requested Prof Brian Foley to arrange our meeting with Professor(s) from Maths and Sciences for a range of discussions basically aimed at Contemporising the curriculum at Thapar, and Harmonising the curricula across both institutions so as to facilitate student exchange. Prof Foley has already written to the Maths professor and we met Prof Ryan on March 16 at 2.00 pm. We had a brief discussion about what we teach in the four Maths courses in India as well as what the students have already covered in Grade 11 and 12 in high school. We exchanged notes and I am expected to hear from Prof Ryan anytime next week on her feedback. Based on her feedback, we will suitable incorporate changes wherever necessary.

   On the same lines Prof Foley has arranged our meeting with academics from Physics and chemistry and we will follow the same procedure as above.

During the discussions, Prof Foley also mentioned that TCD is considering replacing the 10 credit Engineering Design IV project (Shelter) with two separate 5 credit courses. Tentatively, one of these courses would be a project aligned with civil and bio-medical engineering programs and the other would a Numerical Analysis and Statistics course. However, there have been only preliminary discussions and nothing has been finalized. Using this feedback, it is proposed that Engineering Design IV project in our original scheme be replaced with a Department Specific Project.

The second meeting for curriculum harmonization was held on March 18 in the Mechanical Engineering Board Room. Prof Henry Rice and Dr Carine Simms who were not present during the first meeting, were briefed about the discussions we had during the first meeting. The scheme of modules was discussed once again and the syllabus of some of the common and department specific modules was discussed. Some of the observations of the members are listed as under:

Solids and Structures: The module of solids and structures does not have too many experiments on structures. In fact most of these experiments are related to engineering materials and must be moved to the engineering materials module. A project, for example to make a bridge and predict forces may be added to this course. Also, matrix based pin joint analysis should be added.

Computer Programming I and Computer programming II: C^{++} should be added to the syllabus as it is more universal language as compared to JAVA. Dr Garg emphasised that JAVA is used extensively in Indian IT industry so is more useful. Dr Garg to have further discussion with academics from SCS&S at TCD. The syllabus for these modules and the department specific modules will be discussed in the next meeting when Prof Jeremy Jones and his colleagues will be there.

Kinematics of Machines: The students must do computer coding on how the mechanisms work. Also, it was suggested to integrate the different aspects of visualizing the movements by programming.

The Research assignment listed in the syllabus must not be descriptive but should be analytical which means for example to measure something. Also, the weightage of 10% to the research assignment my be increased to 20%.

Manufacturing processes: Since all the students would be taking this course, it will be good idea to include manufacturing of micro-chips used in IT and electronics industry. This may be done by giving an assignment on micro-chips and touch screens. Some components of metrology and measurement may be added to the course.

Computer Aided Design and Analysis: The lab component of this course should be combined with solids and structures course where student can analyze the project completed during that course.

Analog Electronic systems: Reduce some lab work and include mini-projects such as building a power supply or a Protection circuit. The syllabus needs refinement.

Electrical Engineering: Head EIED to check to ensure there is no overlap with the Physics module. The module seems to cover a lot of material. Do we have enough time to cover everything in the given time? If not, some of the topics may be reviewed.

Engineering Materials: It is important to include explicitly the mechanical properties of various materials including strength, stiffness, ductility/brittleness, toughness, shrinkage, diffusion and corrosion. The module should include Material Selection in Design based on Properties covering timber, aluminium, glass, Polymers and ceramics and steel phase diagrams

The topics on laws of diffusion, temperature dependence of diffusion coefficient, Determination of activation energy, solids solutions and alloys, Gibbs phase rule, Isomorphous and eutectic phase diagrams and their construction, Lever arm rule, Application of phase diagrams, Zone refining may be reviewed for its usefulness at this level as this is a common module for all students.

There are too many experiments listed in the lab work. It is suggested that the lab work may be left open ended and enquiry based. Some of the experiments seem to be unnecessary to be performed for all students. There seems to be too much emphasis on Germanium. The lab work should include experiments on hardness, toughness, ductility etc typically performed in Solid Mechanics course but need to be moved to this course.

Computer Programming: Laboratory work is not listed in the syllabus. In the lab class, the students should preferably be given open ended problems instead of routine exercises. Do the students work in groups and complete the exercise in the allotted 2-hr time. Prof Jeremy Jones expressed desire to have a look at some of the workbooks. It will be useful to give a mini-project during the latter half of the semester.

Internet and Java Programming: The course seems to be very ambitious with large content for a 2nd semester student. There was a discussion on why do we need to switch the language after the C^{++} undertaken in the first semester. Dr Garg's view was that since most Indian IT companies are service industries, they use Java to a large extent. This course thus helps the students to pick up another language. The student should develop an ability to take a problem and generate a solution. The course will be retained in its present form.

Discreet Mathematical Structures: Accepted as it is.

Operating Systems: Good course and will help those students who transfer to TCD at the end of two years immensely. Investigation of concurrent should be included in the syllabus.

Data Structures and Algorithms: Accepted. The language to be used will be left to the course instructor.

Mechanics: This course should focus more on applications than theory. The tutorials should include a project on measuring rotational moment of inertia, measuring friction in an engineering application, emphasis on free body analysis, and analysis of real life applications.

Civil Engineering Department specific courses: The three department specific courses in 2nd year are Hydrology and Ground Water, Surveying and Building Materials and Construction. The courses were approved as it is.

Energy & Environment: It is proposed that the L T P scheme for this course should be 3 0 0. During the tutorial class, a project each on energy and environment should be included.

Mathematics courses (Maths I to IV): The maths courses proposed by SMCA were discussed during the curriculum harmonization meetings and it was decided that the following topics needs to be added either in Maths III or IV. These are:

- Euclidean n-space and n-vectors; How to model and encapsulate a real world engineering problem under the vector space
- Linear transformations and their matrices; subspaces; linear combinations of vectors;
- Subspaces spanned by a set of vectors; linear independence of a set of vectors;
- Basis and dimension; standard basis in n-space; coordinates of vectors relative to a basis; Problems based on these parameters and applications to engineering field

- General and particular solutions for a linear system;
- Row, column and null space of a matrix, finding bases for them using elementary row operations, rank and nullity of a matrix; Importance of rank to engineering application, trace of a matrix importance of Eigen values, etc
- Inner products, lengths, distances and angles relative to them;
- Orthogonal and orthonormal bases relative to an inner product, orthogonal projections to subspaces, Gram-Schmidt Process;
- Best approximation by the least squares method;
- Eigen values and eigenvectors of square matrices;
- Some important matrices and their properties like Hermitian matrix, Toeplitz matrix, circulant matrix, triangular, lower triangular, upper triangular etc. and their applications to engineering field
- Matrix factorization, like QR decomposition, Singular value decomposition etc
- How to model and encapsulate a real world engineering problem using single integral, or multiple integrals
- MATLAB in the lab component

Applied Chemistry: We met Dr. M. Bridge and discussed the syllabus of the course supplied by Head SCBC. Trinity does not cover UV-Vis and IR spectroscopy and Chemistry of Polymers. They put more stress on atomic structure and bonding in theory and the lab experiments are more enquiry based and open-ended and cover the following:

- Electrochemical Measurements
- Kinetics of the oxidation of iodine ion by perosydisulphate ion.
- Acids and Bases
- Atomic and molecular spectroscopy
- Thermo-chemistry

Applied Physics: We shared the syllabus of the course taught at TU, suitably modified with inputs from Head SPMS, with Trinity and requested them to provide their feedback. The following feedback and notes were received from TCD Physics faculty which is reproduced below:

Further to our conversation, you can find a copy of my lecture notes and some sample tutorials here. I note that a colleague of mine delivers the lectures on electrostatics and they are not included in the linked folder. I will ask him to share his notes with you. I have reviewed the course content you deliver to your undergraduate engineering students. It appears you are teaching more content than we are here in Trinity. Considering your freshman students have twice as many lecture hours for engineering physics, this is not surprising. As you will have heard from Brian and his colleagues, our module in engineering physics facilitates our students acquiring scientific habits of mind through

1. Exploring concepts in physics through problem solving and application of theory to 'real world' situations

2. Encouraging student-led learning (eg peer-learning with clickers in lectures, experimental laboratories that do not always rely on prescriptive lab manuals, and tutorials that encourage conversation and debate, student involvement with informal/outreach activities (not for credit)) I will share my paper on problem-based learning in engineering physics undergrad labs when it's published (it's being reviewed at the moment). It's a very effect teaching innovation. We have seen a considerable increase in student engagement, a broader student perception of the scientific process and better learning outcomes for the students.

Based on the above discussions, a fresh scheme of courses to be offered from July 2015 at TU is as given below. The syllabus of the courses will need to be revised based on the feedback provided above.

Applicable from July 2015 to all undergraduate engineering programs

SEMESTER-I

S.No.	Course No.	Title	L	T	P	Cr
1		MATHEMATICS-I	3	1	0	3.5
2		COMPUTER PROGRAMMING	3	0	2	4
3		APPLIED PHYSICS	3	1	2	4.5
4		ELECTRICAL ENGINEERING	3	0	2	4
5		INTRODUCTION TO PROFESSIONAL ENGINEERING	2	0	2	3
6		ENGINEERING DESIGN-I	2	4	0	4
			16	6	8	23

SEMESTER-II

S.No.	Course No.	Title	L	T	P	Cr
1		MATHEMATICS-II	3	1	0	3.5
2		APPLIED CHEMISTRY	3	1	2	4.5
4		MECHANICS	2	1	0	2.5
5		ELECTRONIC ENGINEERING	3	1	2	4.5
6		COMPUTER PROGRAMMING-II	3	0	2	4
		ENGINEERING DESIGN-II (Catapult and more such projects) (6 Self Effort Hours)	1	0	2	5
			15	4	8	24.0

SEMESTER-III

S.No.	Course No.	Title	L	T	P	Cr
1		Energy & Environment	3	0	0	3
2		Solids and Structures	3	1	2	4.5
3		Mathematics-III	3	1	0	3.5
4		Thermo-fluid	3	1	2	4.5
5		Manufacturing Process	2	0	3	3.5
6		Department Specific with project (includes 7 self effort hours)	3	1	2	8
			17	4	9	27.0

SEMESTER-IV

S.No.	Course No.	Title	L	T	P	Cr
1		Department Specific	3	1	2	4.5
2		Mathematics-IV	3	1	2	4.5
3		Engg Materials	3	0	2	4
4		Humanities for Engineers	2	0	2	3
5		Department Specific	3	1	2	4.5
6		Engineering Design-IV (Buggy and more such projects) (10 Self Effort Hours)	2	0	2	8
			16	3	10	28.5

1.5 Any new Department/Centre introduced during the year. If yes, give details.

As part of the contemporisation program, we are also setting up a Centre for Academic Practice and Student Learning under mentorship of Trinity to support and help the faculty hone their skills and teaching pedagogy. This centre will support a whole-institutional approach to teaching and learning and facilitate a broad adoption of this new learning paradigm. The training and on-going professional development will be instrumental in establishing the culture necessary for this initiative to grow and contribute meaningfully to the contemporisation programme.

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Others (Visiting Professors & Lecturer)
316	176	44	35	61

2.2 No. of permanent faculty with Ph.D. 215

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
22		0		0		33		55	

2.4 No. of Guest and Visiting faculty and Temporary faculty

11		

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	30	40	70
Presented papers	25	31	13
Resource Persons	5	52	80

2.6 Innovative processes adopted by the institution in Teaching and Learning:

Aspiring to become a globally acclaimed university, we have signed a comprehensive institutional agreement to CONTEMPORIZE TIET University with Trinity College, the University of Dublin. Trinity as it is popularly called is one of the world's oldest universities - over 422 years old and its cutting- edge research, technology and innovation places it at the forefront of higher education and is consistently ranked amongst the top 100 universities in the world. The collaboration is a central component of a major

contemporisation programme that Thapar Institute of Engineering and Technology University has undertaken. The CONTEMPORARIZATION PROGRAM is envisaged to deliver a research inspired; outcome based educational experience to the students. The partnership covers all the major academic and research activities of the University and will help address and bolster Thapar Institute of Engineering and Technology University's position as a leading centre for higher education in India and in the region. As a first step, we invited Trinity in November 2014 to conduct an academic review of our programs and governance procedures. The findings of the review set out a path to achieve a closing of the performance gap. An overall plan for change was then prepared for implementing the findings of the academic review. As a first step the harmonization of curriculum with Trinity was taken up to bring it up to date with global standards. We have adopted the learning outcomes approach for teaching with greater reliance on self-directed learning, projects and research led teaching. The agreement will also give students admitted to undergraduate engineering programs at Thapar Institute of Engineering and Technology University the opportunity to study at Trinity. Eligible students will pursue the first two years of their course at Thapar before transferring to Ireland in years 3 and 4 of their program. A cohort of 8 students has been nominated to Trinity on a scholarship program earlier this year to complete their year 3 and 4. Another batch of 8 students will also go in 2016 before a larger group of 40 undertakes this credit transfer program from 2017. To give a major fillip to research, we have sponsored two research professorships at Trinity. The Professors would spend time both at Thapar and Trinity and would lead a major research effort which will culminate into setting up of a State of the Art research centre at Thapar in the next five years. As part of the contemporisation program, we are also setting up a Centre for Academic Practice and Student Learning under mentorship of Trinity to support and help the faculty hone their skills and teaching pedagogy. This centre will support a whole-institutional approach to teaching and learning and facilitate a broad adoption of this new learning paradigm.

We have undertaken major examination reforms during the year. In the new procedure, the question papers are now being reviewed by Trinity. The examination results will be discussed by an Examination Board which will be convened to review sample answer scripts, projects and the marks obtained by the students. The partnership is now being expanded to collaborate in other areas of academia and research which includes the programs offered by TIET University Schools of Mathematics, Physics, Chemistry and the postgraduate and PhD programs. Additional academic areas in Arts, Humanities and Social Sciences are also being scoped. An Innovation Centre/Venture Lab would be set up at TIET University to run accelerator program open to teams of students with an early-stage business idea. The program will support students in developing investor-ready ventures.

2.7 Total No. of actual teaching days during this academic year

180

2.8 Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions)

All in practice

2.9 No. of faculty members involved in curriculum Restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop

65		

2.10 Average percentage of attendance of students

75% min

2.11 Course/Programme wise distribution of pass percentage:

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
2014UG-1st Yr	1207	255	738	214		
2013 UG-Ist Yr	994	166	473	237		
2012 UG-2nd Yr	955	159	502	280		
2011 UG-3rd Yr	905	168	546	192		
2010 UG-4th Yr	851	152	527	127		
2014 PG-1st Yr	647	121	471	55		
2013 PG-1st Yr	589	123	322	80		
2012 PG-2nd Yr	732	191	410	85		

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

The University has established, documented and implemented a Quality Management System. Continuous improvement in the implementation and effectiveness of the quality management system is ensured through continuous reviews and internal audits. The University has identified the processes needed for the quality management system and their application throughout the organization process are being carried out in the University. Documented procedures have been developed for the management activities, provision of resources, instructional design, delivery and control and measurement.

The University continuality improves the effectiveness of the quality management system through the use of quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and management review. At the time of every management of review, through the measure of each objective and its comparison with earlier level of that objective, the trends are ascertained. Action points are then listed to continually improve the system. The status is reviewed in the subsequent management review meetings. The University conducts internal audits every six months to verify whether quality managements system conform to the quality plan and to determine that it is effectively implemented and maintained. The review of the quality system is carried out once every six months to ensure continuing suitability, adequacy and effectiveness in satisfying the requirements of the standard and the quality policy of the University. The review includes assessing opportunities for improvement and the need for change to the quality management system

2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	*Number of faculty benefitted*
Refresher courses	51
UGC – Faculty Improvement Programme	13
HRD programmes	4
Orientation programmes	21
Faculty exchange programme	30
Staff training conducted by the university	53

Staff training conducted by other institutions	41
Summer / Winter schools, Workshops, etc.	32
Others	1 (Int. Conf.) and 3 (National Conf.)

2.14 Details of Administrative and Technical staff

Category	Number of Employees	Number of Vacant Positions	Number of permanent positions filled during the Year
Administrative Staff	316	06	06
Technical Staff	167	05	06

Criterion – III

3. Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

The CONTEMPORIZATION PROGRAM is envisaged to deliver a research inspired; outcome based educational experience to the students. The partnership covers all the major academic and research activities of the University and will help address and bolster Thapar Institute of Engineering and Technology University's position as a leading centre for higher education in India and in the region. As a first step, we invited Trinity in November 2014 to conduct an academic review of our programs and governance procedures. The findings of the review set out a path to achieve a closing of the performance gap. An overall plan for change was then prepared for implementing the findings of the academic review. As a first step the harmonization of curriculum with Trinity was taken up to bring it up to date with global standards. We have adopted the learning outcomes approach for teaching with greater reliance on self-directed learning, projects and research-led teaching.

To give a major fillip to research, we have sponsored two research professorships at Trinity. The Professors would spend time both at Thapar and Trinity and would lead a major research effort which will culminate into setting up of a State of the Art research centre at Thapar in the next five years.

As part of the contemporisation program, we are also setting up a Centre for Academic Practice and Student Learning under mentorship of Trinity to support and help the faculty hone their skills and teaching pedagogy. This centre will support a whole-institutional approach to teaching and learning and facilitate a broad adoption of this new learning paradigm. The training and on-going professional development will be instrumental in establishing the culture necessary for this initiative to grow and contribute meaningfully to the contemporisation programme.

We have envisioned improving the laboratory and physical infrastructure on the campus. A modernization plan for the important teaching and research laboratories in consultation with Trinity has been developed. We have hired world class foreign architects to develop key academic infrastructure that would include new Computer Science block, Library, Lecture hall complex, student residences and other academic blocks. Face lifting and modernization of older buildings has also been planned in a major way. Thapar Institute of Engineering and Technology University has also planned to implement an international ERP system to manage and govern the academic, financial and administrative functions.

We have undertaken major examination reforms during the year. In the new procedure, the question papers are now being reviewed by Trinity. The examination results will be discussed by an Examination Board which will be convened to review sample answer scripts, projects and the marks obtained by the students.

The partnership is now being expanded to collaborate in other areas of academia and research which includes the programs offered by TIET University Schools of Mathematics, Physics, Chemistry and the postgraduate and PhD programs. Additional academic areas in Arts, Humanities and Social Sciences are also being scoped.

An Innovation Centre/Venture Lab would be set up at TIET University to run accelerator program open to teams of students with an early-stage business idea. The program will support students in developing investor-ready ventures.

Thapar Institute of Engineering and Technology University constituted the "Senate Research Committee" to discuss all the matters pertaining to policies of Ph.D. programmes and other research parameters like consultancy, testing and IPR cell.

For each Ph.D. student a specific doctoral committee is there consisting of supervisors, members from the cognate area from the candidate's department and outside the department & chaired by the respective head of the department/school. The doctoral committee monitors the progress of the candidate from time to time and specifically once in every semester through a formal presentation of work done during previous six months. The Dean, R&SP communicates to all departments/schools for research facilities and funding available by various sponsoring agencies from time to time. The progress record of research projects is maintained by the DoRSP office.

The Doctoral Committee constitutes of Head of Department/Schools as Chairperson, Supervisor (s) and two other Senior Faculty in the area of expertise as members. Each candidate has to make power point presentation of the progress before the Doctoral Committee and presentations are organized by the office of Dean (Research & Sponsored projects).

Regarding monitoring of research projects, a statutory body of the University i.e., Planning and Monitoring Board under the Chairmanship of the Director and other senior faculty being its members monitor progress of each project, the minutes of which are circulated. The meeting of Planning and Monitoring Board are held at regular intervals at least twice in a year.

Dean, R&SP convenes the meeting of all Heads of Departments/Schools in every semester to decide on the admissions to Ph.D. programme of the University.

The university proactively promotes participation of all faculty members as Principal Investigator for various sponsored projects/schemes and provides all the necessary and provides all the necessary support and basic facilities as well as to advance the funds as support to ensure smooth completion of the projects.

There are several joint research activities like Ph.D. supervision between various departments. There has been lot of synergy between some departments such as Mechanical Engineering with Chemical and Civil Engineering, Chemical Engineering and Biotechnology, Civil and Environmental Engineering, Computer Science and Mathematics, Behavioural Sciences with Management, Industrial Engineering with Management and many others. Many sponsored research projects are being guided jointly by faculty of two different departments.

MOU's with other Institutions are also operational which facilitate joint research activity. Many faculty members from different IIT's are acting as supervisors of the PhD students registered at Thapar Institute of Engineering and Technology University.

The details of such joint collaborative projects and joint PhD supervision are placed with Departmental/ School's profile submitted separately.

3.2 Details regarding major projects (**from agencies other than Thapar Institute of Engineering and Technology University**)

	Completed	Ongoing	Sanctioned	Submitted
Number	18	127	21	---
Outlay in Rs. Lakhs	241.34	2725.77	466.35	---

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	1	2	--	--
Outlay in Rs. Lakhs	1.0	5.5	--	--

3.4 Details on research publications

	International	National	Others
Peer Review Journals	460		
Non-Peer Review Journals	226		
e-Journals	All published papers are available online.		
Conference proceedings	160	57	

3.5 Details on Impact factor of publications:

Range 0-12 Average 1.7 h-index 38 Nos. in SCOPUS 460

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Projects Received
Major projects	2014-15	CSIR, DBT, DRDO, DST, UGC, etc	Rs. 465.25 lakhs	20
Minor Projects	2014-15		nil	nil
Interdisciplinary Projects	2014-15	--	--	---
Industry sponsored	2014-15	Jyoti Industries Ludhiana	1.10	1
Projects sponsored by the University/ College	2014-15	Thapar Institute of Engineering and	Rs. 49 lakhs	13

		Technology University		
Students research projects *(other than compulsory by the University)*	2014-15	---		
Any other(Specify)	2014-15	---		
Total		515.35 Lakhs		34

3.7 No. of books published i) With ISBN No. 24 Chapters in Edited Books

(3-current data)

ii) Without ISBN No. -

3.8 No. of University Departments receiving funds from

UGC-SAP 4 CAS DST-FIST 5

DPE DBT Scheme/funds 4

3.9 For colleges Autonomy CPE DBT Star Scheme

INSPIRE CE Any Other (specify)

3.10 Revenue generated through consultancy 136.58 Lakhs

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	4	2			
Sponsoring agencies	AICTE, DST, TEQIP-II, UGC				

3.12 No. of faculty served as experts, chairpersons or resource persons 59

3.13 No. of collaborations International 15 National 10 Any other 16

3.14 No. of linkages created during this year 3

3.15 Total budget for research for current year in lakhs:

From funding agency 466.35 Lakhs From Management of University/College 200 Lakhs

Total **666.09** Lakhs

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	3
	Granted	Nil
International	Applied	Nil
	Granted	Nil
Commercialised	Applied	Nil
	Granted	Nil

3.17 No. of research awards/ recognitions received by faculty and research fellows Of the institute in the year

Total	International	National	State	University	Dist	College
28	9	15	4	50	----	----

3.18 No. of faculty from the Institution who are Ph. D. Guides and students registered under them 215

684

3.19 No. of Ph.D. awarded by faculty from the Institution 53

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones):

JRF 72 SRF 10 Project Fellows 12 Any other: **TA** 81

3.21 No. of students Participated in NSS events:

University level 750 State level

National level International level

3.22 No. of students participated in NCC events: **Nil**

University level State level

National level International level

3.23 No. of Awards won in NSS**:** **Nil**

University level State level

National level International level

3.24 No. of Awards won in NCC: **Nil**

University level		State level	
National level		International level	

3.25 No. of Extension activities organized

University forum	35	College forum	---		
NCC	---	NSS	14	Any other	55

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

NATIONAL & INTERNATIONAL ACTIVITIES

I) ARANYA – THE TECHNICAL FESTIVAL OF THAPAR INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY, PATIALA, NOVEMBER 14 TO 16, 2014

ARANYA the annual technical festival of Thapar Institute of Engineering and Technology University, Patiala, was a three day long extravaganza that aimed at bringing the best talents from all over northern India to a single platform. Started in the year 2006, the golden jubilee year of the University, ARANYA has gained more and more popularity with the passage of time and has become one of the most 'looked forward to' events of the year. The ninth edition was organized from 14th – 16th November, 2014. Mr. Divya Soni, the Overall Student Coordinator of this year's edition, informed that in this year's ARANYA more than 50 technical events were organized during this year's program touching all the engineering streams, spread over three days. For the first time in the history of the technical festival a Para sports event was also organized under the guidance of Mr. Pradeep Raj. Dr. Anil Kumar Verma, was the Faculty Advisor of ARANYA 2014. A very good participation was there in all the events, wherein the students from various institutes like PEC, NIT's and some IIT's descended on campus to participate in various technical events. Students from all around the nation compete with each other to achieve excellence. This year's technical festival was a unique blend of Tech Events, Workshops, Guest Lectures, Awareness campaign (Swachh Bharat) and Sports activity. Then after full day of hard core competition the students were enthralled with techno-cultural events like 'Wheel chair dance show & Laser Show on 14th November, a live performance by Legendary Punjabi Artist GurdasMaan on the 15th of November, 2014".

The Director of Thapar Institute of Engineering and Technology University, Prof. Prakash Gopalan inaugurated the event and expressed his satisfaction in the efforts being put up by the students and faculty of the university in organizing this technical festival on Thapar Institute of Engineering and Technology University Campus. He said, "Events like ARANYA are an excellent breeding ground for young and dynamic leaders who will take the nation forward".

EVENT REPORT ON ROBOCLASH 2014:

Robotics Society organized a robotics based competition on November 10, 2014 in Aranya 14'. Brilliantly designed mobile robots competed on the arena to cross the obstacles and collect the balls to score the points. The event was time trial based. The event was a huge success. All the participants and the spectators were thrilled and enthusiastic about the event. The organizing team had put in a lot of efforts to make this event a success.

II) URJA 2015: THE INAUGURAL SPORTS FESTIVAL

URJA, the inaugural national level sports festival of Thapar Institute of Engineering and Technology University in which more than 20 institutes from all over the country participated, was held from April 14 to April 16, 2015. Organized on the theme of "Let us play for a drug-free world", the three-day event witnessed around 500 students vying for top honors across eight sporting events, including athletics, badminton, basketball, chess, football, lawn tennis, table tennis and volleyball.

Teams from Punjab Engineering College, Chandigarh; Chitkara University, Baddi and Rajpura; NIT, Kurukshetra; NIT, Jalandhar; Maharshi Dayanad University, Rohtak; JAYPEE, Solan; Maharishi Markandeshwar University, Mullana; South Point Engineering College, Sonepat; LPU, Jalandhar; BRCM, Bhiwani; NSIT, Delhi; SLIET, Longowal; ITM, Gurgaon; ACIET, Amritsar; UCOE, Patiala; and IMS, Ghaziabad were amongst the participating teams in the tournament.

RehanPoncha, an Arjuna awardee and a five-time national swimming record holder, also delivered a motivational lecture to the participants in the auditorium as a pre-build-up to the opening ceremony.

Commenting on the initiative taken by Thapar Institute of Engineering and Technology University to organise a national-level sports festival at such a large scale for the first time, Thapar Institute of Engineering and Technology University Director Prof Prakash Gopalan said, “This sports meet is part of our effort to channelize the energies of youngsters and promote excellence. The message we want to send across is that sports can go a long way in curbing the menace of drugs. Sport ensures the all-round development of students by inculcating in them values like discipline, responsibility, self-confidence and accountability.”

The closing ceremony of URJA was organized on the evening of April 20, where Arjuna awardee and Commonwealth Games gold medalist in boxing Mr. Akhil Kumar was the chief guest. The prize distribution ceremony was followed by a traditional Bhangra and Gidda performance by Thapar Institute of Engineering and Technology University students.

III) FORMULA STIET University DENT, GERMANY 2014:

In August 2014, team of 29 students led by Mohammed Zijah, from Thapar Institute of Engineering and Technology University participated in Formula Student Germany in Hockenheim, Germany. There were 74 teams participating in the event in combustion category. They secured an overall rank of 68. Ranking in each division was as follows:

Total Teams	**74**
Overall Position	**68**
Cost	70
Business Presentation	38
Engineering Design	58
Acceleration	-
Autocross	-
Endurance	-
Penalty	0
Total Points Scored	**126**

IV) SPICMACAY SOCIETY

GATKA PERFORMANCE: The 'SPICMACAY' society organized a 'GATKA' performance on 29th October 2014 in SBOP lawns. GATKA is an ancient Sikh martial Art which was developed by GURU GOBIND SINGH JI . It includes use of sword and various other Weapons for defence and attack. Aranya 2k14 played an important role in publicizing this event. A large number of students came to see this performance which made this event a huge success.

SPIC-MACAY NIGHT

"SPIC MACAY Night" was organized on 22 January, 2015 in Auditorium. It was night mainly focused on depicting and showcasing the true values and culture of our nation. There were several events including cultural dress showcase, folk dance, poetry & singing. It was a unique event in itself as in this event we tried our best to motivate our fellows to remain in touch with Indian culture. After the performances there was playing of Dhol .The audience were enchanted after dancing on Dhol-beats. All credits to hard work of SPICMACAY team, this event was a huge success

SPIC MACAY- SITAR EVE

The SPIC MACAY Sitar Eve was organized on 28 January, 2015 in Auditorium. In this event, there was a Sitar performance by Sitar Maestro Pt. Prateek Chouwdhari, a well renowned artist of our nation. Honourable Director of our University presided as Chief Guest in eve along with Dean of student Affairs and our esteemed teachers. All applauded the performance and it was also a good interactive session, which worked as icing on the cake.

V) THAPAR MOVIE CLUB

Cine Youth kick started on 27 Feb 2015 at 6 P.M in the Auditorium in presence of DOSA, Deputy Director, Dr. Manmohan Chhibber, the team members and the audience. It started with the lightning of lamp followed by speeches by Dr. Manmohan Chhibber, Dr. Maneek Kumar, DOSA, and Dr. Susheel Mittal, Deputy Director and vote of thanks by the OEC. After this, the theme for the 24 hour film project was given to the students followed by play "Armed robbery for Dummies".

The various competitions organized under the event Cine Youth included the following:

- **Photography Competition**- Photographs taken by students were posted on our Facebook page under different genres and the winner was decided based on the photography skills.
- **How It Should Have Ended?** – This competition was for the hidden directors or script writers, to add a different perspective to a particular scene of an existing movie. Entries were received in form of text paragraphs and the winner was decided based on the creativity and thinking.
- **Still Cinema**- This competition lets students create a story by showcasing series of pictures, each describing a particular scene. It was held in C-Hall and a good turnout was observed. The winner was decided based on the creativity and thinking.
- **Vines**- In this competition, the participant had to make a 10-60 seconds video to describe a situation or scene usually comic. Entries were posted online on our Facebook page and winner was decided based on popularity of the video.
- **24 Hour Film Project**- Students were given a topic after the inauguration ceremony on which they had to create a movie within 24 hours. Many enthusiastic movie makers from Thapar and from other colleges took part in this competition. The theme given to them was- 'Why so Serious?' The movies were showcased in C-Hall on final day and the winner was announced then.
- **Minimalistic Poster Design**- This competition is based on the idea that a complex concept can be explained with the help of basic shapes and designs. The competition took place in C-Hall. Participating teams were given a movie or a phrase each to make a minimalist on without the usage of internet. This tested their creative and solving skills and winner was decided on this basis only.
- **Guest Lectures:** We had Rana Ranbir, a famous Punjabi cinema artist to enlighten the crowd. A short film depicting the conditions of farmers in Punjab was showcased and discussed upon in the C-Hall in presence of DOSA on 1 March 2015. Rana Ranbir specifically emphasized upon the use of 'Mother tongue' and the advantages of reading books. It was a very informative session overall with everybody appreciating each and every word said by him.

SOCIAL ACTIVITIES

I) NATIONAL SERVICE SCHEME (NSS)

Objective: One day camp was organized to create interest among the B.E. first year students during the frosh week. Trees were planted along the road leading to hostel PG, near old polytechnic building and on the divider of the road leading to FRA & FRB. Total 85 trees were planted as per the following details.

Report On NSS One Day Camp

NSS Unit 8 & 9 organized a one day camp i.e. a Quiz Competition to celebrate 68th Independence Day "Bharat koJano" on 13th August, 2014 at 5:00 pm in Auditorium. The Quiz was based on our India's Rich Culture and History and was conducted in mother tongue HINDI. Even the quiz paper was typed in Hindi with different sets. The total numbers of participants were around 140 (70 teams in total). The team comprises of two members. There were 20 girls and 120 were boys. Exciting prizes and certificates were given to first ten teams. First year students also participated in quiz competition. Pictures of the event are attached.

i) Mega Blood Donation Camp at Thapar Institute of Engineering and Technology University, 235 units of blood donors donated blood.
Patiala, Punjab 28th August, 2014

Thapar Institute of Engineering and Technology University, organized a mega blood donation camp in its campus under the banner of National Service Scheme. A team of highly qualified doctors from Rajindra Hospital observed and conducted the proceedings of the camp. The camp was partially supported by State Bank of Patiala. Dr. Prakash Gopalan, Honorable director, Thapar Institute of Engineering and Technology University alongwith Dr. Ashwini Sharma, Ex-Professor, Thapar Institute of Engineering and Technology University jointly inaugurated the event. Dr. Seema Bawa (Dean, Student Affairs), Dr. R. S. Kaler (Dean RPG), Dr. Ravinder Agarwal (Head EIED), Mr. Parag Nijhawan (Program Coordinator, NSS), Mr. Karun Verma (Program Officer, NSS), Mr. Souvik Ganguli (Program Officer, NSS)and Mr. Sanjay Dhull (Manager, SBoP, TIET Branch) were present on the occasion. 235donors donated the blood in support of noble cause in the camp.

The enthusiastic volunteers of the unit did a commendable job of planting 50 plus fruit trees inside the campus on the first day. The fruit trees of Mango & Bel were planted on the first day. Faculty

members, namely, Prof. Girish Jaswal, Prof. PiyushVerma, Prof. Karminder Singh, Prof. Harjot Singh, Prof. RudraRameshwar, Prof. VipulGupta, Prof. Gurparkash Singh, Prof. Gaurav Goyal, Mr. Ripneet Singh and Mr. Chopra planted the first trees.

The best way to find yourself is to lose yourself in the service of others" –Mahatma Gandhi

When we start caring about people around, we start sharing love and emotions. When, we start sharing, we extend a helping hand and grow together to make a strong nation. In this process, somewhere we find our self, the true meaning of our existence comes in front of us. At the end of life we will not be judged by how many diplomas we have received how much money we have made, how many great things we have done. We will be judged by "I was hungry, and you gave me something to eat, I was naked and you clothed me. I was homeless, and you took me in". With this spirit of serving and sharing, the unit proceeded with its mission to serve the residents of Behra village. Around 35-40 residents were served with winter caps, clothes and eatables with love and affection by the volunteers.

i) Day 5, September 12:Visit to cottages in Behra Village

The volunteers proceeded to serve the residents of Behra village. They distributed winter caps, clothes, shoes, food and sweets to the needy to two places in the village, one with 20-25 odd residents and the 0ther with around 35-40 odd residents. The volunteers felt that it made us realize how important it is to extend a helping hand to people to make them realize their true potential and hence uncover the true potential of India.

ii) Day 6, September 13:Visit to Classes I, II and III of Government Elementary School, Village Behra

The volunteers distributed mugs, plates, eatables, winter caps, notebooks and stationary to the little children and made them aware of the good habits and importance of cleanliness.

iii) Day 7, September 14:Visit to Classes IV and V of Government Elementary School, Village Behra

The soul is healed by being with children.

The volunteers were delighted to meet 105 students of classes IV and V of the Government Elementary school at Behra village. They distributed umbrellas, plates, winter caps, notebooks, pencils, scales and other stationary items along with biscuits, cakes and chocolates to them.

1. Child Labour and Child Abuse 14th November, 2014 7AM onwards. (Approx. 150 Volunteers participated in this event)

This Children's Day was special. It was the 125th birth anniversary of our beloved Prime Minister Pandit Jawaharlal Nehru. And to make it more special NSS Unit of Thapar Institute of Engineering and Technology University decided to celebrate it with tiny tots and future of our new India. Around 30 unit members visited Government Elementary School, Derabassi to meet students of class 1,2,3,4

and 5. Unit distributed sweets, snacks, stationeries to the young kids present there and also spread the message of love, cleanliness and joy to everyone out there.

2. Blood Donation Camp Report

Inauguration ceremony was organized on 5 the December 2014 at 10.00 a.m. in the Auditorium of Thapar Institute of Engineering and Technology University, Patiala. Dr. Ravinder Aggarwal, Head Electrical & Instrumentation Engineering Department inaugurated the camp in the presence of Mr. Pawan Sharma Branch Operation Manager, HDFC Bank and the NSS Coordinators Mr. SouvikGanguly and Dr. DwarikaNathRatha and the volunteers. Total No. donors were 102 out of which 97 are the male donor and 5 are the female donor. More them 50 volunteers helped in organized this blood donation camp.

iv) Review of NSS Events

MEDICAL CAMP:

Organized by NSS , Date: 18/02/2015, Venue: E BLOCK Timings: 4:30 pm to 7:00 pm

Significance: This camp was organized with the help of A.P healthcare and trauma centre, Patiala. A team of doctors and nurses visited our campus and performed medical checkups and distributed medicines to patients. This camp was organized on the occasion as part of celebration of NSS week.

The Motive and Activities: This camp was having motive to provide medical assistance to medical concern to the needy. A team of doctors having specialization in ENT and medicine conducted the camp. They examined the patients and provided medicines to needy people free of cost.

Response: About 100 persons were registered for the camp including staff, faculty and students.

Date: 19/02/2015

The Motive and Activities: This camp was having motive to provide medical assistance to medical concern to the needy. A team of doctors having specialization in orthopedics and physiotherapy conducted the camp. They examined the patients and provided medicines to needy people free of cost.

Response: About 70 persons were registered for the camp including staff, faculty and students.

EYE CHECKUP CAMP : Organized by NSS, Date: 20/02/2015, Venue: AUDI HALL, Timings: 9:00 am to 1:00 pm

Significance: This camp was organized with the help of Patiala based eye hospital "KAKKAR EYE HOSPITAL AND LASIK LASER CENTRE, ITO ROAD, PATIALA". A team of doctors and nurses visited our campus conducted free eye checkups and recommended medicines to visitors.

The Motive and Activities: This camp was conducted to provide free eye checkup and medical advice to the needy and make them aware of protection of eyes from day to day allergies.

Response: The beneficiaries include faculty, staff and students.

Workshop on Disaster Management: Organized by NSS, Date: 21/02/2015

Awareness on drug de-addiction: Organized by NSS, Date: 22/02/2015

Swachh Bharat Abhiyan: Organized by NSS, Date: 23/02/2015

Blood donation camp: Organized by NSS, Date: 24/02/2015

173 units of blood were collected. Ms. Perneet Kaur was chief Guest to motivate the donors.

NSS SEVEN DAYS CAMP :

NSS Units of Thapar Institute of Engineering and Technology University organized a seven days camp from 06-Apr-2015 to 12-Apr-2015. The major agenda of this camp was social awareness about environment, health, cleanliness, education to underprivileged and tree plantation.

Day 1 (6th Apr, 2015)

On day 1 of the NSS Seven Days Camp, an Eye Check-up and Dental checkup was organized where free eye and dental check-up was done for all students, workers, staff, faculty members and their families. The camp was organized in the university premises in the C-Hall from 9AM – 3:00PM. Dr. Maneek Kumar (DoSA) along with Mr. Parag Nijhawan (Program Coordinator NSS) inaugurated the event. A team of doctors from Global Eye Hospital, Patiala and Dr. Shivani from Dental clinic were invited for the cause.150 registrations were made for the eye and dental check-up.

Day 2 (7th Apr, 2015)

On day 2 a play on drugs awareness "KOI DEYO JAWAAB" was organized in auditorium on 7th Apr, 2015. This play was staged by Kala Kriti Patiala. The agenda behind this play was to make youth aware about the after effects of drugs. Dr. Susheel Mittal, Deputy Director Thapar Institute of Engineering and Technology University along with other faculty members was present in this event.

Day 3 (8th April, 2015)

A blood donation camp was organized by NSS, Thapar Institute of Engineering and Technology University Patiala on Apr 08, 2015 in auditorium. The camp was inaugurated by Dr. Prakash Gopalan, Director, Thapar Institute of Engineering and Technology University Patiala. The team of doctors and assistants headed by Dr. Sukhwinder Singh had come from Rajindra Hospital Blood Bank. They guided the volunteers and donors about the prerequisites and procedure. The students, staff and faculty members were there among donors. Both male and female students had participated in the event with a very high motivation. A total of 111 units of blood were collected. Refreshment was distributed to the donors. Certificates of appreciation were also given to the donors.

Day 4 (9th April 2015)

NSS team got a privilege to visit Mata Khevi Orphanage and Old Age Home near Patiala on 09 th April, 2015. The visit was planned to share some happiness and joy and spend quality time with all the children and elders. Some performances were presented by the volunteers along with the senior citizens. Their smile, blessings and spirit of living was a great motivation for all the volunteers.

Day 5 (10th April, 2015)

On day five of the NSS Seven Days Camp, the volunteers organized a drawing, singing and poem recitation competition for the children of various age groups belonging to the workers of different hostels of the

university. Around 65 children took part in this competition. The major aim to organize this event was to provide a platform to the children of the workers and to motivate them for their precious and hidden talent. The event started with introduction of all the children. It was followed by the singing and poem recitation competition. The volunteers then distributed drawing sheets, pencils, erasers, colors, etc. to all the participants. Refreshments were served to all the children after the competition. Various prizes were also distributed among the winners of both the competitions. The success of the event was defined by the smile on the face of every child.

Day 6 and 7(11th and 12th April 2015)

NSS Student volunteers were involved in major cleanliness drive organized in collaboration with Paryavaran Society on 11th and 12th April 2015. Cleanliness, painting and beautification of roundabout was done at Cafe Coffee Day circle, Bhupindra road, Patiala. On this occasion Ms. Sanmeet Kaur (NSS Program Officer Unit XI, Thapar Institute of Engineering and Technology University), volunteers from Paryavaran society and student volunteers of NSS unit XI were present. A tree plantation campaign was also conducted on Nabha Road Patiala. Around 50 saplings were planted on the roadside.

The camp ended with a great satisfaction on volunteers' faces. They organized and took part in every event with a great zeal and enthusiasm. Every event was planned for some social cause and was a great success.


Camp
UE-AUDI
TIME-9
3:00PM

II) PARYAVARAN WELFARE SOCIETY:

Tree Plantation Drives: Rapid constructions and mushrooming of housing colonies have led to the depletion of green cover in many parts of our country. The importance of trees in purifying the air, reducing global warming, preventing soil erosion, conservation of water, maintaining the ecological balance, providing natural resources as medicines, habitats for faunal species, providing nutrients to the soil etc. is well known. Unfortunately, the overall green cover, not just in Patiala but in other parts of the country is also reducing and as a consequence of this, pollution is increasing at an alarming rate. Increasing the green cover by tree plantation is one of the easiest yet effective measures towards reducing this imbalance.

During the July to September 2014, PWS carried out tree plantation drives at different locations **within Thapar Institute of Engineering and Technology University and** nearby areas of district Patiala like **Central divider Sirhind road**, **Central divider Rajpura road** and **Power house colony**.

So if you want to save our mother earth from further destruction please do contribute because your little contribution is the only thing that is needed for the big cause of conservation.

III) <u>YOUTH UNITED:</u>

YU Public Health Mission (PHM) aims to aware the underprivileged population about various issues concerning health and eventually providing them with solutions to health related problems through self-initiated camps, drives, dispensaries and hospitals.

In one such initiative taken by the Youth United Society, on 11th October 2014, under the "DaanUtsav" they organized a one day free medical camp at Pingalwada Ashram near Aggarsain Hospital, Rajpura Road, Patiala for mentally and physically challenged people and children and also for the old age. The health camp was organized with the objective of providing free medical examination and check-up. Nearly 60 inmates of the Pingalwada attended the camp.

A team of renowned Sadbhavna Hospital under the guidance of Dr. Gurmeet conducted this health camp providing free medications for the sufferings. The checkup team included physician and medicine doctors', and was accompanied by Youth United team and also the caretakers of Pingalwada, who provided the detailed information of each member. The children and the other members too were very enthusiastic and attentive which further lead the doctors to concluding that more camps like this will be taken up in the nearby future.

Refreshments mainly oranges, apples, bananas, healthy and seasonal fruits were distributed to the inmates and also to the caretakers of Pingalwada Ashram as well as the doctors' team. Later on Medicines were distributed. The list of medicines was taken from the hospital team earlier, which helped, in the smooth procedure of distribution of medicines prescribed by the doctor.

Members of Youth United told the inmates the necessity of cleanliness and made them aware about common health problems and their prevention.

Expanding the horizon outside Thapar Institute of Engineering and Technology University was a great start and great experience for YU members. The event was a huge success. The authorities of Pingalwara Ashram as well as the doctors were happy with the initiative of Youth United. No. of members visited: 20

IV) 5TH NATIONAL ORGANIC FARMING CONVENTION, NITTTR, SECTOR 26, CHANDIGARH:

The 5th National Organic farming convention was held at NITTTR, Sector-26, Chandigarh on 28thFebruary and 1st and 2nd of March, 2015. The event was organized by NITTTR and several NGO's such as OFAI, ASHA and KVM. Haryana CM, Mr. Manohar Lal inaugurated the convention and released a book on organic farming. A team of 14 students along with the faculty Dr. Mandeep Singh from Thapar Institute of Engineering and Technology University participated in the convention.

The convention included multiple sessions that were aimed for the betterment in the area of farming and environment. Six different sessions were held at different venues simultaneously on 28th of February and 1st of March. Our team of 14 students under Dr. Mandeep Singh actively participated in the session-"GMO CROPS". The students confronted their opposition to the genetic modification in our food. They also stood firmly against the GMO field trials stating them as a threat to safety of the food chain.

A conference on "MAINSTREAMING AGRO-ECOLOGY" was also organized by Society for Agro Ecology, India on 1st and 2nd March,2015 The conference was mainly lead by group of scientists and professionals to elaborate the restoration of the agrarian landscape and a sustainably prosperous rural local economy. Various articles on crop system and physiology, ecological economics of agriculture, food system, S and T policy related to agriculture, soil biology in agro-ecosystems, ecosystem service

provisions, organic/integrated farming system and nutrition, hunger and agro-ecosystems, socio-economic impacts were presented.

Haryana governor Prof KAPTAN SINGH SOLANI was invited as the chief guest in the event. The governor directed the farmers to go for eco-friendly farming techniques. He also instructed that no one is authorized to adulterate our natural resources and no compromises with the practices that lead to degradation in human health shall be tolerated. He warned the policy makers of agricultural universities not to promote unhealthy fertilizers and pesticides, failing which their authentication will be terminated.

The convention was an amalgam of various cultures of India as 27 states marked their participation. Farmers from various parts of the country came to bring upon a change in the society of agriculture. The students interaction with various famous personalities like Mr.NandanSaxena(National Film award winner), Dr. Devinder Sharma (food and trade policy analyst), Dr. G V Ramanjaneyulu (Executive Director, CSA), Ms. KavitaKuruganti (social activist), Dr. Raj Rup Fuliya(additional Chief Secretary(IAS Retd.), Govt of Haryana), Mr. Prakash Singh Raghuvanshi(Indian farmers, distributes organic seeds for free), Dr. Debal Deb (rice conservationist,ecologist, founder of BASUDHA farm), MR. UmendraDutt (Executive Director, KhetiVirasat Mission), Mr. GurpreetDabrikhana(photojournalist and activist who covered the Punjab story in satyamevjayate) and many more, was truly productive. The team was motivated upon meeting the dedicated reformers and also volunteered in conducting various sessions with them.

The visit to this convention was undoubtedly successful. We would like to thank Dr. Mandeep Singh, President, Spiritual Scientist Alliance for giving us an opportunity to be a part of such a remarkable event, for being the pillar of constant motivation amongst us and guiding us step by step towards optimism.

V) PRATIGYA SOCIETY:

Pratigya is a movement started in 2005, aiming for all round development of underprivileged children. It is a team of students that basically teaches underprivileged kids from classes' 1st to 12th and diploma students. Pratigya team nourishes the children of 4th class staff of TIET University , the construction site labourers and students from nearby colonies. Pratigya not only lays stress on teaching but also on extra-curricular activities like drawing competition, Rangoli making, kite flying, sports day etc.

The volunteers are the students of Thapar Institute of Engineering and Technology University from B.E. all years as well as MSc, M. Tech and MBA. Proper timetable is maintained for the process and regular attendance is taken and tests are conducted. Our faculty advisors viz. Dr. AnoopVerma, Dr. Prateek Bhatia and Dr. SeemaBawa supervise all process and workings of the society.

Regular classes: Giving education is our top priority and we try our best to help kids of Pratigya society in every way possible. Regular classes are held in B-Block (ground floor) from Monday to Friday at 5:00pm. On an average 100 kids from various backgrounds come to us for studying and we try our best to provide as much knowledge to them as possible.

New Concepts Introduced:

Extra English workout:

After classes some work material, like comprehensions, word meanings, phrases, etc... are given to students in order to enhance their skills in English language.

Point system:

On basis of students attendance, performance in tests and participation in extracurricular activities, certain points are given to students . According to their performance in class and points, students are given prizes which not only adds to their motivation but also helps in boosting their confidence significantly.

TECHNICAL ACTIVITIES

I) OWASP:

13th October, 2014, we started off with events for the semester. Dr. Maninder Singh, Associate Professor, CSED, Thapar Institute of Engineering and Technology University, was invited to give a seminar on Information Security. Dr. Maninder Singh talked about the threats that we face in our day-to-day lives, the bigger picture of computer security and how a common person can keep himself secure in the age on internet. 14th October, 2014 had Dr. SastryTumuluri, IT Advisor and CISO, Government of Haryana on campus, who talked about web applications and its security. The seminar was made compulsory for 2nd and 3rd year B.E. Computer Engineering.

The finals of .ex were organized on 5th Nov' 14, online at www.owasptsc.in. Mr. NamardeepSood, Mr. ArushNagpal and Mr. Gaurav Maadan secured the first position. 5th Nov' 14, we also invited, Ms. Tarunpreet Bhatia, Lecturer, CSED, Thapar Institute of Engineering and Technology University, to present a seminar on Secure Coding. Briefly the seminar was about security awareness and ways to overcome security vulnerabilities that can be found in algorithms coded in C/C++. A memento was presented to Ms. Tarunpreet Bhatia by Dr. Maninder Singh, President, OWASPThapar Student Chapter. 6th Nov' 14, we invited, Mrs. Karamjit Kaur, Lecturer, CSED, Thapar Institute of Engineering and Technology University and Ms. Maggi Bansal, Lecturer, CSED, Thapar Institute of Engineering and Technology University to conduct a workshop on Python language. The basics of python were covered in this 6hr long workshop. Certificates were awarded to all the participants of the workshop.

SecurA with collaboration of Linux User Group, Thapar Institute of Engineering and Technology University also organized TIET University CTF, a computer hacking event where the participant had to

find flaws in the computer code, exploit the flaws and obtain a flag. Mr. RajatSharda won this event. A power band was given away as the first prize and a pen drive for the runner up.

II) MOCK PLACEMENT BY SAIC:

Student Alumni Interaction Cell (SAIC),Thapar Institute of Engineering and Technology University came up with an idea which benefitted every student of 3rd n 4th year, MOCK PLACEMENT. As the name suggests, Mock Placement was a simulation of the actual Placement scenario with a series of written test followed by GD's and finally the Interview. This event would not have been possible without the support & guidance of Mr. H. S. Bawa (Placement Head) judging the GD rounds. This event was collaborated with Bulls Eye who provided the students with questionnaire. Question paper included aptitude related questions as well as technical questions (branch specific).

The event started just like the actual placement procedure. Dr. Maneek Kumar (DOSA) addressed the students with the presentation of the recruiting company,Illudentes Inc. Along with that an interactive talk on how to Crack the Placement process, regarding every aspect of written tests, group discussions, personal interviews; and the useful tips and techniques from a highly experienced Alumni member currently working in Bullseye was also given.


THAPAR UNIVERSITY ALUMNI ASSOCIATION BUILDING MEMORIES
ENGINEERS, STUDENTS, EDUCATIONISTS, INDUSTRIALISTS
DIRECTOR
DR. PRAKASH GOPALAN
GEN. SECRETARY
ER. HENNA SINGAL
CHECKER
PRESIDENT
ER. RAJEEV SHARDA
A.R.O.
DR. MANEEK KUMAR

III) INSTITUTION OF ENGINEERS (INDIA):

5 events were held during the session in 2014 (August-October) by the student's chapter of Institution of Engineers (India).The list of which is as given below:

1) Participation in Frosh Week

2) Recruitment

3) NAT

4) SHAASTRA 2k14 Plc scada workshop

5) Soldering Workshop

FROSH WEEK

The Institution of Engineers (India) Thapar Chapter held on 19th August 2014 a stall at the society fair under the Frosh week event, which aimed at introducing the newly admitted students to all the societies in the Institution.

The IEI society displayed its projects initiated by IEI members at the stall and explained their working to the students. Members of the team guided the Students about the functioning of the society and various events, which the society organizes.

Student showed a keen interest in joining the IEI society. We received more than 300 entries of the students on the same day willing to join the society.

RECRUITMENT

The students who filled the recruitment form to enter the Institution Of Engineers (India) Thapar Chapter were divided in four different sections based on their areas of interest namely Technical, Event management, publicity and designing.

Interviews were taken at the E Block for the respective departments. Students participated enthusiastically and a few out of many were selected after the interview. The selection criteria for Technical went further ahead, students selected after interview were asked to clear a test to enter the technical department of the society.

NAT

The Institution of Engineers (India), Thapar Chapter conducted an aptitude test on 27th August 2014, which was open for all streams and all years. The test aimed at testing the general aptitude of the participants.

Students were required to team up in pairs for the quiz. They participated in it enthusiastically and we received more than 350 entries. Participants appreciated the test and made this event a huge success. Our society president Dr. Gagandeep Kaur motivated the students with few words at the end of the event.

Results were declared within two working days, it was a close call but we had clear winners. The top two teams were awarded with the certificate of winning and the prizes by the President of our society, Dr. Gagandeep Kaur.

SHAASTRA 2k14 PLC SCADA WORKSHOP

The Institution of Engineers (India), Thapar Chapter organized a 2-day workshop on PLC and SCADA in collaboration with the IIT MADRAS SHAASTRA 2015 at the C hall on 11-12 October 2014. Technical experts from INNOVIAN TECHNOLOGIES carried out the 2 days, 16 hours event.

Software was provided to the participating students. A small competition was held and 2 teams were selected for the next round to be held at IIT MADRAS. Our respected Dean of student's affairs Dr. Maneek Kumar presented a token of gratification to the guests.

Each participant was given a certificate of merit. This event, which was held in the convention hall, ended with a vote of thanks and encouraging words by the dean of student affairs and our society president Dr. Gagandeep Kaur.


SOLDERING WORKSHOP

The Institution of Engineers (India), Thapar Chapter organized a soldering workshop for society members on 13th, 14th& 16th October 2014 from 5pm to 7pm. This was our first step towards making our own robots.

Soldering was taught on a general-purpose pointed circuit board (PCB). Members arranged materials and various components required along with the soldering iron and members were taught basic soldering techniques by their seniors. All the circuit diagrams of circuit to be designated were shown to everybody. A good discussion was held about all the ins and outs of those circuits. Minute details of soldering and disordering were discussed and question related to soldering were discussed.

The students faced lots of difficulties but as the time passed by they looked comfortable with it. So we ended the workshop on a positive note. The 3-day workshop was held in F-block in Room no. F-106 of the academic building. The workshop was interactive and very useful for first year and second year students (members).

Technotron 1.0 Date: 2nd -10th Feb We, the members of Institution of Engineers (India), Thapar Chapter organized a fest Technotron consisting of various formal and informal events.

Natural Aptitude Test (NAT) Date: 4th February, 2015. Venue: C Hall We, the members of Institution of Engineers (India), Thapar Chapter conducted NAT, a quiz based on general reasoning and ability questions on 4th February 2015 for the students of all branches. The Quiz was conducted with an intention to acknowledge the students the level of their aptitude by competing with other Thaparians. The students were excited to participate as they got the platform to assess their aptitude level acquired till date. A total of 60 teams (each consisting of two students) registered for the Quiz competition. The time limit for the quiz was of 30 minutes. The winners were awarded with prizes in order to encourage them to participate in many such events coming up in future and show their maximum participation.

SOLDERING WORKSHOP Date: 4th -5th Feb Venue: E101 A workshop was conducted by Institution of Engineers (India) Thapar Institute of Engineering and Technology University Chapter from 4th -5th February, 2015) in Thapar Institute of Engineering and Technology University. Soldering was taught on a general purpose printed circuit board (PCB). All the circuit diagrams of circuit to be designated were shown to everybody. Soldering roots, PCB's, soldering wire and all the required components were given to each of them. All the teams were made to practice soldering on their reflective PCB's. On the 2nd day of our workshop, soldering was the main motto of the day. A dedicated three hour session was put forward in soldering. A DTMP circuit diagram was shown to all and was asked to implement that on PCB through soldering technique they learned and acquired on the day.

Guest lecture on career development and placement Date : 5th feb Venue : C Hall We, the members of Institution of Engineers (India), Thapar Chapter conducted a guest lecture on 5th february,2015. Mr. Sanmeet Sandhu, a corporate counsellor who is presently working with Bull's Eye was invited and he taught students a lot about how to make a good Resume and present themselves during placements and interviews. Around 100 students participated in the guest lecture and got to learn a lot. Students liked the lecture a lot and wanted more lectures of this type in future. A Memento was given away by Dr. Gagandeep Kaur, the President of the society to the guest

Workshop on C programming Date : 5th -6 thfeb Venue : E102 A workshop was conducted by Institution Of Engineers (India) Thapar Institute of Engineering and Technology University Chapter from 5th and 6th February, 2015) in Thapar Institute of Engineering and Technology University. Workshop was delivered by Mr.Aneesh Garg from HCL technologies. Around 50 students participated in the workshop. Dr.Gagandeep Kaur, President of IEI society honored the guest.

Workshop on Matlab Date: 7th – 8th February, 2015.Venue: TAN Auditorium A workshop was conducted on MATLAB by Institution Of Engineers (India) Thapar Institute of Engineering and Technology University Chapter from 7th and 8th February, 2015) in Thapar Institute of Engineering and Technology University's tan audi in association with TRYST-2015 (IIT Delhi). The sessions of 6-7 hours in two days were conducted to enhance image processing. The students were taught about NUMERICAL

Technotrivia Date: 9th February, 2015. Venue: C Hall We, the members of Institution Of Engineers (India), Thapar Chapter conducted NAT, a technical quiz based on electrical and electronic subjects on 9 th February 2015 for the students of EIC, ECE and ELE. The Quiz was conducted with an intention to judge and enhance the understanding level of concepts. The students were excited to participate as they got the platform to assess their knowledge level acquired till date. A total of 40 teams (each consisting of two students) registered for the Quiz competition. The time limit for the quiz was of 30 minutes. The winners were awarded with prizes in order to encourage them to participate in many such events coming up in future and show their maximum participation.

IV) CREATIVE COMPUTING SOCIETY:

The Creative Computing Society, one of the most active & elite societies of Thapar Institute of Engineering and Technology University aims to garner creativity and talent & propagate awareness regarding various tech-related knowledge throughout the ingenious minds of Thapar and beyond. Creative Computing Society helped students in realizing their potential by providing them a platform where they could show their skills and also a platform for learning and increasing their technical skills.

Web Development: Your task is to create a website that showcases our festivals and culture in their true sense. ./a.out(knight coders): Knight Coders is one of the biggest programming contests held in the college. With a right mix of math, algorithms, data structures and programming, this contest has something to offer for everyone. If you love coding, then this is the right place to be.

V) ASHRAE SOCIETY

ASHRAE TIET University Student Chapter organised an audio-visual quiz with an objective of enhancing technical skills of students. It was conducted in the college campus itself on 15th October, 2014 with 60 registered participants. These 60 participants were in groups of two.

Quiz consisted of a screening round, picture round, video round and finally the rapid fire round. Screening round was of written objective type with 14 questions to be answered in 10 minutes. After calculating the

scores of this round only the highest scoring 4teams qualified for next rounds. In picture round, teams were asked 8 questions and time given to answer each question was 20seconds.In video round, a video was shown to each team and 4questions were asked related to that video which were to be answered in 30 seconds each. In rapid fire round, 6 questions were asked and10 seconds were given to each team to answer a question.

The participants enjoyed the quiz and had a good experience.

The winning team was of Varun Bansal and Vinay Mohinder Singh. They won a cash prize of one thousand six hundred rupees.

VI) SOMIE SOCIETY

1. Event during Froshweek

An event was held during froshweek for the first year students on 31 July 2014 (from 5.00 p.m. to 5.30 p.m.) in the university auditorium. An introduction to SOMIE was given to the students, with the help of an audio-visual quiz and videos about engineering were also shown to motivate the students about the engineering career.

2. SOMIE in Society Fair 2014

The event was a promotional event of society SOMIE for the newly admitted batch (2014-2018) where every minute detail about the society was presented to all the enthusiastic freshers. Every detail of the events organized or to be organized were introduced to the students.

Next a VISUAL LOGO QUIZ was organized in an interesting and innovative manner. Logos of different automobile brands and some vehicles were stuck on the dart board. Participants were to hit the logo with the dart. If they were successful in guessing the logo correctly, they were awarded with chocolates. There was a huge rush at the SOMIE counter. Students were enthusiastic about joining SOMIE. Around 200 students registered for the society's future events.

Hon'ble Director of the University, Dr. P.Gopalan and former Dean of Student Affairs Dr. SeemaBawa also visited the SOMIE stall. The hard work of the students and active participation in the events was appreciated and they were motivated to carry on and come up with more such interactive sessions in the future.

3. Guest Lecture

An invited expert lecture was organized by SOMIE on 1 Oct., 2014 at 10:00 am in the Mechanical Engineering Department Seminar Room. Dr. I.V. Singh, Associate Professor, IIT, Roorkee talked to the students of M.E. CAD/CAM Engineering and enlightened them in the area of XFEM and Meshfree FEM.

VII) ROBOTICS SOCIETY

Robotics society successfully organized the ROBO-WEEK in the month of February 2015. This event was specially organized to motivate students about robotics and to take their doubts in various aspects of robotics. More than 60 students from various disciplines had participated.

Our experienced faculty members delivered expert lectures providing interactive sessions to gain more out of the topics discussed. Mr. AnkushKansal, Assistant professor, Department of Electronics &Communication Engineering, talked about advances in electronics systems that are used in modern electronics applications on 02/02.2015. Dr. Ashish Singla, Assistant professor, Department of Mechanical Engineering, who is also an expert in field of robotics enlighten the students by this expert talk about advanced robotics application and control on 03/02/2015. Mr. R. K. Duvedi, Assistant professor, Department of Mechanical Engineering, touched the mechanical aspect of robotics design and application in his expert talk which has given students a broad idea of different mechanical configurations of robots and their design considerations on 04/02/2015.Another expert lecture was given by Dr. M. D. Singh, Assistant professor, Department of Electrical & Instrumentation Engineering, on 5/02/2015. He addressed the students on advanced robotics control.

VIII) ECON CLUB ORGANIZES THE LOGO HUNT

Thapar Institute of Engineering and Technology University: The University's Econ Club recently organized a Logo Hunt for the students in which 200 logos were placed all around the campus creating a great zeal and enthusiasm in the 160 participants that took part in the hunt.

The event was a big success and a large number of students showed a keen interest to take part in it to make themselves aware of the newest logos in use. The Logo Hunt provided a fun learning experience to those who participated in the hunt.

The Econ Club Team gave their whole support and managed the event very smoothly. A lot more is under the hood to come under the club's banner.


EVENT REPORT- SOCIETY FAIR

Thapar Institute of Engineering and Technology University has been famous for its intensive culture of co-curricular activities and academic focus beyond the syllabus, all of which is carried out with the existence and functioning of the societies assigned for various fields in regards to the same. The seniors pass on the baton for functioning of the same to their juniors towards their passing year and thus this has become an innate part of the university's culture.

With the arrival of the fresh breed of Thaparians, introducing them to the concept of societies is very necessary. For this purpose a society fare is organized every year, wherein the fresher's choose to join societies on the basis of their interests and talents, carrying forward the tradition of talent appreciation in the university.

Thapar Institute of Engineering and Technology University had its society fare for the batch of 2014-18 held on August 19th 2014 in the SBOP lawns. There were several societies managing their stalls, promoting themselves and registering students.

The Econ Club like every other society made the best effort to promote itself and be able to recruit a smart set of people for better functioning of the club in the future. Every student that came to the stall was properly explained the importance of having knowledge of finance and economics apart from their technical curriculum. The econ club team members worked really hard to explain the needful to the students and make them realize how important it is for them, the result of which was an overwhelming response at the stall.

Overwhelming response at the stall: The club members even went a step ahead of the others by conducting a basic economics quiz for the whole crowd present there, the results of which were evident of the lack of economics based knowledge in today's techies, which is inevitable for monetary and professional aspects. The club talked about its past events and future strategies with the prospective recruits. The event concluded with an overwhelming response to the econ club society.

IX) <u>AIESEC SOCIETY</u>

GLOBAL VILLAGE 2k14 Organised By AIESEC in Thapar Institute of Engineering and Technology University AIESEC: AIESEC is an international, non-political, independent, not-for profit organization run by students and recent graduates of institutions of higher education. AIESEC has, each year since 1948, worked to fulfill the mission of developing young people to meet the challenges of the world, our countries and local communities. By empowering them with the necessary skills and understanding of the forces shaping the world around them, we create a powerful group of future leaders with a strong sense of social

responsibility and a desire to act. Our vision for the organization when we started off was "Peace and Fulfilment of Humankind's Potential" and it still remains the same. About Global Village: Global Village is an event showcased by AIESEC where interns from different countries across the globe come together to exchange cultures and traditions with the people. AIESEC aims at facilitating global experience as a vision to promote oneness among each and every individual in the world. This is done by exchange programs across different countries. The international experience as well as the cultures and traditions of countries are brought together at one place through the event, Global Village. The main purpose of the event is sensitizing the people towards other cultures and traditions and providing them an insight about a country's profile through realities usually not mentioned in books. 23rd August, 2014 at Playways School: Global Village was conducted by AIESEC in Playways Senior Secondary School, Patiala. The students and a total of 35 inters from various countries together put up country specific exquisites and souvenirs on display for all the spectators. The school children could instantly relate to the countries culture as taught to them in the curriculum. The event was graced by the benign presence of various Ministers of Punjab and other Corporates. With a footfall of more than 2000 people, the event was a huge success. The day-long fun activities, a grandiose exhibition of diversity, music and dance added colours to the entire event. 26th August, 2014 at Thapar Institute of Engineering and Technology University: Global Village was conducted by AIESEC in Thapar Institute of Engineering and Technology University for the third consecutive time in the University Campus itself. Around 1500 people attended the event in University where 10 interns from 7 countries showcased cultures of their respective counties. From food to art, tradition to currency, music to dance, the lifestyle was discussed by the interns with the spectators. Also the people shared similar traditions in India as well as Punjab with the interns. The event was also marked with a thrilling drum performance by one of the interns and yet another mesmerized the audience with a melodious song in her language

CULTIET University RAL AND LITERARY ACTIVITIES

I) FROSH WEEK 2014 – A WELCOME START FOR FRESHERS' BATCH AT THAPAR INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY, PATIALA:

Thapar Institute of Engineering and Technology University, 26th August 2014 – Frosh Week is the time at the beginning of the academic year during which a variety of events are held to orient and welcome new students. This fiesta is an opportunity for the freshers to find their bearings in a new environment, while being introduced to the nurturing traditions and culture of the campus. Setting up a second home away from their parents can be a daunting experience but Frosh Week will ensure that this process is as comfortable as possible.

Proem 2014, preceded frosh Week and was organized on similar lines. Proem was organized from July 28 to August 1, 2014. It had lectures by eminent teachers and professionals on topics ranging from 'Art of Communication' to 'Enjoy life: It is an adventure". There were yoga sessions for the students in the morning and throughout the day various workshops on painting, theatres, debating etc. were organized for the first year entrants. The Proem ended with a cultural program compiled by the first year students on August 1, 2014. Frosh Week started off with Society Fair on 19th August: A platform for all societies in the University to showcase their achievements and attract students. This was the third society fair to be organised since the start of Frosh Week concept.

A session from Spiritual Scientist Alliance was organised on 20th August at TAN Auditorium. The interactive session based on Better Living was conducted by Dr. Mandeep Singh. This was followed by Run for A Cause on 21st August, 2014, where students were given inspirational talk by Dr. Maneek Kumar,

about a prevailing social issue Drug Abuse. Then the students then took part in the subsequent intra university marathon, which started off from the Directorate and ended at Hostel H. In the evening, students were also given a chance to showcase their creativity in the form of a graffiti based on social and environmental issues like global warming, child labour, drug abuse etc in the event Paint for A Cause.

Events planned for 22nd August were Reverse Engineering, a fun based interactive quiz which will be technology oriented along with basic engineering oriented followed by a Karaoke Eve where the freshers sang their hearts out without any fear.

Frosh Week society organised a Patiala city tour on Saturday, 23rd August where freshers were taken to various memorable locations in the city so as to familiarise them to their new home. The tour included locations such as DukhNivaran Sahib, Sheesh Mehal, NIS Patiala, Baradari gardens and so on.

Sunday, 24th August was also fun filled day for the freshers. An interactive session by Frosh Week team followed by a session by Counsellor ParokshSujayji and an award ceremony for all the winners of previously organised Sports mania, Run for A Cause, Paint for a Cause and Scavenger Hunt. The day was brought to a close by organizing a Movie Eve, where a movie selected by freshers themselves was showcased.

Frosh Week 2014 completed on Monday, 25th August with a session by influential speaker Mr. Smarth Bali and followed by another Karaoke Eve. Frosh Week as a whole has been and will always be a wholesome learning experience filled with fun and interaction for the freshers.

II) TIET University MUN SOCIETY

Thapar Institute of Engineering and Technology University hosted one of the biggest possible Model United Nations conferences of the North India - TIET University MUN 2015. An MUN is a simulation of the actual proceedings that take place in the world organisation, United Nations (UN). The participants are designated as the delegates of various countries and international bodies. An added popular committee was the AIPPM i.e. the All India Political Party Meet that is much like an Indian Parliament session where the delegates designate the various ministers and political figures of India. There were four committees in all with the following agendas-

1. UN General Assembly: Measures to prevent terrorists from acquiring conventional weapons and weapons of mass destruction.

2. UN Security Council: Crisis committee.

3. UN Office Of Drug and Crime: Criminal justice reforms in post conflict states with special emphasis on extradition.

4. All India Political Party Meet: Question of religious conversions and border security issues with Pakistan.

Thapar Institute of Engineering and Technology University Model United Nations

The conference had a burgeoning response and participation with 200 delegates in total. Out of these, there were around 70 from outside hailing from UPES, Dehradun, PEC Chandigarh, Punjabi University Patiala, Delhi University, St. John's School Chandigarh and various other prestigious institutes. The delegation had people with an experience of as much as 70 MUNs and the Executive Board of the conference who chaired

the committees were as much experienced. The TIET University MUN society had worked hard and well organised the event. From hospitality to public relations, from logistics to delegate affairs; everyone had their work divided and executed it efficiently. Also regular workshops prior to the event were conducted to familiarize the students with the rules and procedures of the formal debate and tackle the conference. The entire auditorium broke into applause when the president of the society, Dr. Gurwinder Kaur came to the opening ceremony and motivated everyone. The two day long conference saw 14 hours of rigorous debate and discussion, along with logical and heated arguments and fine deliberation over national and international affairs. All committees managed to produce a sound resolution that is the main motive behind an MUN. The conference had big names such as Dunkin Donuts, Click Technologies and Red Bull attached to it

III) LITERARY SOCIETY

Literary Society is dedicated to providing a platform for literary expression and creativity to the students of Thapar Institute of Engineering and Technology University. With its eight sub-societies which include ones focused on writing, dramatics, quizzing, to name a few, the student audience the society caters to is vast and varied. Whereas the society gives an opportunity to showcase one's talent at various competitive events – the crowning glory of which is the inter-year literary festival, Elixir – it also disseminates literary knowledge and culture through various club meetings organized throughout the year, allowing members to grow and learn side by side.

Major Events

Induction Ceremony

Apart from its stall in the annual Society Fair, and conducting workshops during Froshweek, Literary Society held its induction ceremony, as is tradition. The event saw enthusiastic participation from first year, for whom the event is primarily organized in order to introduce them to various sub-societies of LitSoc and let them know the plan for the rest of the year. There was a short quiz, presentations by various societies, a spontaneous theatre event, among others.

Elixir 2014

Pitting four years – first, second, third and post-graduates – against each other, Elixir 2014 presented a high-point of the society's activities, with overwhelming participation in the opening ceremony and beyond. With many events packed across exhilarating four days, the pulse of the festival could be felt throughout the campus, with the cafeteria and the surrounding areas turning into battlegrounds of publicity. Events included plays, a Kavi-Sammelan, movie-making, debating, writing, and quizzing, to name a few – all topped off with a comic showcase play, The Importance of Being Earnest to bring the event to a close. The theme of Elixir was Harry Potter and the years were divided into four great wizards of the wizarding world. Elixir was eventually won by the third year.

Acumen 2014

Acumen 2014 proved the crowning glory of literary activities in the even semester as teams were grouped according to hostels, this time to the theme of comic superheroes. The four days of the festival saw enthusiastic participation from all four teams in as many as thirty events spread across four days, which included debates, plays, parody plays, quizzes and the like. One feature that set apart Acumen 2014 was the introduction of cosplays – which involve dressing up as comic book characters and performing – as a part of publicity for the very first time. It added colour and flair to the competition on a never before seen

level, rendering the maiden cosplay a vibrant success. It was the combined might and enthusiasm that edged out the rest to take the trophy in what was hailed as the most closely contested literary festival in years.

Club Activities

Scrabble and Pictionary

Muse, LitSoc organized a Scrabble cum Spell Bee tournament in the month of August'14 for freshers and sophomore students. The first day of the event was a preliminary round which included rounds of Spell Bee with different difficulty levels, while the second day of the event was a sole scrabble game. Top four participants of each category on first day met again on the final day and played scrabble, and after an intense and engaging war with words, winners from each category were declared.

Debating Events: Freshman, Sophomore, and Challenger's Debate

DebSoc kept up its usual itinerary of training students in the art of debating, group discussions, and other speaking events as well as organizing the annual Freshman and Sophomore debates which saw enthusiastic participation. Their innovative idea of having a challenger's debate in the even semester, saw various debaters challenging the freshman debate winner from their year. A popular event, it garnered a lot of participants, and speakers able to prove their mettle left the tournament with pen-drives as rewards.

Open Mike

The first open mike was organized by Thapar Poetry Society in the odd semester and it was successful in garnering the attention of many performers and introverted artists who wanted their views to be heard. The event was a great success and was even attended by the Dean of Student Affairs, Dr. Maneek Kumar. Two more open mikes were organized in the even semester, one by Anubhooti and the other by the Poetry Society at Barista. The open mike organized in Barista was attended by over 70 people and this one of a kind event was a definite success.

TQC: Ex-Quiz-Eat in Kababchi

Thapar Quizzing Society continued its tradition of having an amalgamation of cuisine and quizzing at Kababchi in the odd semester. The winning team was provided with a free meal and six teams having four members each participated in it. In addition to it, TQC organized SPAM quiz and Biz quizzes in both the odd and the even semesters.

MatribhashaDiwas and RashtriyaShikshaDiwas

The RashtriyaShikshaDiwas was commemorated by the Anubhooti Society by organizing a Hindi presidential debate on various issues plaguing the education system today. MatribhashaDiwas was celebrated on 23th February as a tribute to the national language, Hindi. Attended by over 50 students and several faculty members, it included Vaad Vivad (a Hindi parliamentary debate), a Kavi Sammelan, and a Hindi literature quiz.

Workshops

Cineastes, the movie making society of Thapar Institute of Engineering and Technology University organized various workshops, both in the even as well as the odd semesters, to train interested students in the art of photography and film-making. In addition, Cineastes also organized a photography walk on 1st March 2015, which saw participants stroll about in Nirvana in the peaceful early morning hours, clicking pictures of nature at its pristine best.

Thapar Theatre Club showcased two plays in Elixir and Acumen, executing them to perfection after months of preparation. Taking place after the closing ceremonies of both major literary festivals, the showcase plays have always been a benchmark for theatrical arts in the college.

Apart from their flagship events and competitions, the various sub-societies convened multiple times in a semester – a sound literary exchange being the hallmark of every meeting, whether it be the book discussions in Muse meets, or intense intellectual exchanges between members of the Debating Society.

IV) MUSIC AND DRAMATIC SOCIETY

The most awaited cultural night, Mudra 2k14 was held on 14th October, 2014 in the open air theatre of Thapar Institute of Engineering and Technology University. The event was honoured by the benign presence of the director, Dr. Prakash Gopalan, The Dean Of Student Affairs, Dr. Maneek Kumar and the President of Mudra society, Dr. D.P. Singh.

The event started with the lighting of the lamp by these dignitaries and honouring them with mementos. The students enthralled the audience by their performances which were a perfect amalgamation of western and Indian cultures. The event consisted of classical dance, western dance, folk and classical music, band performances, fashion show, short plays conveying social messages as well as traditional Punjabi dances.

(BHANGRA), (FASHION SHOW), (DANCE N SINGING EVENTS)

The students worked hard from auditioning to practicing ,thus finally giving their best on stage and leaving everyone mesmerized. The discipline team took good care of the decorum that was to be maintained while the program was going on and made the event a success. Mudra society has been improving every year and this time they proved it by their excellence in performance, discipline and management . Mudra 2k14 has made a benchmark for the cultural events to come and has raised the status of Mudra society manifold.

A much awaited event under the Mudra Society calendar, Sur Nite was organised on 12th November 2014 to showcase the musical talent of the University. The event was organised under the guidance and presence of President of Mudra Society, Dr. D. P. Singh.

The Bi-annual musical night, SUR saw its 7th edition which involved a plethora of vocalists and instrumentalists taking the stage to perform songs transcending various genres and cultures. The songs ranged from the jurisdiction of folk and traditional like a soul-wrenching performance of qawwali to the very western music of International Artists.

The discipline team took good care of the decorum that was maintained throughout the event asthe night was attended by over 600 people in the Auditorium and had over 22 performances with over 50 artists involved in it. By the end of it all, the audience reaction proved that the hard work, time and patience put in by the participants for the event made it a grand success.

V) FINE ARTS AND PHOTOGRAPHY SOCIETY

CARD MAKING AND CANDLE DECORATION: The competition on Card Making and Candle Decoration was organized by FAPS on 12th February in K lawns. Around 20 teams (2-3 students in each team) participated in both the competitions. Students from first year to final year from BE, ME and MCA showed their talents in art and craft. The theme of card making was Valentine Day. The competition started at 5:30 and students were given two hours to show their talent. Meanwhile refreshments was provided to all the students and organizing members. At the end Results were announced and prizes worth Rs.2000/- were given to the winners.

LANTERN MAKING COMPETITION: Lantern making competition was organized by FAPS for the students of Thapar Institute of Engineering and Technology University, on 28thjan 2015 in K –lawns. The event was organized to give students a chance to showcase one's creativity and skills in lantern making.

About 45 students participated earnestly and enthusiastically in the competition. They came up with amazing artwork. Some beautiful and eye catching lanterns were made by the students. Materials which were required for making the lanterns were provided by our FAPS society. Registration was totally free of cost. Proper refreshments were also provided during the competition.

The judgment was done by Dr. Ravi Kiran, President, FAPS.The winners were awarded with Certificates and prizes worth Rs.1000.After the competition Lanterns were kept all around the K-Lawn and flying lanterns were given to all participants. Everyone together flew the lantern high up in the sky, ending the event in possibly the best way anyone can.

MASK MAKING COMPETITION: A mask making competition was organized on 28thJan 2015 in K-Lawns for all the students of the University. The event was organized to explore and encourage creativity in students and offer them a platform to show their skills in mask making.

About 40 students participated earnestly and enthusiastically in the competition. They came up with amazing artwork. A variety of face and eye masks were made by students which were appreciated by one and all.

Materials which were required for making the mask were provided by our FAPS society itself. Registration was totally free of cost. Refreshments were also provided during the competition. The final judgment was done by the President of FAPS society, Dr. Ravi Kiranmaam .The winners were given certificates and prizes worth Rs.1000.

PAPER BAG MAKING COMPETITION: Paper bag making competition was organized on 29th Jan 2015 in k-lawn for the students of Thapar Institute of Engineering and Technology University. The event was organized to explore creativity among the students. The competition brought about immense artistic creativity.

About 30 students in team of 2 or 3 participated with great enthusiasm. A variety of paper bags came up in a really creative manner and the creativity of the students was really appreciable.

Materials which were required for making the mask were provided by our FAPS society. Registration was totally free of cost. Proper refreshments were also provided during the competition.

The competition was judged by respected Dr. Ravi Kiran. The winners were given certificates and prizes worth Rs.500/-,as a token of appreciation. This fun filled event witnessed an enthusiastic participation of the students.

PAPER QULING WORKSHOP,FAPS: A workshop on Paper Quilling, Origami, and Kirigami was organised by FAPS on 9th and 10th February. It started with Paper Quilling which was taken by Hardika and Himanshu who explained the basic technique of paper quilling and took it to an advance level.

Around 35 students attended the workshop in which students from first year to final year were present from all courses BE, ME and MCA and showed the great talent in paper quilling by making many beautiful patterns using quilling. It was then preceded by Origami where different objects were made by different types of paper folding. Refreshment was given to all attendees and organizers.

Next day Kirigami, a Japanese art of origami was explained by Hardika by making beautiful patterns by paper cutting and paper folding.

Microsoft Student Chapter

Mr. Vinay Arora, Assistant Professor from Computer Science & Engineering Department

Inspirus2k is a technical fest conducted under the crown of Microsoft Student Chapter (MSC). Mr. Vinay Arora, Assistant Professor from Computer Science & Engineering Department is currently leading this society and having the post of the President. Mr. Gursimranjit Singh, student 2nd Yr CSE is the student coordinator and playing an active role. The concept of this kind of fest has been started from the year 2014, in which society conducts its technical events.

Now, in 2015 MSC has conducted Inspirus2k15 and the details related to various events are as given below:

29th January

Compu-Quest: This event is a quiz based on latest technologies introduced in recent years. Questions in this quiz are related to the knowledge about the technology that dominates our modern lives. Approx. 200 students have registered for this event.

30th January

Brain Wizard: This event is based on the knowledge of mathematics and its application in the engineering. Approx. 180 students have registered for this event.

31st January & 1st February

Workshop on WordPress and Moodle: This is related to the web site designing. Wordpress and Moodle are the important components of any web package. This workshop will give insight related to the latest styles of web page designing. Approx. 120 students have registered for this event.

2nd February

Workshop on Web Crawler and Search engines: This is related to the working and internals of a search engine and the functionality of a web crawler. This is important for M.E. students as they can get an idea from this event for carrying their thesis work. Approx. 100 students have registered for this event.

3rd February

Workshop on e-Money: This workshop will provide the basic information related to online money making while grabbing online projects available on internet. Approx. 80 students have registered for this event.

4th February

Anti-coding (Coding Event): This event incorporates the assignments dealing with the concepts of object oriented approach and its application. Approx. 230 students have registered for this event.

5th February

Code Sense (Coding Event): This event incorporates the assignments dealing with the concepts of object oriented approach and various alternatives for writing an optimized code. Approx. 250 students have registered for this event.

ISTE STIET University DENT CHAPTER THAPAR INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY

India Society for Technical Education (I.S.T.E.)- Student Chapter Thapar Institute of Engineering and Technology University successfully organized the Grand Challenges video contest in association with IUCEE, Indo-US Collaboration for Engineering Education in the mid October,2014. In this the students were given a time of a week and they were expected to submit a 3 Minute Video on how to solve one of the below mentioned Grand Challenges, deadline for which was October 17, 2014.

- Make solar energy economical.
- Provide access to clean water.
- Restore and improve urban infrastructure.

IUCEE (Indo US Collaboration for Engineering Education) was founded in 2007 by a group of engineering educators and industry leaders with the objective of improving the quality of engineering education in preparing students to address the challenges facing the world.

Top 3 winners across India of this contest were to be sponsored to the Global Student Forum and World Engineering Education Forum which was to be held in Dubai in December. We received many entries from the students. The best entry from our university came from the team of Angad Kapoor and Anmol Jawa, students of 2nd year electrical branch. They were awarded with a Micro-Controller Kit and a certificate of recognition by our society President- Dr. Rajesh Khanna.

SPIRTIET University ALITY FOR JOYFUL LIVING 17.4.2015

We started SSA year with a session named 'Spirituality for joyful living' for joyful living which was taken by Swami PitambranandjiMaharaj (Ex-secretary Rama Krishan Mission) which enlightened the Thapar family on this topic.

He gave the idea of Living a happy and joyful life by anger management, patience and enhancing yourself with knowledge. The event was attended by the students as well as the faculty on 9th April 2014 at 5 p.m., the duration of the event was about 2 hours.

THREE MONKS IN THAPAR

This was the skill enhancement workshop held on 27thapril 2014 in Meditator's Enclave at 5:15 p.m. for students of Thapar Institute of Engineering and Technology University which was organized for the first time and was taken by Swami AnupamaanandjiMaharaj, Swami NirantaranandjiMaharaj and Swami BrahmeshanandajiMaharaj. In this the topic of the session was relationship matters, going beyond the stress of underperformance , achieving what you want. The discussion jotted in the points that are going to be helpful for the betterment of their future.

KIRTAN SMAGAM

This event was held on 15th January 2015 on the eve of Prakash Purab of Shri Guru GobindSinhJi in collaboration with Youth Welfare Club in which all the students, faculty and the Thapar staff was invited. The event started at 4:15 p.m. with the welcome of Shri Guru Granth Sahib Ji followed by Path Shrisukhmani Sahib, Kirtan by Thapar students, BhaiGurmeetsinghJi, BhaiPritpal Singh Ji, BhaiRandhir Singh Ji, BhaiApardeep Singh Ji; Ardaas and Hukamnama and then the event was concluded by bidding Adieu to Shri Guru Granth Sahib Ji. At the end Langar was served to all the devotees.

SWAROOP

Swaroopwas the sequence of seminars conducted for the Thapar students. The sessions were conducted in Activity Room 2, COS complex (Meditators' Enclave). This includes expert talk on Spirituality which helped students to explore their inner self & life that was given by AcharyamitraParokshSujay, a well known counselor. In this session the topics covered were life, ego, anger, god and stability. The duration of these sessions was about 2 hours (from 5:30 p.m. to 7:30 p.m .). The seminars also covered the aspect of life which we miss in our daily routine i.e meditation and various Yogic activities.

5TH NATIONAL ORGANIC FARMING CONVENTION

The 5th National Organic farming convention was held at NITTTR, Sector-26, Chandigarh on 28th February and 1st and 2nd of March,2015. The event was organized by NITTTR and several NGO's such as OFAI, ASHA and KVM. Haryana CM, MrManoharLal inaugurated the convention and released a book on organic farming. A team of 14 students along with the faculty Dr. Mandeep Singh from Thapar Institute of Engineering and Technology University participated in the convention. The convention included multiple sessions that were aimed for the betterment in the area of farming and environment. Our team of 14 students under Dr. Mandeep Singh actively participated in the sessions.

UNNATI – An Education Initiative

It was an initiative taken for the development of education in the rural areas, this was done in collaboration with SEC,LMTSM. In this the volunteers and members of society visited the school and rural areas and helped them in various ways. setting the help desks, providing the better supportive material to study, stationery, books, and the electricity equipment for the rooms in schools. They also motivated the students for their future.

UHVE WORKSHOP

Universal Human Values and Ethics Workshop was held on 14th and 15thfeb. 2015 in Meditator's Enclave from 10 a.m. to 5 p.m. for day 1 and 10 a.m. to 3 p.m. for day 2. This was solely for faculty and PhD. Students. The idea of the workshop was to spread the message of the values that is right understanding and relationship to as much as students possible. That,s why teachers were targeted as efforts by a single teacher

can reach large number of students at one time. The seminar was taken by Mr. Kumar Sambhav, expert from Noida and Mr. JitendraNarula, expert from Jalandhar. The session was ended with the determination that everyone will tell the learning's to as much as people one could.

5TH NATIONAL ORGANIC FARMING CONVENTION ,NITTTR, SECTOR 26, CHANDIGARH

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The convention included multiple sessions that were aimed for the betterment in the area of farming and environment. Six different sessions were held at different venues simultaneously on 28th of February and 1st of march. Our team of 14 students under Dr. Mandeep Singh actively participated in the session-"GMO CROPS". The students confronted their opposition to the genetic modification in our food. They also stood firmly against the GMO field trials stating them as a threat to safety of the food chain.

A conference on "MAINSTREAMING AGRO-ECOLOGY" was also organized by Society for Agro Ecology, India on 1st and 2nd March, 2015 The conference was mainly lead by group of scientists and professionals to elaborate the restoration of the agrarian landscape and a sustainably prosperous rural local economy. Various articles on crop system and physiology, ecological economics of agriculture, food system, S and T policy related to agriculture, soil biology in agro-ecosystems, ecosystem service provisions, organic/integrated farming system and nutrition, hunger and agro-ecosystems, socio-economic impacts were presented.

SPORTS ACHIEVEMENTS:

The list of achievements for the year 2014-15 is:

- Thapar Institute of Engineering and Technology University's basketball (men) team Runners up in the 'RannNeeti 14' invitational tournament, organized by IIT Mandi from September 19 to 21, 2014.
- The Chess (men) team got first position, in Inter-Engineering University tournament organized by NIT kurkshetra from September 14 to 15, 2014.
- The Badminton Women teams got Third position in Inter Engineering University tournament organized by NIT, Jalandhar from September 14 to 15, 2014.
- The Table-Tennis Men team won Gold Medal for two consecutive years in Inter-Engineering University tournament held at PEC University Chandigarh from October 10-11, 2014.
- Our Table Tennis Women's team won Bronze Medal in Inter-Engineering University tournament held at PEC University Chandigarh from October 10-11, 2014.
- Our Football (Men) team got Bronze Medal at the Inter Engineering University Football Tournament held at Thapar Institute of Engineering and Technology University Patiala.
- Our Basketball Women team won Gold Medals for two consecutive years in Inter-Engineering University Basketball tournament held at NIT, Jalandhar from February 13-14, 2015.
- Our Basketball Men team won Silver Medals in Inter-Engineering University Basketball tournament held at NIT, Jalandhar from February 13-14, 2015.

In addition to winning laurels at the Inter-Engineering and Invitational tournaments, our university teams also participated and performed admirably at the various All India Inter-University tournaments as well. Some of the participations are as under:

- Our Cricket Men team participated in the Inter University cricket Tournament held at University of Delhi from 27-31 Oct. 2014.
- Our Football Team participated in the Inter University Football Tournament held at Panjab University Chandigarh from 2-8 Dec. 2014.
- Our Lawn Tennis Men Team participated in the Inter University Tournament held at DCRUST Murthal from 24-29 Oct. 2014.
- Our Basketball Men team Participated in the Inter University Tournament held at PTIET University Jalandhar from 21-25 Dec. 2014.
- Our Table Tennis Men team participated in Inter University Tournament held at UTIET University Dehradun from 18-21 Dec. 2014.
- Our Shooting Men Team participated in All India Inter University Shooting Championship held at Punjabi University Patiala from 2-5 January 2015.

Basketball (M)	12	Inter Engg. Uni.	13-14 Feb 15	NIT Jalandhar	2nd Position
Basketball (W)	12	Inter Engg. Uni.	13-14 Feb 15	NIT Jalandhar	1st Position
Basketball (M)	10	Invitation Sangrm,15	20-22 March15	IIT Roorkee	3rd Position
Basketball (M)	10	Invitation Sangrm,15	20-22 March15	IIT Roorkee	

Table Tennis Boys	4	Invitation Sangrm,15	20-22 March15	IIT Roorkee	
Table Tennis Girls	4	Invitation Sangrm,15	20-22 March15	IIT Roorkee	2nd Position
Cricket	16	Inter Engg. Uni.	10-12 April 15	PEC Chandigarh	1st Position
Lawn Tennis Boys	05	Inter Engg. Uni.	24-25 April.15	TIET University	2nd Position
Lawn Tennis Girls	04	Inter Engg. Uni.	24-25 April.15	TIET University	1st Position
Athletics (M & W)	20	Inter Engg. Uni.	24-25 April.15	TIET University	Overall Winner
Celeste Goel (W)	01	Inter Engg. Uni.	24-25 April.15	TIET University	Best Athlete

MISCELLANEOUS ACTIVITIES:

WORKSHOPS ON PRESENTATION AND INTERVIEW SKILLS

Thapar Institute of Engineering and Technology University has engaged Mr. Smarth Bali for conducting the workshops on presentation and interview skills for the University students. Smarth will conduct these workshops to bridge the gap between university and corporate. He is a global communications specialist as well as a corporate coach and trainer. He has worked in India, USA and Canada, and across several industries.

He has initiated two programs that will cover a gamut of essential soft skills for students:

1. Presentation Skills (Two days) to be organized over the weekend
2. Interview Skills (Two days) to be organized over the weekend

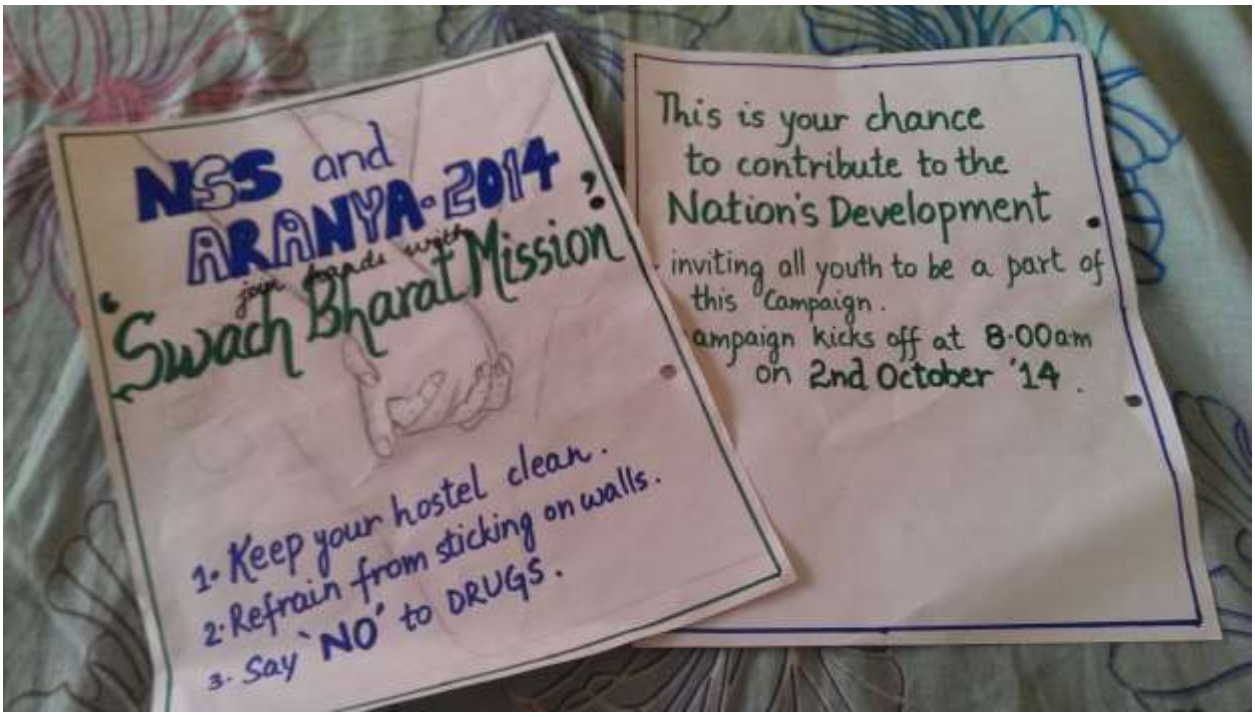
The above two programs will in general cover the following fundamental salient components:

- Communication in verbal and nonverbal skills
- Public speaking
- Grooming
- Listening
- Persuasion

For the academic session 2014-15, this workshop has been made open to all the pre-final year students of BE/B. Tech and M.C.A students.

SWACHH BHARAT ABHIYAN

29th-30th September 2014: NSS team member's alongwith Aranya team members started to work upon the publicity of the events planned for the campaign "SWACHH BHARAT ABHIYAN". Banner regarding the same was designed and was given to the printing shop for printing. Handmade posters as well as printed posters were put on, on all the notice boards in the academic area, hostels as well as in the campus shopping complex. Apart from this mouth to mouth publicity and publicity on various social networks such as Facebook and Whats app was done.



Our Honorable Prime Minster Narender Modi started the biggest cleanliness drive "SWACHH BHARAT ABHIYAN". The ideology behind this is that by 2019, on Gandhi's 150th birth anniversary, every city, town and village is to be 'clean', that is, they will have pucca toilets for all, safe drinking water, waste disposal systems and clean roads & lanes.

Following the pathway led by our Prime Minister, NSS, Thapar Institute of Engineering and Technology University in collaboration with Aranya tech fest team took the initiative to launch the "SWACHH BHARAT ABHIYAN" in Thapar technology campus. The abhiyan kicks off on 1st October 2014 with motivating speech by our Honourable Director Prakash Gopalan and Dr. Maneek Kumar (Dean Of Student Affairs), followed by 'The Pledge' to keep the surroundings clean and to stay away from drugs was taken. Then after the awareness rally was launched starting from the directorate to Nirvana Park. There was active participation of different faculty members, NSS members of different units, Aranya Team members and other students. After the rally, a token of gift by our respected director was given to the organizing members.

On the next day that is on 2nd October 2014, on auspicious birthday of Mahatama Gandhi, the cleanliness drive was launched at Nirvana Park road. The faculty members including Head of departments, students, security guards and workers gathered there for the launch of "SWACHH BHARAT ABHIYAN". Our respected Director, wield the broom across the road and started the drive followed by dean of student affairs and HOD of Electrical & Instrumentation Engineering Department Dr. Ravinder Aggrawal and all faculty members, students and workers. Plastic wastes and other disposable items were collected from the roads. Sweeping of the road was done and then after the cutting of the grasses with the help of saw and machine was carried out. Each and every Hostel cleaning campaign was led by the respected Hostel faculty in-charge and Manager. Students cleaned their room and sweeping and washing of Hostel corridors was done. The campaign ends with a thanking speech by the NSS Programme Coordinator Mr. Parag Nijhawan addressing the Director, DOSA and HODs; and congratulating the students for the success of the campaign.

LMTSoM Student Activities round the year (2014-15)

Programs of Centre for Strategy, Sustainability and Society (CSSS)

- The L.M. Thapar School of Management, Derabassi Campus (Thapar Institute of Engineering and Technology University) has instituted various in-house center of excellence, namely Centre for Strategy, Sustainability and Society (CSSS) in association with Environment and Sustainability Club (ESC) to support the underprivileged sections of the society and community.
- The LMTSM Derabassi Campus also assists the above centers and clubs to participate in community engagement activities by conducting workshops on different themes listed as follows:
- Bicycle Rally under Clean and Green Derabassi Campaign - 'Education Awareness Program' and 'Door-to-Door Awareness Camp' have been organized in Rural Areas (Behra and Fathepur Village, Near LMTSM Derabassi Campus) - jointly organized by ESC and CSSS on January 26, 2015. (Past event) The objective of this campaign was to spread awareness among common people in the rural areas adjoining LM TSM Campus in Dera-Bassi through special activity - 'Bi-cycle Rally'. The student volunteers of the Environment & Sustainability Club of SSS along with faculty and staff volunteers from LM TSM organized a community engagement activity to take the 'Green Dera-Bassi' message forward. The students engaged in a discussion with the rural citizens on the ways & means through which every individual can contribute towards this mission.

- Workshop on 'Clean India - Green Industry' at LMTSM Derabassi Campus - jointly organized by CSSS and ESC on February 05, 2015. (Past event)
- Celebrating 'Earth Day' at LMTSM Derabassi Campus- jointly organizing by ESC and CSSS on April 22, 2015. (Forthcoming event)
- Celebrating 'World Environment Day' at LMTSM Derabassi Campus - jointly organizing by ESC and CSSS on June 05, 2015. (Forthcoming event)

LMTSM business fest: A platform to test and hone management skills

- 'Nimaya 2K15', the three-day business fest that began on April 3, included a gamut of activities ranging from inter-college competitions on business management and cultural programmes to a Higher Education Summit and a Social Entrepreneurship Forum
- Luminaries from various leading North Indian universities participate in Higher Education Summit
- The first business fest of its kind to be organised in northern region, Nimaya will witness exciting contests between teams from various colleges, including IIT Delhi, IIT Bombay, University of Petroleum and Energy Studies, Dehra Dun, PEC and PU
- Social Entrepreneurship Forum provides budding social entrepreneurs, students a chance to learn the art of running social enterprises from established social entrepreneurs, NGOs
- Serving as an ideal platform to test and hone the skills of management students, the LM Thapar School of Management (LMTSM), the business school of Thapar Institute of Engineering and Technology University, Patiala, organised an exclusive three-day business fest "Nimaya 2K15" that began on April 3, 2015. The fest included a gamut of activities ranging from various inter-college competitions on business management and cultural programmes to a Higher Education Summit and a Social Entrepreneurship Forum.
- The first business fest of its kind to be organised in the northern region, Nimaya, as its name suggests, would enable students to "explore the "unknown" in the process of preparing themselves for their future roles in an uncertain business world.
- The highlight of the opening day, where Patiala MP Dharamvir Gandhi was also present, was a Higher Education Summit in which luminaries from various leading universities across North India participated. Prominent among them were Prof Yoginder S. Verma, Vice-Chancellor, Central University of Himachal Pradesh, Dr Paramjit S. Jaswal, Vice-Chancellor, Rajiv Gandhi National University of Law, Patiala, Dr KL Johar, former Vice-Chancellor, Guru Jambeshwar University, Hisar, Haryana, Prof Bhupinder Brar of Panjab University's Political Science Department, Prof Rajesh Gill of Panjab University's Sociology Department, Dr Arun Sharma, an IAS officer from Himachal Pradesh, Prof Tandon, former chairman, University Business School, Panjab University, and former PEC Director Dr GD Bansal.
- The three-hour marathon Summit, which addressed various issues and challenges concerning higher education and its linkages with industry, was followed by a Nukkad Natak (Street Play), cultural programmes and a movie night to add to the entertainment quotient of students.
- "This business fest showcases the ideals of the 'New India' our business school stands for—ethical decision making, inclusive human resources management, sustainable strategy development and social and commercial entrepreneurship. We intend to take this forward by creating an ideal interface between the society, industry and academia," said LMTSM Director Dr Padmakumar Nair.
- The second day of the fest witnessed various inter-college competitions and a Social Entrepreneurship Forum where established social entrepreneurs like Arunachalam Murgurutham and B. Subramanian taught the art of running social enterprises to budding social entrepreneurs and students through innovative ways and shares their experiences.

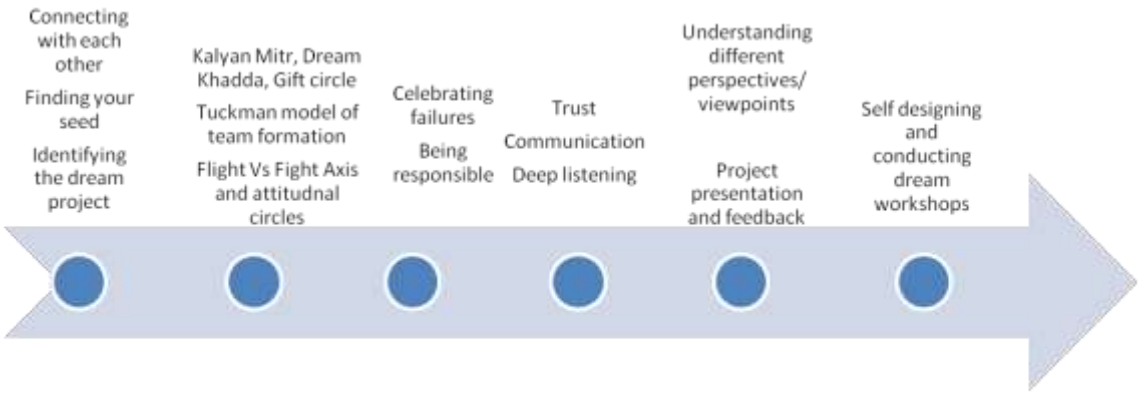
- The events with a real flavour of the industry included Paragon People (Human Resource), Sosa Wars (Operations), Striders (Information Systems), Moves of the Goldman (Finance), Markeeto (Marketing), Design Innovation Challenge (Biomimicry), Twist-O-CSR and many more. These events will witness exciting contests between teams from various colleges of the region and other parts of the country, including IIT Delhi, IIT Bombay, University of Petroleum and Energy Studies, Dehra Dun, Punjab Engineering College (PEC), University Business School (UBS), Panjab University, University Institute of Applied Management Studies (UIAMS), Panjab University, LMTSM and Thapar Institute of Engineering and Technology University.

You Lead Workshop by Anubhavshala: In House Personal Leadership Program for Students
You Lead is a platform where we make an effort of peeping into our own self, getting comfortable with the discovered self and taking responsibility for our actions and its consequences. It's a program which triggered varied questions so as to get clarity of who we are and what we really want. We believe that if one is at peace with one's self, he/she will take complete ownership of his/her actions (walk the talk) and will in turn be in harmony with the surrounding thereby resolving all the above mentioned challenges.

Program Objectives:

- To facilitate adolescents / adults in finding opportunities out of problems and enabling them to become responsible for the choices they make
- To assist students/teachers in gaining trust by facilitating the aspect of initiating the action (Being the change)
- Co creating a safe environment where there is complete freedom to express without being judged

Program Flow: The whole journey of the program is shown below:



The schedule of three day workshop (March 20-22, 2015) was as follows:

- Day 1: Theme: Connecting, breaking the ice, knowing each other, listening to different perspectives Activities like community cooking, community music, community walks, night sky watching

- Day 2: First half: Gift Circle, sharing the gift, students designing and leading workshops/games for parents and teachers Second half:
- Identifying the challenges, Dialogues on various issues pertinent to the community, shramdaan
- Day 3: Community giving (spreading the culture of giving, sharing our gifts) - shramdaan, Closure, Key takeaways, Plans going forward

CIIE and Thapar School of Management: hosts 'Network Expansion Workshop' at Dera Bassi

Social Entrepreneurship is one of the few possible aspects that is being pondered over to bridge the gap between the various strata of society that is being plagued by severe developmental issues and increasing social and regional inequalities. The 'Network Expansion Workshop' hosted by L M Thapar School of Management was part of the pioneering series of workshops being conducted by CIIE in collaboration with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). This workshop was an attempt to provide a platform to the support organizations and social enterprises to meet and explore synergies.

The two day workshop opened February 21, 2015with the support organisations like NGOs, Foundations, Business Incubators, Industrial Body, Academic Institutions and other big enterprises exploring the need of social enterprises and their role and importance in developing the social enterprises from the idea phase to scaling phase. While the social enterprises tried to build their capacities through the session on 'Service Blueprinting', the support organizations looked into different social entrepreneurs already running their enterprises.

The first day concluded with a session where the support organizations tried to design an ecosystem around the attending social enterprises in different sectors. It also helped the support organizations discover and offer the support it can provide to various social enterprises and its needs. The second day focused on networking through structured and unstructured meetings.

This maiden initiative in this region has laid a strong foundation for strengthening of ecosystem for social enterprises of this region.

Ankurit-2015: A **SEED MONEY COMPETITION**

"Ankurit-2015", a SEED MONEY COMPETITION, was organised by Venture Lab, Thapar Institute of Engineering and Technology University to foster entrepreneurship and help early stage start-ups to kick-start their business venture at LM Thapar School of Management, Derabassi Campus, Near Chandigarh on February 28, 2015

Through this event, we supported passionate individuals who have a credible business idea and a clear intent to set up an enterprise. Total Seed money worth Rs.5 lakhs was provided to successful candidates who are at preliminary stage of venture creation for sustaining them during the conceptualization phase. Along with that, office like space was offered to these start-ups at Venture Lab-Thapar, the newly established state-of-the-art incubation centre of Thapar Institute of Engineering and Technology University.

Details & updates regarding the event are as follows:

Process:

Step I:	Participant(s) will submit Executive Summary of Business Idea along with their credentials. (Template attached with this mail)	February 12, 2015
Step II	The shortlisted 30 teams will be provided half day competency building workshop in collaboration with the Center for Innovation Incubation & Entrepreneurship (CIIE), IIM - Ahmedabad	February 18, 2015
Step III	15 Finalists would be called to present detailed Business Plan to the panel of Judges for the grant of Seed Money.	February 28, 2015

The Event was judged by a panel of experts including: angel investors, successful entrepreneurs and a commendable chartered accountant.

Participation: We received entries from institutes like: Narseemonjee Institute of Management Studies(NMIMS), Mumbai; IIT (Delhi), BITS Pilani; NIIT University, Thapar Institute of Engineering and Technology University and corporate early age start-ups. The start-ups are from various fields like education,travel, legal, health etc. and have immense potential to make it a huge success. Venture Lab-Thapar is helping early stage start-ups and entrepreneurial minds to shape their journeys fruitfully.

Results:

Startup	Description	Institution	Position	Seed Grant Given
edulyft's	edu lift aims to clear the clutter of chaotic test prepration routines	**BITS Pilani**	**1**	**Rs.1,50,000**
bananamedia	Banana Media shows how can notebooks be used as a marketing tool?	**IIT (Delhi)**	**2**	**Rs.1,00,000**
Srjna	Experiential learning to enable students to learn and understand the concepts rather than mugging them up	**IIT (Delhi)**	**3**	**Rs.1,00,000**
Bhooka.in	Help people discover the new varieties of street food. Table reservation and food pre-ordering is a feature that no website is having till date, which saves a lot of time.	**Thapar Institute of Engineering and Technology University**	**4**	**Rs.50,000**
Acha tutor	Helps find the right kind of tutors for your needs with acha tutor at your rescue.		**5**	**Rs.50,000**
eWools	Portal for marketing hosiery and woolen garments from Ludhiana		**6**	**Rs.50,000**

Establishment of Venture Lab - Thapar

Thapar Institute of Engineering and Technology University in collaboration with the Venture Lab International of the University of Twente, the Netherlands has conceptualised Venture Lab-Thapar, with a focus on developing holistic entrepreneurial ecosystem that will work towards bringing back the entrepreneurial spirit of Punjab and the surrounding areas by providing technological, financial, infrastructural and strategic support to budding social and commercial entrepreneurs from within and outside Thapar Institute of Engineering and Technology University.

Areas of focus for the Venture Lab include: Social Enterprise, Technology led enterprises, Product Co-Creation Concept with community and Agri-value chain Enterprise. Venture Lab has begun operations only recently and wishes to develop an incubation model that helps it achieve its multi-pronged vision.

Start-up Weekend at LMTSM to give head start to wannabe entrepreneurs

Highlights:

- LM Thapar School of Management hosted a start-up workshop being conducted by Start-up Weekend, a global grassroots movement of active and empowered entrepreneurs, from March 21 to 23
- The three-day marathon 'Start-up Weekend Chandigarh 'workshop will provide an opportunity to the participants to connect with over 1.5 lakh entrepreneurs who have launched over 8,000 start-ups around the world through Start-up Weekend, an initiative of a US-based NGO

Being conducted for the first time in the region north of Delhi, the Start-up Weekend is a university event focused on promoting entrepreneurship among students of various universities of Punjab; working professionals, freelancers also taking part. Providing an incredible launch pad to aspiring entrepreneurs, the LM Thapar School of Management (LMTSM), the business school of Thapar Institute of Engineering and Technology University, Patiala, facilitated a start-up workshop that was conducted by Start-up Weekend, a global grassroots movement of active and empowered entrepreneurs.

It focused on promoting entrepreneurship among students of various universities of Punjab. While 60% of the participants are students, the remaining comprise working professionals, freelancers and other aspiring entrepreneurs.

Start-up Weekend, an initiative of UP Global, a non-profit organisation headquartered in Seattle, Washington. This largest community of passionate entrepreneurs with over 1,100 past events in more than 550 cities across 125 countries is on a mission to inspire, mentor and empower individuals, teams and communities to launch successful ventures.

The workshop enabled would-be entrepreneurs to learn what it means to launch ventures through rigorous grooming, mentoring and coaching by successful entrepreneurs. The participants pitched their start-up ideas and received feedback from their peers. Teams were formed around the top ideas, as determined by popular vote, which was followed by an extensive exercise of business model creation, coding, designing and market validation. The workshop culminated with presentations in front of local entrepreneurs, providing another opportunity for critical feedback.

The speakers and mentors at the workshop include **professionals from the Punjab government, leaders of start-ups like Zomato, EcoCabs and YuvaShaala, and companies which** have raised angel funding and gone on to form accelerators, like The Morpheus, 500 Start-ups, Y Combinatory and Microsoft Accelerator.

LM TSM associated with this prestigious start-up workshop as facilitators because the concept gels with our mission of cultivating a spirit of social and commercial entrepreneurship among our students so as to turn job seekers into job creators.

Baseline survey of four villages to identify health needs: in order to develop appropriate interventions

Baseline survey of four villages was done with the help of LM TSM students in the month of Feb.15, 2015 Based on the findings, the activities in the communities similar to work done by Avantha Foundation at other AF sites will be planned by April 2015 and we will be ready to launch it in May 2015.

Avantha Foundation provided technical as well as monitoring support to team. LM TSM students are involved on voluntary basis. Orientation and training of the students on baseline was conducted on 7th -8th Feb.15 and the baseline survey started from 9th Feb 2015.

10 students (half male and half female) with attitude to social works conducted the survey in the four opted villages. These students were trained by Dr. Lalita Mahajan, Expert on health initiative from Avantha Foundation.

Adoption of Village Behra:

Vehra village in the vicinity has been adopted by LM TSM for various social development initiatives. Monetary help is provided to every family of the village for supporting them when a marriage ceremony is solemnised. Students of LMTSM go to teach in the government school to teach.

Regular engagement is in place with villagers by training them for health, agriculture and other issues of concerns to the population of the village.

A Special Camp of NSS Unit 12

NSS Unit 12, consisting of students of LM Thapar School of Management, has been organizing a special camp and some one-day activities each year. In the academic year 2014-15, the camp was organized at village Behra which houses the LM Thapar School Of Management in the Derabassi campus of Thapar Institute of Engineering and Technology University between September 8-14, 2014. More than 50 volunteers of the unit participated in the special camp. The enthusiastic volunteers planted 121 fruit trees, including 32 mango, 6 billpatra, 31 guava, 22 amla and 20 jamun and 10 Beri trees, in the two-day plantation drive. They donated winter caps, clothes, woolens and footwear to around 50 gardeners, safai karamcharis and mess staff. They also served them with tea, cakes and biscuits. They visited a labour colony and residents of the Behra village. They met 30-40 laborers and 35-40 residents and distributed winter caps, clothes and eatables to them. They also visited the Government Elementary School in Behra village. They distributed umbrellas, mugs, plates, eatables, winter caps, notebooks and stationary to the little children in classes II to Vand made them aware about cleanliness, hygiene and other good habits.

In another activity, children's day was celebrated in the Government Elementary School in Behra village by distributing sweets, snacks, stationary items to children of classes 3, 4 and 5. Message of Swachh Bharat was reinforced.

A blood donation camp was also organized on March 26, 2015 at LM Thapar School of Management – with collaboration of P.G.I.M.E.R under the supervision of Dr. Anita, The Head of Department, Department of Transfusion Medicine, P.G.I. Chandigarh. 66 persons, 36 students, 3 faculty members and others from non-teaching staff, donated their blood for the cause.

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area	270 Acres	26.29 Acres (Derabassi Campus)	Fees , Income from Research & Consultancy projects, Executive Development Programmes	
Class rooms	81	10(TAN)+20(polytechnic)		110
Laboratories	105	20		125
Seminar Halls	7			7
No. of important equipments purchased (≥ 1-0 lakh) during the current year.		39		39
Value of the equipment purchased during the year (Rs. in Lakhs)		Rs 530.42		Rs 530.42
Others: (Expenditure on enhancing computer networks and infrastructures)		Rs.55.66		Rs.55.66

4.2 Computerization of administration and library

Thapar Institute of Engineering and Technology University, Patiala is in the process of implementing e-solutions software for its academic and other related activities including human resource management and financial management. Academic activities, such as, conduct of mid semester test and end semester examination, central repository of marks and grades of the students, assigning the grades to the students by faculty members and students reaction survey have been implemented using this software. Online facility for registration information, date-sheet, seating plan and duty chart has been provided to all the concerned through Web-Kiosk. On-line quizzes have been started for core courses. Computerized DMCs of students are sent to the parents.

4.3 Library services:

	2013-2014						2014-2015					
	Existing		Newly added		Total		Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value

Text Books	7142 7		8225	31.0 Lakhs	79652		79652		8891	36.93 Lakhs	88543	
Reference Books												
e-Books	1779				1779		1779		405		2184	
Journals (Print)	102			70.0 Lakhs	102				78	73.8 Lakhs	78	
e-Journals	1122 0				1120				6538		6538	
Digital Database					13						13	
CD & Video					3000+						3000+	
Others (specify) Magzines					22						22	
Standards	428 4		--		4284		4284		--		4284	
Print Thesis	247 4				2474		2474		65		2539	

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Depart-ments	Others
Existing	900	12	500mbps with 2800 concurrent internet users	Wifi and wired computer network facility is available all around campus including academic area, hostels, faculty residence, cafeterias and all labs	2 dedicated computer centres	258	15	---
Added	150	4	900mbps and additional 900 concurrent internet users		----	Faculty can purchse computers from faculty developments funds from	----	----

						University		
Total	1050	16	3700 users		2	258+	15	----

4.5 Computer, Internet access, training to teachers and students and any other programme for technology up gradation (Networking, e-Governance etc.)

Centre of Information and Technology Management (CITM) has been established in the University after integrating three units, namely, Computer Centre, Centre for Information Super-Highway and University Science Instrumentation Centre. This centre has been established to cater the needs of users involving implementation, maintenance and support activities related to software and hardware; procurement, support and maintenance of various equipments of users.

CITM offers internet access and network services to Thapar Institute of Engineering and Technology University. It has two static leased line connections: 310 Mbps leased line STM-2 for internet bandwidth from Reliance and 1 Gbps leased line of National Knowledge Network (NKN). The Campus-wide Local Area Network (LAN), which currently has 4000 live nodes (wired and wireless), is backboned by Optical Fiber connected with layer-3 and layer-2 switches, structured with CAT 5 and CAT6 cabling.

The CITM has four state-of-the-art computational labs and one server room. CITM Labs remain open from 8.00 AM to 8.30 PM on all working days and from 9.00 AM to 5.00 PM on Saturdays. The computational facility in the Centre includes 10 Dell Power Edge servers and 166 nodes and other peripherals such as one heavy duty Line Printer Lipi6100, Six HP Laser Jet printers. CITM is a member of Oracle Academia Initiative program of Oracle India Ltd, Microsoft Edvantage Program and is also in agreement with Symantec for university wide antivirus facility.

CITM also provides repair and maintenance of Electronic Instruments/Equipment and, PCs and peripherals used in various Laboratories. This centre is contributing in the implementation of ERP software that includes modules financial management, inventory management, human resource management, purchase management, academic activities etc. and its related support to the users of Thapar Institute of Engineering and Technology University. CITM is also responsible for maintenance and administration of Thapar Institute of Engineering and Technology University Website. The main objective of centre is to provide better support and services to the users for their individual as well as collective growth.

4.6 Amount spent on maintenance in lakhs:

i) ICT	27.22
ii) Campus Infrastructure and facilities	2727.04
iii) Equipments	523.93

iv) Others	3638.21
Total:	6916.4

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

The newly admitted students are apprised of the activities of the counseling cell during the orientation program by the Chief Student Counselor appointed by the Director. The department nominates faculty member(s) to this cell on the advice of the Chief Student Counselor. General information is sent out to all students of the department informing them of the services extended by the cell and inviting them to meet the faculty coordinator of the department. The students are encouraged to seek guidance on academic, general or psychological issues, if necessary. Also, semester wise results are forwarded to the Student Counselor of the department by the Academic Section who prepares a list of students whose performance is observed to be below average or poor. Such students are then invited to meet the counselor or any faculty member of their choice on a fixed date and time (changes possible on request of the student). Such meetings are arranged at least twice in a semester and are chaired by the Head of the Department and may include anybody who might be of help to the student. The students are advised to improve performance and are given suggestions or options for clearing their backlog courses.

The advising process is designed to ensure that each student selects a set of courses during each semester that meets minimum grade requirements and which can result in the student making efficient and orderly progress in meeting the academic requirements as listed in the course scheme. The advising process also helps to identify and solve problems the student may be confronting in achieving the educational objectives. Each department has an Academic Counselor for advising the students. He is also a one point contact for issues related to academic performance or any other issues faced by the students. The students are encouraged to meet him to seek guidance on any matter related to academic performance. Individual faculty members routinely spend time with students during and after classes discussing any issues related to the course, student problems, and advice them on all matters as desired related to academic, placement, industrial training and career goals. Faculty members are often members of co-curricular activities in the department and provide ample opportunities for faculty to answer student questions in an informal environment.

5.2 Efforts made by the institution for tracking the progression

The University has CILP (Centre for Industrial Liaison & Placement) and counseling cell which provides career guidance, training and placement to the students. The students of Thapar Institute of Engineering and Technology University have taken initiatives at Science & Technology Entrepreneur's Park towards creating awareness on opportunity exploration and to shape a career smartly, ultimately aiming at development of entrepreneurs; exploring inventive dimensions and reaching new heights by organizing sessions related to career and personal positioning of an individual, through a series of interactive hours, personal discussions and individual guidance supported by experts.

Science and technology Entrepreneurs Park (STEP) at Thapar Institute of Engineering and Technology University has been established in the year 2005 jointly by NSTEDB, Department of science and

technology, GOI to create Entrepreneurial opportunities and fostering economic growth through business incubation. STEP is involved in creating atmosphere ecosystem for innovation and entrepreneurship between academics and industry, sharing ides and experiences. STEP provides necessary infrastructure for business incubation and opening new avenues for students, teachers, researchers and managers.

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
4052	1419	616	-

(b) No. of students outside the state: 50%

(c) No. of international students: 5

	No	%		No	%
Men	4299	70.6	Women	1788	29.4

Last Year						This Year					
General	SCO/ SCST-PB	ST	BC	Physically Challenged	Total	General	SCO/ SCST-PB	ST	OBC	Physically Challenged	Total
1033	153	11	35	1	1232	1299	111	40	28	2	1480

Demand ratio 1: 15 Dropout % 8.90%

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

Nil

No. of students beneficiaries

5.5 No. of students qualified in these examinations: This data is approximate as exact numbers are not available

NET	9	SET/SLET		GATE	250	CAT	370
IAS/IPS etc	3	State PSC	6	UPSC	7	Others	80

5.6 Details of student counselling and career guidance

The University has a counseling cell which is chaired by a Chief Student Counselor appointed by the Director. Each department/school nominates faculty member(s) to this cell on the advice of the Chief Student Counselor. General information is sent out to all students of the department informing them of the services extended by the cell and inviting them to meet the faculty coordinator of the department. The students are encouraged to seek guidance on academic, general or psychological issues, if necessary.

The semester wise results are forwarded to the Student Counselor of the department by the Academic Section who prepares a list of students whose performance is observed to be below average or poor. Such students are then invited to meet the counselor or any faculty member of their choice on a fixed date and time (changes possible on request of the student). Such meetings are arranged at least twice in a semester and are chaired by the Head of the Department and may include anybody who might be of help to the student. The students are advised to improve performance and are given suggestions or options for clearing their backlog courses. The advising process is designed to ensure that each student selects a set of courses during each semester that meets minimum grade requirements and which can result in the student making efficient and orderly progress in meeting the academic requirements as listed in the course scheme. The advising process also helps to identify and solve problems the student may be confronting in achieving the educational objectives. The student academic Counselor is also a one point contact for issues related to academic performance or any other issues faced by the students. The students are encouraged to meet him/her to seek guidance on any matter related to academic performance. Individual faculty members routinely spend time with students during and after classes discussing any issues related to the course, student problems, and advice them on all matters as desired related to academic, placement, industrial training and career goals. Faculty members are often members of co-curricular activities in the department and provide ample opportunities for faculty to answer student questions in an informal environment.

The details of these activities are available with each department/school and will be made available during the visit of the expert committee.

No. of students benefitted | Overall 500

5.7 Details of campus placement

On campus			***Off Campus***
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
185	1479	979	.....

5.8 Details of gender sensitization programmes

Thapar Institute of Engineering and Technology University is committed to creating and maintaining a community in which students, teachers and non-teaching staff can work together in an environment free of violence, harassment, exploitation, intimidation and stress. This includes all forms of gender violence, sexual harassment and discrimination on the basis of sex/gender or amongst the same sex members. Every member of the University should be aware that while the University is committed to the right to freedom of expression and association, it strongly support gender equality and opposes any form of gender discrimination and violence. All the complaints in this regard can be made to the committee duly constituted by the Thapar Institute of Engineering and Technology University, Patiala.

5.9 Students Activities

5.9.1 No. of students participated in Sports, Games and other events

State/ University level	526	National level	--	International level	--

No. of students participated in cultural events

State/ University level 4750 National level 326 International level -

5.9.2 No. of medals /awards won by students in Sports, Games and other events

Sports: State/ University level 27 National level International level

Cultural: State/ University level 14 National level 8 International level 1

5.10 Scholarships and Financial Support:

	Number of students	Amount (Rs IN LAC)
Financial support from institution	437	487.13
Financial support from government	228	200.64
Financial support from other sources	5	1.10
Number of students who received International/ National recognitions	NIL	NIL

5.11 Student organised / initiatives

Fairs : State/ University level 12 National level 12 International level 1

Exhibition: State/ University level 01 National level 01 International level

5.12 No. of social initiatives undertaken by the students 34

5.13 Major grievances of students (if any) redressed: Nil

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

VISION

To be recognized as an exemplary leader committed to excellence in education, research and innovation that meets the needs of the global community.

- An Institution grounded in rigor and relevance
- Innovative, Integrative and Inclusive
- Engineering education grounded in rigorous Mathematical, Physical, Biological and Social sciences
- Business Education grounded in rigorous Mathematical and Behavioral sciences
- Relevant blend of theory and practice
- Higher Education with global relevance

MISSION

- To provide a scholarly and professional environment that enables faculty, students and staff to make lasting contributions to the advancement of knowledge
- To be dynamic, innovative and flexible in devising academic programmes, structures and mechanisms.
- To produce globally competent graduates having creative skills and ethical values
- To carry out cutting-edge research and development for the benefit of society

6.2 Does the Institution has a management Information System

Yes. Thapar Institute of Engineering and Technology University, Patiala has implemented e-solutions software for its academic and other related activities including human resource management and financial management. Academic activities, such as, conduct of mid semester test and end semester examination, central repository of marks and grades of the students, assigning the grades to the students by faculty members and students reaction survey have been implemented using this software. Online facility for registration information, date-sheet, seating plan and duty chart has been provided to all the concerned through Web-Kiosk. On-line quizzes have been started for core courses. Computerized DMCs of students are sent to the parents.

6.3 Quality improvement strategies adopted by the institution for each of the following:

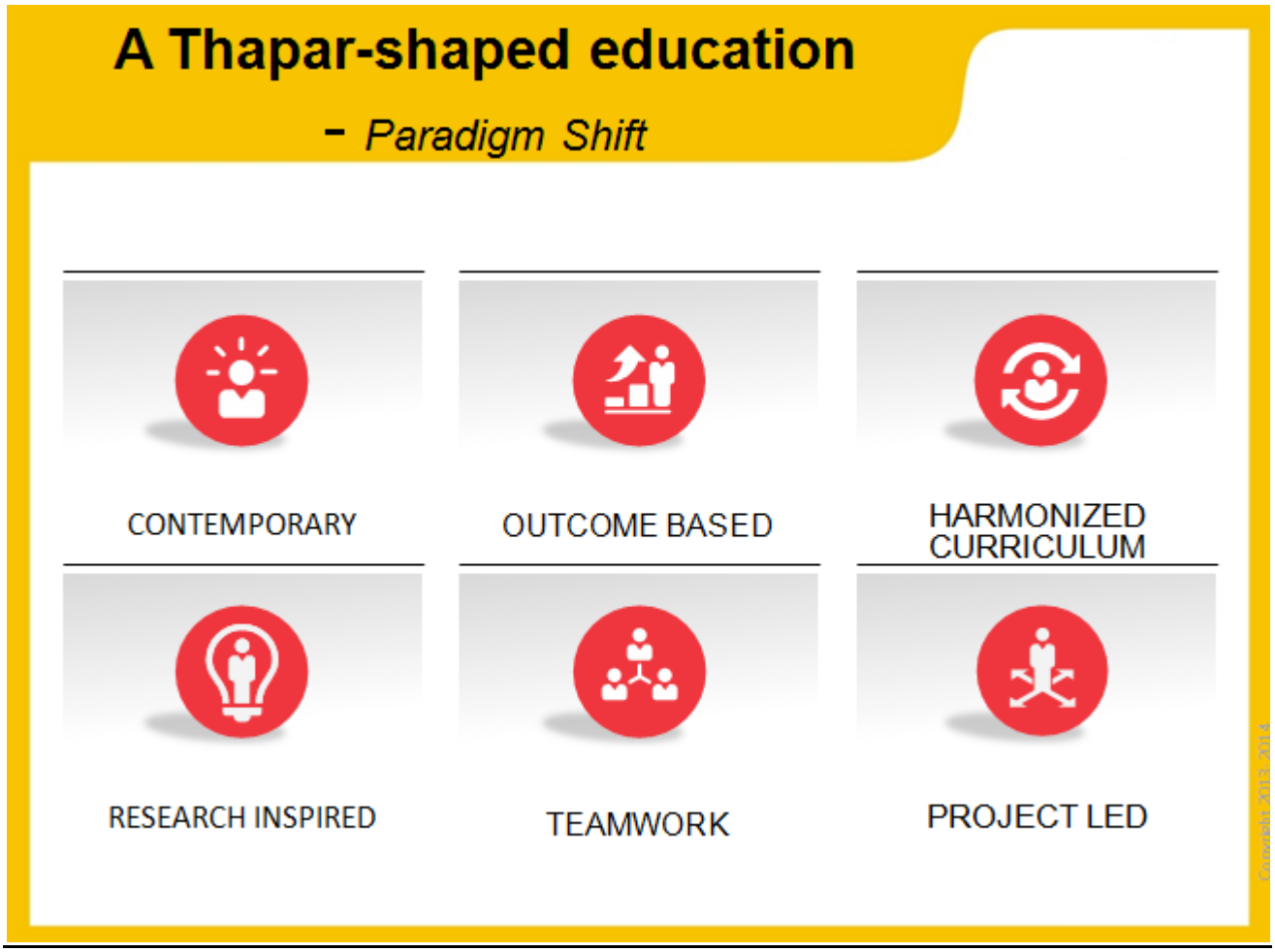
6.3.1 Curriculum Development

- **Curriculum Harmonization**

The curriculum of the undergraduate engineering programs has been harmonized in line with Trinity with an objective is to create a mini-Trinity at Thapar Institute of Engineering and Technology University where not only the top students but all students are exposed to a harmonized curriculum. The Trinity curriculum places greater emphasis on research inspired and project led teaching which has been incorporated at Thapar. For this purpose, Thapar deputed a team of its senior faculty to Trinity to understand and implement a modern engineering curriculum. Some of the significant changes made in the curriculum is introduction of three large engineering design projects during the first two years followed by a capstone and an individual research project during the later years. Thapar has adopted the learning outcomes approach for teaching with greater reliance on self-directed learning, mini-projects within the courses, research-led teaching, use of project work and assignments. Most of the first two years of curriculum across of undergraduate programs will remain the same and the specialized courses will be taken up during the later years.

The academic agreement between Thapar Institute of Engineering and Technology University and Trinity will also give students admitted to undergraduate engineering programs at Thapar Institute of Engineering and Technology University the opportunity to study at Trinity. Eligible students will pursue the first two

years of their course in India before transferring to Ireland in years 3 and 4 of the degree program, subject to meeting the required academic requirements. On completion of the degree, qualified students can apply to pursue a Masters qualification at Trinity by completing one additional year at Trinity.



The statutory bodies of the University, the Senate or the Planning and Monitoring Board oversee the design and development process so that the activity is carried out in a planned manner. The detailed planning for this activity is the responsibility of the Department Head. The systematic process of design and development includes the activities & sub activities including techniques & organizational interfaces and the time frame for completion of various activities. The plans are updated, as the instructional design evolves.

The design and development process generally begins with a need analysis report which comprises of (i) Stated customer needs (ii) Implied needs (iii) Overall goals of Instructions (iv) Relevant standards i.e. AICTE and UGC guidelines and Curricula of Entrance Tests like Indian Engineering Services (IES) and Graduate Aptitude Test for Engineers (GATE), etc. and (v) General characteristics of target population.

Organizational and Technical interfaces between different faculty and external expert groups providing input to the instructional design are defined, committees are constituted and their reports are documented. Faculty members from different disciplines connected with the design & development activity are associated with the process. The updation/restructuring is carried out as the design process progresses. Clear responsibilities are assigned and effective communication is ensured.

The requirements of instructional design are determined and recorded. For instructional design, the input is taken from various sources. Input requirements are clearly understood and reconciled. The design input may come from:

- Need analysis & Reviews.
- Recommendations from alumni, senior management, industry etc.
- Success/failure reports of similar courses & programs.
- Published literature relevant to programs.
- Boundary condition w.r.t GATE, IES, IAS curricula etc.

The process of determining solutions to satisfy the identified needs is laid down and documented. Instructions are designed by incorporating these solutions. The analysis and mappings are recorded. The design output at this stage is taken as the initial design for subsequent reviews. The output of instructional design & development is documented in the form of a report named "Curriculum and Scheme of Courses". Through various reviews and verifications, it is ensured that the design output meets the design input requirements.

The design output report includes:

- The types and levels of skill and knowledge to be imparted
- Details of need analysis and mappings at various stages
- Scheme of courses and the detailed syllabi
- Instructional strategies.
- Selection of instructional aids for delivery.
- Assessment and evaluation.

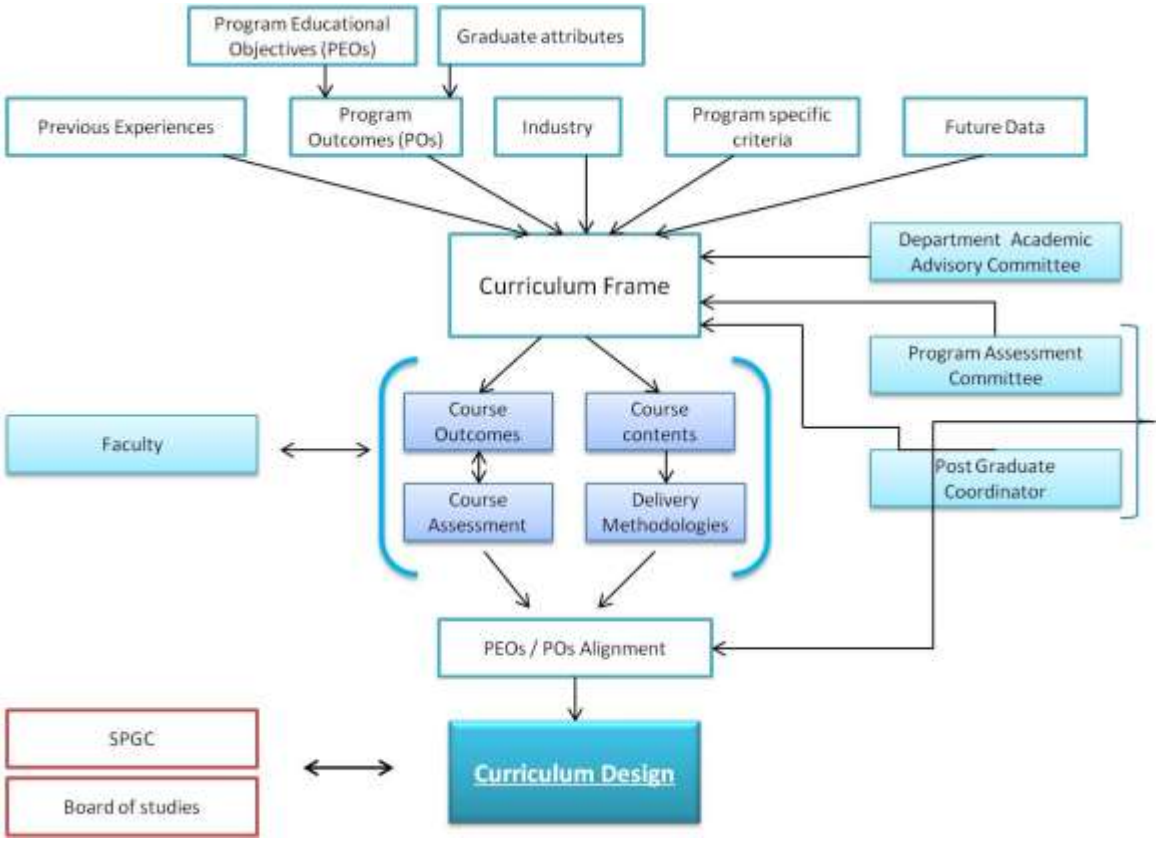
The output documents like curriculum and instructional strategies are reviewed and approved before release at various levels and stages.
Reviews are conducted at defined stages of the curriculum Design, in which faculty members from the concerned area as well as experts from amongst the peer group from within and/or outside the University are associated. Records of the reviews are maintained. Based on the reviews, the design is updated and brought into document control for revision. The design reviews are carried out at the end of each of the following stages using prescribed check lists:

- Need analysis
- Design and review by Board of Studies (BOS)
- Review by Senate Postgraduate Committee (SPGC)
- Review by Senate
- Review by Board of Governors (BOG)

Verification of design is conducted by comparison of the design with similar courses run by prestigious Universities. Evolved designs are also verified by taking independent opinion of the experts from amongst the peer group from within or outside the University. The new curriculum is introduced only after adequate verification.

New/revised curriculum and instructional design is made applicable to the prospective students. The curriculum is validated in the initial stages of its introduction by taking a feedback from students and faculty members regarding the effectiveness and applicability of the curriculum, with regard to the documented needs. Necessary changes, if required, are made to ensure that the design conforms to defined needs of the

students. Wherever required, additional instructional sessions and allied inputs are arranged for students/participants.



The general steps followed in curriculum development are as under :

- The need for starting a new programme or course(s) may arise from interaction with Industry, Faculty, Students, Alumni or PMB/Senate/BOG , UGC/AICTE etc.
- The idea of proposed programme is discussed in the HODs' meeting and if found appropriate, the Head of concerned deptt is asked to put up a proper proposal. A sub-committe of internal/external member(s) may sometimes be formed for making the feasibility and viability analysis.
- The DAAC (on the basis of recommendations of sub-committee, wherever required) does the need analysis and prepares the proposal for approval from BOS.
- The BOS after delibrating on the proposal may make the desired modifications and then send the proposal to DOAA for consideration in SUGC/SPGC, alongwith the duly filled checklists.
- The proposal is put up for consideration to SUGC/SPGC and upon its approval the recommendations may be sent to the Senate and PMB.
- After the Senate approval, the proposal may be sent to concerned Department/School through academic section for allocation of appropriate course codes OR if required it is sent to AICTE/UGC for approval and the status is put up in the forthcoming meeting of BOG.
- In case AICTE/UGC approves the proposal, it is implemented by the concerned Department/School after allocation of proper course code by the academic section.

6.3.2 Teaching and Learning

The teaching pedagogy employed for the engineering programmes offered at Thapar Institute of Engineering and Technology University reflect the long held ethos that engineering education should be broad-based to enable graduates to develop throughout their professional careers, finding solutions for as yet unseen challenges. The partnership with Trinity focuses on strategies to deliver a research inspired, outcome based educational experience to the students at all levels. This is a major shift in focus from the current content-oriented imparting of engineering education to a project-based and outcome-oriented educational experience. The new teaching pedagogy lays emphasis on applying engineering skills through relevant engineering design projects, improving team-working skills and awareness of issues relating to ethics and professionalism. Also, all academic staff is encouraged to bring in cutting-edge research ideas from their own research into their teaching

Thapar Institute of Engineering and Technology University will sponsor two high impact Chair Professors (research) positions at Trinity in thematic research areas of interest to both partners. The Professors would spend time both at Thapar and Trinity and would lead a major research effort which will culminate into setting up of a State of the Art research centre at Thapar in the next five years. The thematic areas will be inter-disciplinary and would involve several other academic staff. The teams would focus on attracting large research funding and publications in high impact journals.

Thapar is also setting up a Research Committee to establish a structured PhD program, form inter-disciplinary research groups, encourage/ support the academics to publish, take research students, raise research funding and feed this knowledge into advanced undergraduate and postgraduate courses and oversee the setting up of a major Research Centres. The committee will review the metrics for measurement of research output (Publication quantity and quality, PhD student(s) produced, research funding raised, measures of innovation and impact).

The committee will identify research thematic areas in consultation with TCD which will be pursued during the next 5 years.

6.3.3 Examination and Evaluation

Examination Reforms: Thapar Institute of Engineering and Technology University is also initiating reforms in the way, examinations are conducted worldwide. In the contemporary set up, the concerned instructor will prepare the question paper along with model solutions to each question and will seek feedback from a faculty colleague from the cognate area. The same will then be sent for vetting to an outside expert (Trinity in this case). After the conduct of the examination, the marks are uploaded on an academic software which generates an excel sheet listing the marks obtained by each student in all the subjects. An examination board is then convened consisting of internal and at least one external member who reviews sample answer scripts, projects and the marks obtained by the students.

6.3.4 Research and Development

As compared to the last few years, this year saw an increase in the research activities, wherein more funds were received for sponsored projects, higher number of Ph. D. students got registered and resource generation through consultancy also increased. Out of the sponsored projects received from various funding agencies (UGC, AICTE, DST and DOE, etc), 18 were completed during the year under review and 127 projects are ongoing and progressing towards their completion. 21 new projects were received during the year 2014 – 2015. The total funding received during the year was Rs. 466.35 Lacs. During the year, 345 technical papers were published in reputed national and international journals listed in SCI/SSCI, and several research papers were presented/ published in conferences, seminars and workshops.

Sponsored Projects	**2011-12**	**2012-13**	**2013-14**	**2014-15**
Received	37	56	25	21
Ongoing	89	116	106	127
Completed	15	09	17	18
Funds Sanctioned (Rs. in lakh)	613.07	871.88	467.49	466.35

Publications	**2011-12**	**2012-13**	**2013-14**	**2014-15**
In International Journals listed in SCI/SSCI with Impact Factor	302	320	345	460
In Non SCI Journals	220	276	164	226
In seminars, conferences and workshops	258	245	276	160

6.3.5 Library, ICT and physical infrastructure / instrumentation

University Library is housed in a centrally air conditioned spacious premises covering an area of 25,000 square feet. It has 93503 books (reference books, course materials, text books), 2539 print theses, 4284 standards, 4973 bound volumes of journals, educational and career development aids, video etc. These are available on D-Space server and can be accessed from anywhere on the globe. From 2006 onwards all the PhD and Master theses are uploaded on D-Space. During the year library subscribed to about 11,220 e-journals and 102 print journals. E-journals are received under UGC-Infonet program, INDEST consortium and directly from supplier/publishers. The library budget was Rs 161 lac in 2014-15 which is 2% of total expenditure. Library remains open 24X7 throughout the year, even on gazetted holidays. Most of the library operations are automated. Library catalogue (OPAC) can be searched from anywhere and subscribed e-resources can be searched from the Campus only.

The Library offers the following facilities/services:

1. **Digital Resource Centre:** Digitization project of Library is in progress. First phase i.e. digitization of all the previous thesis is over. This laboratory also provides place for faculty and group of students for working on their library learning based assignments.
2. **Reading Facilities:** Three separate reading halls, including one exclusively for faculty and research scholars are available. In addition to these reading halls, reading space is available in the learner's zone, Community library and Print theses sections as well. Library has in all seating capacity for 350 readers.
3. **Community library** for the families of staff and faculty members is a part of Library, where books, newspapers and magazines for children, grownups, ladies and senior citizens are available and this section remains open from 08:00 A.M. to 08:30 PM on all the working days.
4. **Information and communication infrastructure:** The Library is equipped with state of the art facility which includes 200 nodes for Wi-Fi network in addition to wired connectivity. A number of computers are dedicated for library users. Resources like digital scanners, printers, photocopiers and surveillance system for security etc. are available.
5. **Online resources and services**: These can be accessed through its website http://cl.thapar.edu. the library also manages the University's digital archive Dspace@TIET University which can be accessed at http://dsapce.thapar.edu:8080/dspace. All the dissertations and theses are now submitted to the University on Dspace@TIET University . During the year 586 submissions were made on DSpace.
6. **Membership:** Library caters to faculty, staff and students of all the three institutions on the Campus. Students registered for Distance Learning course of University can also become members. Private local resident, professionals and institutions & industries and alumni of the university can also become member of Library on nominal fee.
7. **Document Delivery Service**: Research paper/articles which are not available in the subscribed e-journals and print journals are procured by the library on request through Document Delivery Service (DDS). Library interacts with other libraries and agencies as NISCAIR for procuring research articles.
8. **Library on Wheels:** To make faculty members and research scholars aware about 'Resources & Services @TIET University Library' library conducts and organize presentations in different departments from time to time.
9. **Collection Development:** This year 8225 volumes of books were added to the collection. During the financial year 2013-14 Rs 31 lakh was spent on the purchase of books and Rs.70 lakh on subscription of print and e-journals.
10. **Library Hours:** Library remains open for 24 hours throughout the week. Library services are provided from 8 am to 8.30 pm from Monday to Saturday. During the examination, the library services are also made available on Sundays.
11. **Book Loans:** During the reporting year a total of 34226 books were loaned out to the members.

6.3.6 Human Resource Management

The University has set high standards for imparting quality education and thus induct faculty with higher academic profiles, urge to excel in their respective fields and serve the students and the University with dedication and high quality standards. All the faculty members inducted are qualified and competent teaching in all the academic courses. The University does not recruit any faculty without PhD since 2010. Some of the faculty members recruited prior to this have been encouraged to register for PhD program at the University or other institutions of high repute. Most of these faculty members are at an advanced stage of completing their research work. The University has facilitated their work by giving them one to two semesters off on their request.

The University has established a Professional Development Allowance for a variety of academic activities for all levels and has encouraged faculty to participate in conferences, symposiums, workshops, training programs etc. The University provides seed money for organizing conferences and other faculty development programs to all academic units from time to time.

For the non teaching staff, the University has organized Computer proficiency up gradation programmes for to achieve the desired standards and all the ministerial staff has been trained to handle computers for the routine jobs. The non teaching staff has been motivated and the self development achieved can be gauged from the higher qualifications attained by its staff during the last five years.

The University has organized Computer proficiency up gradation programmes for the ministerial staff to achieve the desired standards and all the ministerial staff has been trained to handle computers for the routine jobs. The non teaching staff has been motivated and the self development achieved can be gauged from the higher qualifications attained by its staff during the last five years.

6.3.7 Faculty and Staff recruitment

The largest constraint in the growth of higher education is lack of faculty. The University makes special efforts for recruitment and retention of quality faculty. The desired profile of the faculty at all levels has been clearly defined. The positions have been publicized widely through print and electronic media. The impact of the change has been clearly visible through larger interest among prospective faculty to join the University. Better qualified faculty members have applied. A meticulous process of evaluation that includes seminar presentation and personal interviews with a carefully chosen panel of experts is adopted. All full time positions offered had Ph D degrees. To provide impetus to the effort and facilitate selection and induction of highly qualified faculty members at the entry and higher levels, we now entertain applications throughout the year. The details of faculty recruitment (new recruitments –external) and internal promotions during the year are as under.

Fresh Recruitment

Designation	Applications Received	Applications Shortlisted	Joined
Professor	29	02	00
Associate Professor	79	03	00
Assistant Professor	1219	175	22
Visiting Assistant Professor (From IITs)	130	Appeared = 76 Selected = 12	05 (2 out of these selected for regular position)
Lecturer (C)	847	104	27+6*

Internal Promotions

Designations	Departments	Number
Professor	CED -1, CHED-1, BTD-2, SCBC-1, SEE-1	06
Associate Professor	CED-4, CHED-1, MED-1, SCBC-1, SPMS-2	09

Assistant Professor (8.5 K)	CED-1, SEE-1, SoM-2, SPMS-3, LMTSoM-2	09
Assistant Professor (8 K)	CHED-1, CSED-1, ECED-1, EIED-1, MED-1, SoM-1, LMTSoM-3	09

The academic performance of the faculty is monitored through the student's response survey. The research performance has been measured through research funding received, research publications and number of PhDs and Masters Students supervised. The performance of the faculty has been ranked through a rigorous process and superior performance is rewarded through a unique performance incentive scheme.

6.3.8 Industry Interaction / Collaboration

S. No	Name	Activity
1.	Secure Net Technologies	Set up "centre of excellence " , running various courses on security such as security-5, network-5, ECSS & CEH
2.	Wipro Technologies	WIPRO is running various courses to upgrade the overall skills of teachers of engineering institutions as well as the students through two programs named as Wipro mission 10X technology Learning Center (MTLC) and Unified Technology Learning Platform (UTLP). Department has conducted one training program under this relationship.-2013
3.	Crompton Greaves Ltd.	One ongoing project -"PREPARATION AND CHARACTERIZATION OF POLYMER/CERAMIC FIBRE AND CELLULOSE COMPOSITE PAPER FOR ELECTRICAL INSULATION" by Dr Rajeev Mehta One more projects has been started. Project was initiated by Dr. Gangacharyulu. Each year ME/Mtech students are sent to CG for one year project training. This year Six MTech Students are sent for one year project training-June 2013.

S. No	Name	Activity
4.	ISA Group Lille, FRANCE	Student Exchange and Faculty Exchange with Biotechnology Department. The activity will co-ordinated by Dr. Abhijit Ganguli. Scholarship for more than 100 students from Indian and French Govt. One faculty had gone Group Lille, France during the summer vacation to deliver a lecture on academic and research exchange programmes at TIET University Attended two meeting/discussion sessions on environmental Food Biotechnology with Prof. Bertrand, Head Environmental Group. Initiatives on Joint Research Projects in the area of Bio-Process and Green Polymer Application for Remediating Environment. One TIET University student Mr. Jatin Sharma BTech BT (4th Year) has been selected for Masters in Food Science and Management at ISA. Scholarship will be offered to the student.
5.	University of Waterloo, Canada	Dr. S. Bedi from UW visited TIET University for two months and delivered 10 lectures on CAD / CAM/ Design Fresh MoU signing has been initiated. Dr KK Raina, Director, Dr S K Mohapatra, Dean of Academic Affairs and Dr. Ajay Batish HMED visited UWO in Sept. 2013
6.	TCS PhD Research MoU	TCS is sponsoring selected PhD Candidates for a Maximum of 4 years. Department currently have 3 TCS Research Scholars. A Stipend of Rs. 23,000 per month is given for the First 2 Years and Rs. 25,000 per month for next 2 years by TCS. TCS supports participation of TCS Research Scholar and respective guide in 1 International Refereed Conference, held outside India, and 2 National Conferences in India. TCS awards One-time Rs 1 Lakh Contingency Amount to the Institute for every TCS Research Scholar to meet any incidental expenses. TCS also has a detailed plan for continuing interaction between TCS Research Scholars and TCS Innovation Labs.
7.	CISCO Net Academy	A global education initiative from Cisco Systems, offers networking programs, like the (Cisco Certified Network Associate) CCNA and (Cisco Certified Network Professional) CCNP courses, which prepare students for the certification exams of the same name, and other computer-related courses. 150 students got their modules cleared and attained discounts to appear in CCNA industrial exam.
8.	EC-Council, USA	EC-Council Academia is an innovative education initiative that delivers information and security skills to improve career and economic opportunities around the world. It provides online courses, assessment exams, CBT videos and lab activities via

S. No	Name	Activity
		iPrep, iVideo, iExam, iLearn and iLabs platform. It also prepares candidates for industry leading EC-Council certifications exams such as CEH, CHFI, ECSA/LPT. 5 students successfully completed C|EH exam and have attained Certified Ethical Hacker Certification from EC-Council USA
9.	Microsoft Edvantage Program	Under Microsoft Edvantage program, all Faculty and staff members can use latest legal software provided by Microsoft. The faculty members have the benefit of using all Microsoft products and keys from this website.
10.	Oracle Academy	Under this program CSED, received licensing to Oracle Database products on huge discount, also learning material is freely downloadable. Students can appear for Oracle certification at discounted price
11.	Apple University Program	CSED started with Course on Mobile Application development which emphasizes app development under android and iOS platform. CSED received free SDK (Software Development Kit) and are part of AUP for uploading apps developed by students after testing done by Appstore.
12.	IBM University Program	CSED is part of this program since 2005 and faculty, students have gained knowhow into IBM technologies by attaining certifications and training from IBM free of cost, 10 faculty members and students were trained under this program for Rational Software Architecture (RSA)
13.	Infosys Campus Connect	Launched by Infosys in May 2004, CC is a unique academia-industry initiative to “architect the education experience”. Goal is to build a sustainable partnership with engineering education institutions in India and abroad for mutual benefit; producing “industry ready” recruits. • Around 800 students got professional benefits from such training. • CSED has got critical inputs on Curriculum changes • Planning to Set up of Centre excellence in thrust areas of CS (initial proposal is being prepared)
14.	Naveen Jindal School of Management, the University of Texas at Dallas, U.S.A and LM Thapar school of management - 2013	Faculty and Student exchange, Joint research

S. No	Name	Activity
15.	Association of chartered certified accountants (ACCA)-2013	The purpose of MoU is to have the international certifications from ACCA in finance and management programmes. With these certifications the profile of the students will be enhanced and they will get more acceptability in the market
16.	INTEL	Intel® Embedded University Program (IEUP) caters to Enhance the Presence Of Intel® Embedded-based Systems Curriculum and to Enable Technology Leaders of Tomorrow an Understanding of Embedded Systems and Provide a Solid Foundation for Designing And Developing new Technologies. This Program supports in Curriculum Development, Student Contests, and Research. It holds an Annual Research and Education Summit giving Professors opportunities to interact with Peers, Intel Architects and Engineers. Following Equipment's were Funded by Intel under this program IXP1200 NP (2), IXP2400 NP (2), IXP425 (2) Kits.
17.	University of Twente, Netherlands	To initiate a pilot bachelor student exchange program, establishing a joint research center on Entrepreneurship and Innovation between the Netherlands Institute of Knowledge Intensive Entrepreneurship (Nikos) of the University of Twente and the LM Thapar School of Management of TIET University .
18.	Ritsumeikan University, Japan	Exchange information on research and educational programmes, to jointly organize short-term continuing education programmes, seminars, conferences, or workshops to exchange, on a reciprocal basis, faculty and students for limited periods of time for the purpose of education and /or research.
19.	University of Missouri-Kansas City	Joint Research Proposals, • Joint Research Guidance at PG and PhD level, • Joint conduct of workshops on upcoming areas of technology Hybrid International Master of Science in Computer Science Program . Dr Kevin Truman, Dean of the University visited TIET University in 11th Sept 2013. Visit to University of Missouri-Kansas City is being planned to further look into the courses.

S. No	Name	Activity
20.	Engg. School of Information and Digital Technology, Paris, (EFREI) FRANCE.	Student and faculty exchange as well as scholarships and waivers for the students for the Master programme at EFREI.
21.	Royal Melbourne Institute of Technology	Mapping of Bachelor Information Technology and Bachelor of Technology (computing Studies) with TIET University program as 3+1 and 3+2 arrangement * Mapping of MCA programs and development of an agreement in BIT and BT Computing studies) and MCS
22.	NVIDIA for CUDA teaching center(CTC) as well as CUDA Research Center (CRC).	NVIDIA is a pioneer in parallel computing architecture using CUDA programming. - Hardware infrastructure required for the task procured - - CUDA teaching centre approved for TIET University
23.	University of Florida	Twining Degree programs Joint Research Proposals, • Joint Research Guidance at PG and PhD level, • Faculty Exchange
24.	Spoken Tutorial IIT-Bombay and MHRD	Workshops, certifications and training on upcoming technologies
25.	ICICI	Trinity is an initiative by ICICI Bank that promotes and furthers the cause of innovation and entrepreneurship amongst the youth community in India.
26.	Trinity College Dublin-Ireland	Thapar Institute of Engineering & Technology University Patiala (TIET University P) and Trinity College Dublin (TCD) have collaborated in areas of mutual interest of both the institutions. The broad scope of this collaboration, would jointly develop a contemporisation program for Thapar Institute of Engineering and Technology University covering broadly the following areas. • Academic curriculum review and development • Research Orientation including supporting lab infrastructure. • Pedagogy (including teaching-learning center) • Governance Structure • Physical Infrastructure • Faculty training and development

S. No	Name	Activity
		• Develop programs in Humanities and Liberal Arts etc

6.3.9 Admission of Students

The complete admission schedules are advertised in the leading National Dailies and magazines well in advance and repeating the advertisements two to three times before the counseling sessions. The schedule is also simultaneously displayed on the Website of the University. The queries of the aspirants are handled telephonically and through email promptly. The transparency is achieved by displaying the data and results of applicants and those short listed on the University Website. Merit lists are also displayed on the Notice Board based on the Counseling conducted publicly. Full transparency is ensured at levels by the Thapar Institute of Engineering and Technology University management.

ADMISSION TO THE BE/BTECH PROGRAMME

A candidate shall be eligible for admission in the UG programmes if he/she has passed 10+2 or equivalent examination with at least 60% marks (55% for SC/ST candidates) in aggregate of three subjects, namely, Physics, Mathematics and any one subject out of Chemistry, Biology, Biotechnology and Computer Science and has qualified Joint entrance examination conducted by CBSE every year with at least 20% aggregate marks (15% for SC/ST candidates).

The University, if deems fit, may admit students to the second semester of UG engineering programmes in January subject to vacancies that may exist in the first semester of first year. The students admitted in this category shall have to clear all the courses as per the scheme of the discipline of Thapar University, in which she/he is admitted. To be considered for December admission, the candidate should be a student of BE/BTech programme of a recognised Institute/University and have passed 10+2 or equivalent examination from recognized board and have secured at least 60% (55% for SC/ST candidates) marks in aggregate of Mathematics, Physics and Chemistry/Computer science/Biology/Biotechnology. The candidate must qualify TU entrance test with at least 20% aggregate marks (15% for SC/ST candidates).

A candidate may also be admitted to the 2nd year of the UG engineering program through lateral entry if he/she has passed diploma, in relevant discipline, of minimum 3 years duration after matriculation or diploma, in relevant discipline, of minimum 2 years duration after 10+2 from Polytechnic College/Institute affiliated with State Board of Technical Education/University, or recognized by UGC/AICTE with a minimum of 60% marks (55% for SC/ST) in aggregate or equivalent grade point. Also, candidates with BSc(Non-Medical) from recognized University with 60% (55% for SC/ST) marks in aggregate can also be admitted through lateral entry in the 2nd year. Such candidates are admitted on the basis of merit obtained in the online entrance test conducted by the University (LEET-TU) with at least 20% aggregate marks (15% for SC/ST candidates).

ADMISSION TO THE POST GRADUATE PROGRAMMES

PhD PROGRAMME

A candidate seeking admission to the degree of Doctor of Philosophy must have obtained ME/MTech/MPhil/MCA/MSc/MA/MBA/CA or equivalent with minimum CGPA of 6.00 on a 10 point scale or 55% marks in aggregate where marks are awarded or NET (UGC/CSIR) qualified. Candidates are admitted on the basis of merit of Entrance Test and Interview conducted by the University. The candidates

who secure minimum of 20% marks in the written exam are only be called for Interview. During interview, a candidate is required to indicate area of research. Relaxation for appearing in the Entrance Test may be given by the University to those candidates who have qualified UGC/CSIR (JRF).

ME/MTech PROGRAMME

Admission to all the ME/MTech programmes is made on the basis of valid GATE Score in respective discipline. First preference is given to GATE qualified candidates. After offering seats to the GATE qualified candidates, for seats remaining vacant (if any), the admission is made on the merit of the online entrance test conducted by the University across India and only those candidates who shall be having minimum 20% (15% for SC/ST) in the entrance test are considered for admission. Additionally, the candidate must have obtained at least 60% (55% for SC/ST) marks in the aggregate in the qualifying examination from a recognised University.

MCA PROGRAMME

The admission to the MCA program is made on the merit of the entrance test conducted online by the University across India. To be eligible for admission the candidate must have a recognized bachelor degree of minimum 3 years duration in any discipline with at least 60% marks (55% for SC/ST) in aggregate.

MSc PROGRAMMES

Admissions in all the MSc programs are made by combining percentage of marks obtained at 10th, 12th and graduation from a recognized University (aggregate marks upto second year/four semesters are considered).

Detailed information about all the programmes and the admission process can be accessed at www.thapar.edu

6.4 Welfare schemes for

Teaching	Yes
Non teaching	Yes
Students	Yes

6.5 Total corpus fund generated

As on 01-04-2014 = Rs 32.74 cr
Additions during the year 2014-15 = Rs 5.01 cr
Balance as on 31-03-2015 = Rs 37.75 cr

6.6 Whether annual financial audit has been done Yes [√] No [ ]

6.7 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External	Internal

	Yes/No	Agency	Yes/No	Authority
Academic	Yes (ISO9000)	STQC	Yes	IQAC
Administrative	Yes (ISO 9000)	STQC	Yes	IQAC

6.8 Does the University/ Autonomous College declares results within 30 days?

For UG Programmes Yes [√] No [ ]

For PG Programmes Yes [√] No [ ]

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

Examination Reforms: Thapar Institute of Engineering and Technology University is also initiating reforms in the way, examinations are conducted worldwide. In the contemporary set up, the concerned instructor will prepare the question paper along with model solutions to each question and will seek feedback from a faculty colleague from the cognate area. The same will then be sent for vetting to an outside expert (Trinity in this case). After the conduct of the examination, the marks are uploaded on an academic software which generates an excel sheet listing the marks obtained by each student in all the subjects. An examination board is then convened consisting of internal and at least one external member who reviews sample answer scripts, projects and the marks obtained by the students.

Program wise examination boards are created for both UG and PG Programs to examine the examination patterns including the quality of question papers, evaluated answer sheets, laboratory examinations, seminars and scrutiny of grades awarded.

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

NA

6.11 Activities and support from the Alumni Association

Scholarships and Placements/Training

6.12 Activities and support from the Parent – Teacher Association

NA

6.13 Development programmes for support staff

Computer proficiency up-gradation programmes for the ministerial staff to achieve the desired standards and all the ministerial staff has been trained to handle computers for the routine jobs. The non teaching staff has been motivated and the self development achieved can be gauged from the higher qualifications attained by its staff during the last five years.

6.14 Initiatives taken by the institution to make the campus eco-friendly

The University is taking the possible initiatives for energy conversation and the new buildings of the University are being designed accordingly to save the energy. The employees and students are advised to use the natural light, turn off the switches of lights, fans etc. whenever not in use, use of LCD monitors for computers, use of tube lights instead of bulbs etc. There are sufficient cross ventilation in laboratories and class rooms to avoid the unnecessary use of electricity. The University has also installed the Power Factor Correction System to save the electricity.

The University has taken several initiatives to make eco-friendly. The University has hired an outside consulting firm for energy auditing and its recommendations are being implemented throughout the University. The use of solar energy specially for heating water in student hostels has been attempted in one of the largest hostel on campus and has been a successful experience. The street lighting in some sections has been made functional with solar energy. There has been wide plantation throughout the campus and Thapar Institute of Engineering and Technology University is one of the greenest campuses in the region. The university has dedicated plantation areas and one such park "Nirvana" has come up beautifully during the last three years.
The University has made provisions of rain water harvesting system in all the new buildings.

The biological waste from various laboratories is collected by Semb-Ramky Environment Management Pvt. Ltd., Ludhiana on weekly basis as per MOU signed between university and them. All other solid waste of residences, hostels and campus is being collected and disposed off at Municipal Corporation dumping ground. Treatment of waste water by Sewage Treatment Plant (STP) and reuse of treated water for irrigation.

The University has followed the Government of India notification related to e-waste (Management & Handling) Rules 2011 that came into effect from May 1, 2012. These rules were circulated to all the Heads of Units and were advised to understand the definition of the e-waste mentioned at page no. 28, sub clause (k), of clause 3 of the said rules. The University comes under the definition of Bulk Consumer which is also mentioned on the same page under sub clause (c) of clause 3 of the said rules and the responsibilities of the "Bulk Consumer" mentioned at page 31 under clause 6 of the said rules and the same has been understood by all concerned. All the Heads of the Departments / Schools / Centres / Units are required to maintain the stock of the e-waste generated in their respective Departments / Schools / Centres / Units in the Form-2 of the said rules. They are supposed to complete entries from Sr. No. 1 to 5 of the Form-2. The e-waste generated can be sent to Central Stores once in six months with a copy to Chairperson, e-waste Management Committee. Central Stores has identified a specific area to store the e-waste sent by different units for final disposal to the authorized vendor M/s Singbros Mobility Solutions, D-85, Focal Point, Patiala.

Following steps have been taken for carbon neutrality:

- The students are not allowed to use the powered vehicles in the campus. They use only bicycles to move in the campus.
- Only LPG cylinders are used in hostels and other places for cooking.
- Installation of Solar Water Heating system at Derabassi Campus and University is also planning to install the same at Patiala campus also.

Criterion – VII

7. Innovations and Best Practices

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

Contemporization

- Aspiring to become a globally acclaimed university, we have signed a comprehensive institutional agreement to CONTEMPORIZE THAPAR with Trinity College, the University of Dublin. Trinity as it is popularly called is one of the world's oldest universities - over 422 years old and its cutting-edge research, technology and innovation places it at the forefront of higher education and is consistently ranked amongst the top 100 universities in the world. The collaboration is a central component of a major contemporisation programme that Thapar Institute of Engineering and Technology University has undertaken.
- The CONTEMPORARIZATION PROGRAM is envisaged to deliver a research inspired, outcome based educational experience to the students. The partnership covers all the major academic and research activities of the University and will help address and bolster Thapar Institute of Engineering and Technology University's position as a leading centre for higher education in India and in the region. As a first step, we invited Trinity in November 2014 to conduct an academic review of our programs and governance procedures. The findings of the review set out a path to achieve a closing of the performance gap. An overall plan for change was then prepared for implementing the findings of the academic review. As a first step the harmonization of curriculum with Trinity was taken up to bring it up to date with global standards. We have adopted the learning outcomes approach for teaching with greater reliance on self-directed learning, projects and research-led teaching.
- The agreement will also give students admitted to undergraduate engineering programs at Thapar Institute of Engineering and Technology University the opportunity to study at Trinity. Eligible students will pursue the first two years of their course at Thapar before transferring to Ireland in years 3 and 4 of their program. A cohort of 8 students has been nominated to Trinity on a scholarship program earlier this year to complete their year 3 and 4. Another batch of 8 students will also go in 2016 before a larger group of 40 undertakes this credit transfer program from 2017. 34
- To give a major fillip to research, we have sponsored two research professorships at Trinity. The Professors would spend time both at Thapar and Trinity and would lead a major research effort which will culminate into setting up of a State of the Art research centre at Thapar in the next five years.
- As part of the contemporisation program, we are also setting up a Centre for Academic Practice and Student Learning under mentorship of Trinity to support and help the faculty hone their skills and teaching pedagogy. This centre will support a whole-institutional approach to teaching and learning and facilitate a broad adoption of this new learning paradigm. The training and on-going professional development will be instrumental in establishing the culture necessary for this initiative to grow and contribute meaningfully to the contemporisation programme.
- We have envisioned improving the laboratory and physical infrastructure on the campus. A modernization plan for the important teaching and research laboratories in consultation with Trinity has been developed. We have hired world class foreign architects to develop key academic infrastructure that would include new Computer Science block, Library, Lecture hall complex, student residences and other academic blocks. Face lifting and modernization of older buildings has also been planned in a major way. Thapar Institute of Engineering and Technology University has also planned to implement an international ERP system to manage and govern the academic, financial and administrative functions.
- We have undertaken major examination reforms during the year. In the new procedure, the question papers are now being reviewed by Trinity. The examination results will be discussed by an

Examination Board which will be convened to review sample answer scripts, projects and the marks obtained by the students.

- The partnership is now being expanded to collaborate in other areas of academia and research which includes the programs offered by TIET University Schools of Mathematics, Physics, Chemistry and the postgraduate and PhD programs. Additional academic areas in Arts, Humanities and Social Sciences are also being scoped.
- An Innovation Centre/Venture Lab would be set up at TIET University to run accelerator program open to teams of students with an early-stage business idea. The program will support students in developing investor-ready ventures.

Innovation in quality systems

The University has established, documented and implemented a Quality Management System. Continuous improvement in the implementation and effectiveness of the quality management system is ensured through continuous reviews and internal audits. The University has:

- Identified the processes needed for the quality management system and their application throughout the organization process are being carried out in the University. Documented procedures have been developed for the management activities, provision of resources, instructional design, delivery and control and measurement.
- Determined the sequence and interaction of the processes of the quality management system. This includes process pertaining to instruction planning, delivery and control as well as support, service and administrative processes.
- Determined the criteria and methods needed to ensure that both the operation and control of these processes are effective.
- Ensured that all the resources and information required for operation and monitoring of the processes are available from time to time.
- Has planned arrangements for monitoring measurement and analysis of the processes.
- Has implemented the planned arrangements along with their control mechanism for the achievement of planned results and for continual improvement of the processes.

Innovations in academic activities

- The student admission process for the Undergraduate program is made with the help of a e-governance package. Even student registration and their complete academic performance form the day of admission to the passing out is maintained on this system.
- The University has developed a system for collecting feedback on student reaction for each course online and the results are automatically analyzed and made known to the faculty members.
- The University has a Performance Incentive Scheme for its entire faculty. The four key result areas identified for improvement include: teaching quality; professional/career development of teachers; relation building with industry, alumni and community and implementation of other co-curricular and extra-curricular activities of students.

CONTINUAL IMPROVEMENT

The University continuality improves the effectiveness of the quality management system through the use of quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and management review. At the time of every management of review, through the measure of each objective and its comparison with earlier level of that objective, the trends are ascertained. Action points are then

listed to continually improve the system. The status is reviewed in the subsequent management review meetings.

CUSTOMER SATISFACTION

The University has made arrangements to monitor information related to customer perception to ascertain whether the University has met customer requirements. The information is collected using the following established mechanism:

- Feedback from the students at the end of every semester on various aspects of the course taught to them.
- Feedback collected from the industry during the campus interviews.
- Feedback from students after they spend six months in industry for their project semester.
- Feedback from the six months project semester of the students, on the quality of students and their usefulness to the industry.

The information thus collected is summarized and analyzed and the results of the analysis are used as a feedback to further improve the system.

INTERNAL AUDIT

The University conducts internal audits every six months to verify whether quality managements system conform to the quality plan and to determine that it is effectively implemented and maintained. The scope covers all activities of the quality system affecting quality of instruction. The responsibility of scheduling internal quality audits lies with the M.R. The arrangements made for conducting internal audits are:

- Documented procedure for planning and implementing internal quality audits has been established and maintained.
- The frequency of the internal quality audits has been decided based on the status and importance of the activity but in no case the frequency shall be less than once in six months.
- The audit of an area/activity would be carried out by trained personnel other than those directly responsible for the said activity.
- The results of the internal quality audits are recorded and report is given to concerned functional Head.
- Timely action on the reported non-conformities is planned and taken by concerned functional Head.
- Follow-up audit is conducted in-order to verify and record the implementation and effectiveness of the corrective action(s) taken.
- The results of the internal quality audits are sent to M.R. for management review and record.

MANAGEMENT REVIEW

The review of the quality system shall be carried out once every six months to ensure continuing suitability, adequacy and effectiveness in satisfying the requirements of the standard and the quality policy of the University. The review includes assessing opportunities for improvement and the need for change to the quality management system.

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year :

Please See Annexure 2

7.3 Give two Best Practices of the institution *(please see the format in the NAAC Self-study Manuals)*

Please see Annexure 3 & 4

7.4 Contribution to environmental awareness / protection

The University has very lush green campus. The Horticulture Section of the University is responsible to maintain the lawns, fruit orchard, Nirvana Park (A 6 Acre Park containing 3000+ plants of difference species) and other areas. The University has also won many prizes in state level flower competitions.

PARYAVARAN WELFARE SOCIETY (PWS)

Tree Plantation Drives: Rapid constructions and mushrooming of housing colonies have led to the depletion of green cover in many parts of our country. The importance of trees in purifying the air, reducing global warming, preventing soil erosion, conservation of water, maintaining the ecological balance, providing natural resources as medicines, habitats for faunal species, providing nutrients to the soil etc. is well known. Unfortunately, the overall green cover, not just in Patiala but in other parts of the country is also reducing and as a consequence of this, pollution is increasing at an alarming rate. Increasing the green cover by tree plantation is one of the easiest yet effective measures towards reducing this imbalance.

During the July to September 2014, PWS carried out tree plantation drives at different locations within the Thapar Institute of Engineering and Technology University and nearby areas of district Patiala like Central divider Sirhind road, Central divider Rajpura road and Power house colony.

So if you want to save our mother earth from further destruction please do contribute because your little contribution is the only thing that is needed for the big cause of conservation.

7.5 Whether environmental audit was conducted? Yes [ ] No [√]

7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis):

Please see Annexure 5

8. Plans of institution for next year.

S. No.	Success Metric	Current Status	Goal (Within 5 years)
1	**Position in Indian Ranking by various organization/bodies**	**Top 20 in the country**	**Amongst the top 10 in India**
	Position in Asian Rankings – QS or other reputed bodies	**Appeared in 200+ list in QS BRICK 2015**	**In top 100 in QS BRICK in next three years**
2	**Research Funding from national and international sponsoring organizations/ industries**	**Rs 15.0 Crore per year**	**Rs 30 Crore per year**
3	**Publications in international peer reviewed journals** **number of citations**	**500 + in SCI/SCI per year** **10000+ citations till date**	**1000 in SCI/SCI Expanded per year** **25000 citations**
4	Quality of UG entrants	80% of the admitted students are within top 12% of the National JEE	80% of the admitted students are within top 8% of the

		test conducted in the country	National JEE test conducted in the country
5	Employability of graduates (overall)	UG : 80% PG: 50%	UG: 95% PG: 75%
6	International students and faculty	Students: < 1% Faculty: Nil	Students: 5% Faculty: 2%
7	**International Accreditation – ABET**	**Applied for Mechanical Engineering program and ABET Committee reviewed the Mech Engg Program for the eight ABET criterion in Dec 2015.** **The team reported no deficiencies in its formal report.** **Formal Accreditation result in August 2016**	**3 other Engineering programs in the next 1 years**

Name Prof Ajay Batish *Name Prof Prakash Gopalan*

_____ _____

Signature of the Coordinator, IQAC *Signature of the Chairperson, IQAC/ Director*

_____***_____

Annexure: I

Feedback from Alumni and graduating students

Feedback from Alumni and graduating students is collected to measure the attainment of student and learning outcomes.

Student Outcome Assessment Process

The step by step process for assessing program outcomes is tabulated in Table 4.1.

Step-by-step process for assessing Student Outcomes

Step 1: The Program coordinator analyses each student outcome by breaking down each outcome into several performance criteria (PC) and weightage and rating scale has been defined for each PC (actions that explicitly demonstrate mastery of the abilities specified). In addition, well designed surveys were used to assess each outcome.
Step 2: For each outcome define performance indicators (Assessment criteria) and their targets.
Step 3: Identify/select courses that address the outcome (each course contributes to at least one of the outcomes). Hence, each outcome is assessed in several courses to ensure that students acquire an appropriate level in terms of knowledge/skills of an outcome.
Step 4: The module coordinators collects the qualitative and quantitative data and is used for outcome assessment in a continual process.
Step 5: The Program Assessment Committee analyzes the collected data. If the assessed data meets the targeted performance value specified in step 2, the outcome is attained.
Step 6: The Department Academic Affairs Committee recommends content delivery methods/course outcomes/ curriculum improvements as needed. In case the targeted performance for some outcome is not met, a corrective action plan is put in place which serves as a feedback to the process for continuous improvement.

This assessment is carried out using the following measurable and quantitative parameters and survey/questionnaire techniques/tools.

Assessment Tools

The assessment process uses both direct and indirect measures to measure the attainment of each outcome. The examples of such measures are given below:

Direct Measures through:

- Examinations
- Assignments
- Projects or any other instrument used by the academics for assessment

In-direct measures through:

- Surveys and questionnaires
    - Course Survey
    - Graduating student's survey
    - Alumni survey
    - Employer survey

Course Survey

Course Survey is completed for every course in each semester to get a formal feedback from students for the courses offered in a semester and provide objective information to the faculty for self-appraisal, self-improvement & development. Formal student feedback is obtained online through semester-by-semester mandatory course evaluation using course survey form and also through discussions with individual students as well as student representatives on the Student Consultative Committee (SCC). The course survey results are compiled by the individual course instructors for his feedback. The detailed feedback report on each course is available to the department head, dean and the Director. This feedback is generally for self-improvement of the faculty. However, in cases when there is an issue which has been repeated or some feedback needs immediate attention, action is taken as appropriate. Also faculty members also provide useful feedback as part of their annual appraisals or during promotion reviews. Summaries of the results are open information and available to the department head. Faculty may report more information from the surveys to the department head, and often do as a part of annual reviews and tenure/promotion reviews.

Graduating student's survey

A questionnaire survey is used to measure the level of achievement of expected student outcomes and also generally about the program. This questionnaire was filled by about 25% of the graduating students picked randomly. The department proposed to make it mandatory for all the graduating students to complete this questionnaire from 2013. Each graduating senior in Mechanical Engineering completes two written survey forms during the month of graduation. The student is asked to rate his perception of achievement of the student outcomes on a scale of 1 to 5 where 1 signifies a poor outcome and 5 signifies a high level of achievement of objectives. The target is set at a minimum average score of 3.0 on the 5 point scale. The assessment results have been documented for the year 2012 and are discussed in the meeting of department faculty to make action points for initiating corrective and preventive actions.

Alumni survey

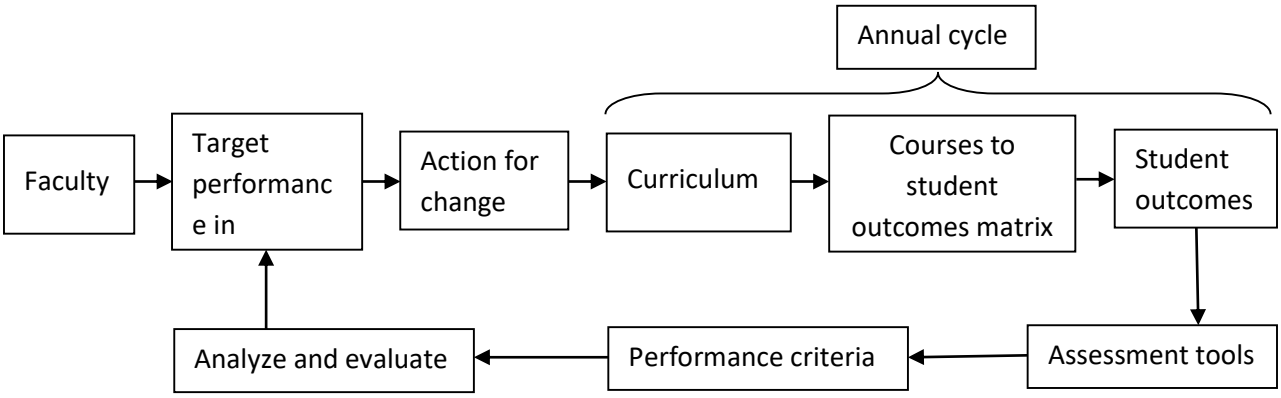
It is believed that the perception of students change from the time of graduation to some point in their respective careers as they get more mature and have learnt tricks of the trade on the job. At this point of time, they are in a better position to provide more valuable and objective feedback on the learning in their undergraduate program and also how much of the student outcomes (on some scale) have actually been possible. To obtain this information, a survey was conducted for practicing alumni who graduate during the last 2 to 5 years. This survey like the graduating student survey was targeted at the student outcomes achieved during the last 2 to 5 years. Again, the respondents were asked to rate each outcome on a scale of 1 to 5. The findings of the survey are being processed and will be used for effecting improvements in the program to achieve the program educational objectives and program outcomes. The Alumni survey was administered by the Alumni Relations Office which had the databank of the alumni.

Employer survey

All the students of program to be accredited are required to spend a full six month's semester in the industry completing an industrial project under the joint supervision of industry supervisors and Thapar University faculty. All the faculty members are required to visit one or two organizations two times during their six month's semester in the industry for evaluation of students placed for their work term in these organizations. This provides an opportunity to take feedback of our graduated students working in these organizations. During the course of interaction with the employer of our students, the employers provide information on their performance against each outcome and the employers are requested to fill survey form to compile the record of employer survey. The survey form, like the other forms, has questions related to the student outcomes. The rating is again given on a scale of 1 to 5 with 5 representing the best performance.

On the basis of results of assessment tools, the assessment of level of attainment of each outcome is carried out. The assessment loop for each student outcomes is shown in Figure 4.2

The student outcomes assessment loop is shown below:



Annexure: II

Action Plan for Next Year

A comprehensive "To-do" list of activities to be undertaken during next year is as under:

1. Academics and Research

- Prepare an implementation report of the harmonized curriculum and discuss with Trinity any feedback from academic staff and students.
- Develop and review the course learning outcomes for the subjects taught by their respective departments in Year 3 & 4. The scheme for years 3 & 4 has already been discussed and agreed in the previous visits. Any new developments after the BoS and Senate meetings to be discussed with Trinity.
- The syllabi of all courses (wherever not done already) to be finalized and signed off by the respective departments. The respective representatives of each department to complete the ground work before the visit. This should include in-house discussions within the departments and seeking inputs from all colleagues in the department.
- Senior design projects and individual research projects to be discussed and collect samples of projects that may be replicated or those may provide some inspiration to our students. A list of all senior design projects during the last five years to be collected.
- Embed in the projects being offered at Trinity during the next term.
- Shadow academics in the courses of your interest and gain insight into assessment, evaluation, and guidance to students. If necessary, attend classes wherever possible.
- The 3rd and 4th year courses are to be reviewed to provide a greater reliance on self-directed learning, mini-project within the modules, research-led teaching, use of project work and assignments.
- The members from each department will meet relevant people in their respective departments at Trinity to explore possibilities of collaborative research activities that can be undertaken.

2. Engineering Design Projects

- Clear any doubts we may have on implementation of engineering design projects.
- Learn all the details of electronic portion in the Mangonel project. As suggested by HECED, Dr Alpana will act as the course coordinator for this portion when the project runs at Thapar during the next semester.
- Dr Alpana and Mr Jawanda will join the relevant TCD academic staff responsible for the Mangonel project and learn everything hands on while it is conducted at Trinity.
- Representatives of ECED and CSED to obtain more information regarding the Buggy project.
- Specific activities to be undertaken by Mr A S Jawanda
    - Learning the Mangonel project including all assignments and assessment.
    - Learning of Arduino software and Guitar project.
    - Case based learning experience and conduct of lab classes
- Develop and detail the infrastructural and material requirement for various projects (Catapult, Buggy and others). This will include the lab space requirement for the projects.
- Document the Standard Operating Procedure (SOP) for evaluation of the projects and also how learning outcomes for these projects are attained.
- Identify and develop some more project themes that can be offered at TU in view of the larger intake of students.

3. Examination

- Review of Question Papers by Trinity for the coming semester. Discuss the modalities to implement this.
- Discuss the examination reforms being undertaken at Thapar.
- Functioning of external examiners, Court of appeal, etc
- Collecting sample examination question papers for year 3 and 4
- Understanding how are course portfolios developed and retained for future use.

4. Development of academic and lab Infrastructure

- Share and discuss the academic and lab infrastructure plan with Trinity
- If necessary, discuss the infrastructure development plan prepared by the Heads with TCD. Specifications of equipment may be finalized if not already done.

5. Other Actions

- Discuss and develop revised quality assurance procedures with advice from Trinity for Thapar UG & PG programmes. These procedures will be used by Trinity's Quality Office to review the implementation of the contemporization program.
- Thapar had received recommendations for academic development, and extensive advice regarding implementation from senior Trinity academic and administrative staff during the academic review in November 2014. Evaluate the progress of Thapar's implementation of recommendations.
- Establish targets of performance in teaching, research and governance with advice from Trinity which will be assessed to monitor progress.
- Develop and document the revised academic governance procedures with advice from Trinity and these will be reviewed by the steering committee.
- Help settling the pilot cohort of 8 students from our 2nd year programs who would have transferred to Trinity by then.
- Discuss modalities for the students admitted in the credit transfer program in July 2015 who will transfer to TCD in September 2017 for the final two or three years.
- TU team will finalize the requirements for exchange and visiting students.

6. Anchoring of Schools

TU team will set up meetings with the Heads of Schoolsof Maths, Science and Chemistry to detail the action plan to be followed for anchoring the TU Maths and Science Schools. The Maths and Sciences schools at TU primarily offer only PG programs and also support the engineering departments in teaching of Maths, Science and humanities modules. It is proposed to initiate a similar activity that was followed for the engineering programs also for the sciences and maths programs. Some of the steps proposed are as under:

- The schools of Physics, Chemistry and Maths will undergo an academic review by Trinity. TU schools will submit a self assessment report to Trinity for the review process.
- TCD and TU would jointly analyze the findings of the review and submit an action plan for implementing the findings of the review.
- TU will depute heads of the Schools to TCD for appropriate period for exposure and training for implementing the enrichment program for the mutually agreed period in 2016. The TU team will harmonize the curriculum of the PG programs.
- The schools will check the possibility of offering joint programs akin to engineering programs.

7. Job Specifications for two Professor positions

Thapar has agreed to sponsor two positions of full Professors at Trinity; one in Computer Science and the other in Engineering. TU and TCD will jointly detail the deliverables and outcomes which will go with the job specifications. The team will further discuss three or four thematic subject areas in which the Professors need to be hired. They would lead a group of young academics and PhD students.

8. PG Programs

Thapar Institute of Engineering and Technology University team will structure and detail the strategies for anchoring the PG programs offered by the four departments. Such strategies will include some or all of the following:

- Identify inter-disciplinary research thematic areas in consultation with TCD which will be pursued during the next 5 years
- Develop metrics for measurement of research output (Publication quantity and quality, PhD student(s) produced, research funding raised, measures of innovation and impact)
- Identify opportunities for joint research between departments in areas of mutual interest by offering structured PhD programs in joint supervision mode.
- Develop strategies to contemporize the postgraduate engineering and/or sciences programs.
- Exchange, on a reciprocal basis, faculty and students for limited periods of time for the purpose of education and/or research for postgraduate or PhD programs.
- Exchange of knowledge, faculty and academic staff for short-term and, as funding and other circumstances permit, longer-term projects and visits.
- Joint applications for research funding to various Government and Non-Governmental organizations.
- Setting up of at least one state of the art Research Centre at Thapar Institute of Engineering and Technology University over the next five years.

9. Centre for Academic Practice

We have requested Trinity to assist in the development of a CAP unit at Thapar and provide a Continuing Professional Development (CPD) programme in collaboration with Thapar Institute of Engineering and Technology University. Till this time, the Trinity CAPSL staff have designed, administered and evaluated a survey of Thapar staff to establish an understanding of the current teaching and learning landscape in Thapar and conducted an on-site preliminary assessment programme of workshops at Thapar to assess development needs in May 2015.

During this visit, the TU team will work with Trinity to design a bespoke professional development programme for teaching & learning for Thapar staff in line with the contemporisation programme. The TU team will seek advice in the development of a Teaching and Learning Development Centre at Thapar.

10. ERP

Implementation of ERP at TIET University and will include discussions on both Hardware and Software capabilities required for implementation.

11. Other points

- Research thematic areas
- What can we do for Master's and PhD courses?
- What changes we should implement for batches admitted in 2014 and prior?

Annexure: III

Best Practice -1

1. Academic Workload Model:

The primary purpose of the Workload Models is to assist in transparent and equitable distribution of work between faculty across various departments/schools. The workload model will be a key tool in relation to the efficient and effective use of resources. The design of the workload model may vary between Department/Schools, reflecting their specific nature and profile of the activities of each unit. However, the proposed model should be designed having regard to the core principles, and operational aspects as listed below.

Academic workloads will consist of three elements reflecting the core academic functions of teaching, research and contribution to University (administration)/scholarly activity. Just to emphasise again that the allocation model in each academic unit may consider the factors of that unit, particularly in relation to nature of outputs (e.g. only PG progarms, size of Department/School) and complexity of activity.

The precise design of the workload model will however adhere to some core principles as set out below. The model is broadly capable of capturing the workload of each faculty member and is designed to ensure fairness and transparency in relation to the expectations and opportunity for faculty to perform. The model will be flexible enough to cater for unanticipated needs of the Department/School particularly teaching, and in this regard, allocation of duties to faculty and the broad application of the model, is a matter for the Head of DPPC. The annual workload allocation will be available to the faculty of the Department/School for information.

Academic Workload Model – Operational Aspects

The following section proposes a common operational model to form the basis for the design of Department/School-specific workload allocation model using the above principles. A common operational model is needed to ensure a level of consistency between the designs of Department/School-specific workload allocation models across the University.

Unit of workload allocation

The basis of the operational model is that workload is described in terms of a nominal unit of workload allocation where the number of workload units that should be allocated to a full-time faculty member is the same across the University.

Assignment of Workload Units

Assignment of workload units to different activities can then be made by Schools based on local knowledge of the effort involved in their delivery. For example, if there are nominally 500 units in a full workload in a semester, a full course of 80+ contacts hours engagement would account for 100 workload units (a 20% time commitment). The number of units can be decided for the individual elements of the model and the numerical values are proposed for them. The model is designed to capture all the significant activities of faculty in the University. It is suggested that measurements should be standard across the University so as to ensure that workloads are equivalent for all members of staff.

The University proposes to have an Academic Workload Model in place for the coming academic year 2016/17.

The following template as shown in Table 1 uses three broad areas of activity carried out by faculty: Teaching, Research & Contribution and Scholarly Activity/ Administration. Some individual elements for inclusion in the model have been identified. For some elements values for workload units is proposed as existing at Trinity. Such standardisation will allow us to compare different departments and schools but the basic objective is to be able to compare workloads.

Basic principles

The workload model is designed to ensure equity between various faculty colleagues in the allocation of tasks; it ensures recognition for the different activities which contribute to the work of the University. It is proposed that for a full-time member of staff the number of workload units should be 1,000 units; all faculty members will be expected to contribute to the three broad areas of Teaching, Research & Contribution and Scholarly Activity/ Administration.

Research and Research Active

Faculty members that are research active according to the University criteria will be allocated a standard number of units (proposed at 200). It is proposed that the model should make no attempt to measure research output apart from the simple active/inactive category for the purpose of this model. Faculty members that are not research active should be allocated a lower number of units for time (assuming that everyone teaching at the university must have time to keep up with their discipline etc beyond simple preparation of teaching).

Seniority and Allocation between Areas

The model assumes that senior faculty spend less time teaching and more on research and administration. The model however assumes that all faculty have a standard norm for the division between different areas. It is also assumed that if some member of staff does not meet the minimum number of units in a particular area, he will need to compensate for it in another area. The model also assumes that this minimum allocation of units to teaching must be met.

The Basic Model:

Area	Activities	Range of Units (Illustrative)		
		Professor	Associate Professor	Assistant Professor
Teaching (Every faculty member must acquire the minimum number of teaching units unless exempted by official order)	Undergraduate and postgraduate teaching (lectures, labs, tutorials) taking account of contact hours, marking etc.	250-300	400-450	550-600

Research & Contribution	All research-related activity, not specified in individual workload	450-600	350-450	250-400
Scholarly Activity/ Administration	Administration (Department/School/ University positions);	200-250	150-200	50-100
Total		1,000	1,000	1,000

Detailed issues

1. Research

The 'reserved time' allocated for research could be fixed at 200 units and will be allocated to all staff who meet the requirement of being research active. A faculty member would be designated as a research active staff if he/she publishes at least 6 papers (single or co-authored) in a journal of repute (SCI/SSCI with a minimum impact factor of 0.5) in a three year block period. The other units can be accumulated are by supervising, commercialising, attending conferences counts as part of research. Departments/Schools may wish to encourage specific activities and such activities could receive similar recognition. The methodology proposed to accumulate these units is as under:

Research and Contribution	Suggested Units	% of total time
Research active (Minimum 6 papers in SCI/SSCI with IF of min. 0.5 in a block period of 3 years)	200	20%
Dissertation PG	20	2%
Research supervision (primary supervisor)	50	5%
Research supervision (co-supervisor)	20	2%
PI of an ongoing research project	100	10%
Co-PI of an ongoing research project	60	6%
PI of an ongoing consulting project	30	3%
Co-PI of an ongoing consulting project	20	2%

2. Teaching

The model allocates units per contact hours (@ 2 units per lecture hour and 1 unit per lab/tutorial hour). For example an assistant Professor with a teaching load of L:T:P :: 6:2:6 per week in a semester can accumulate units as under:

Lecture 6/week for 15 weeks @ 2 units per hour = 180 units

Lab/Tutorial 8/week for 15 weeks @ 1 unit per hour = 120 units

Thus the total number of units accumulated in a semester = 300 units.

3. Scholarly Activity/ Admin

The scholarly work includes activities undertaken to promote University profile such as conduct of workshops, conferences, seminars, members of journal editorial boards, representing TU at National/International events or similar activities. The administrative activities can be defined (there could be many more) as under:

Scholarly Activity/ Admin	Suggested Units	%
Deputy Director	250	25%
Dean	200	20%
Head of Department/School	150	15%
UG/PG/PhD Coordinator	100	10%
Time Table coordinator	60	6%
Project Semester Coordinator	100	10%
Member of University Committee	10	1%
Member of Dept/School Committee	5	0.5%
Coordinator Dept/School reports	30	3%

* Maximum contribution to total workload for supervision of PG and PhD students is 200

**Maximum contribution to total workload for Contribution to University is 250

***The primary responsibility of the lab and tutorial sessions is with the course coordinators and those engaged in lecturing the classes. It is their responsibility to ensure that the instructors in such sessions are trained and updated.

Annexure: IV

Best Practice – 2

PROCEDURE FOR MEASURING ATTAINMENT OF COURSE LEARNING OUTCOMES – DIRECT MEASURES

The assessment process used to measure attainment of CLO's is described as under:

The assessment process uses both direct and indirect measures to measure the attainment of each outcome. The examples of such measures are given below:

Direct Measures

- Student Assignments
- Projects
- Examinations

In-direct measures

- CLO Surveys

To assess each course, we use CLO's defined for that course. For example in Course A, we defined four CLO's (LO1 to LO4) that need to be met to successfully achieve that outcome at a minimum target performance level for a course. In each course, we assess the level of achievement of each course outcome. The data are then combined to analyze and evaluate the program level achievement of each program outcome. If any student outcomes are not met, action is taken for improvement.

In the section below, the assessment of course A using CLO 1 is explained as an example. For example, at the course level, CLO1 reads

- *CLO1: Applying scientific and/or engineering principles towards solving engineering problems.*

CLO Attainment Assessment Process

The step by step process for assessing CLO's is tabulated below.

Step-by-step process for assessing Student Outcomes

Step 1: The Program coordinator analyses each course by breaking down into course learning outcomes and weightage and rating scale has been defined for each course. In addition, well designed surveys were used to assess each outcome.
Step 2: For each outcome define performance indicators (Assessment criteria) and their targets.
Step 3: The module coordinators collects the qualitative and quantitative data and is used for outcome assessment in a continual process.

Step 4: The Program Assessment Committee analyzes the collected data. If the assessed data meets the targeted performance value specified in step 2, the outcome is attained.
Step 5: The Department Academic Affairs Committee recommends content delivery methods/course outcomes/ curriculum improvements as needed. In case the targeted performance for some outcome is not met, a corrective action plan is put in place which serves as a feedback to the process for continuous improvement.

The procedure followed at the course level is depicted in Figure 1 below:

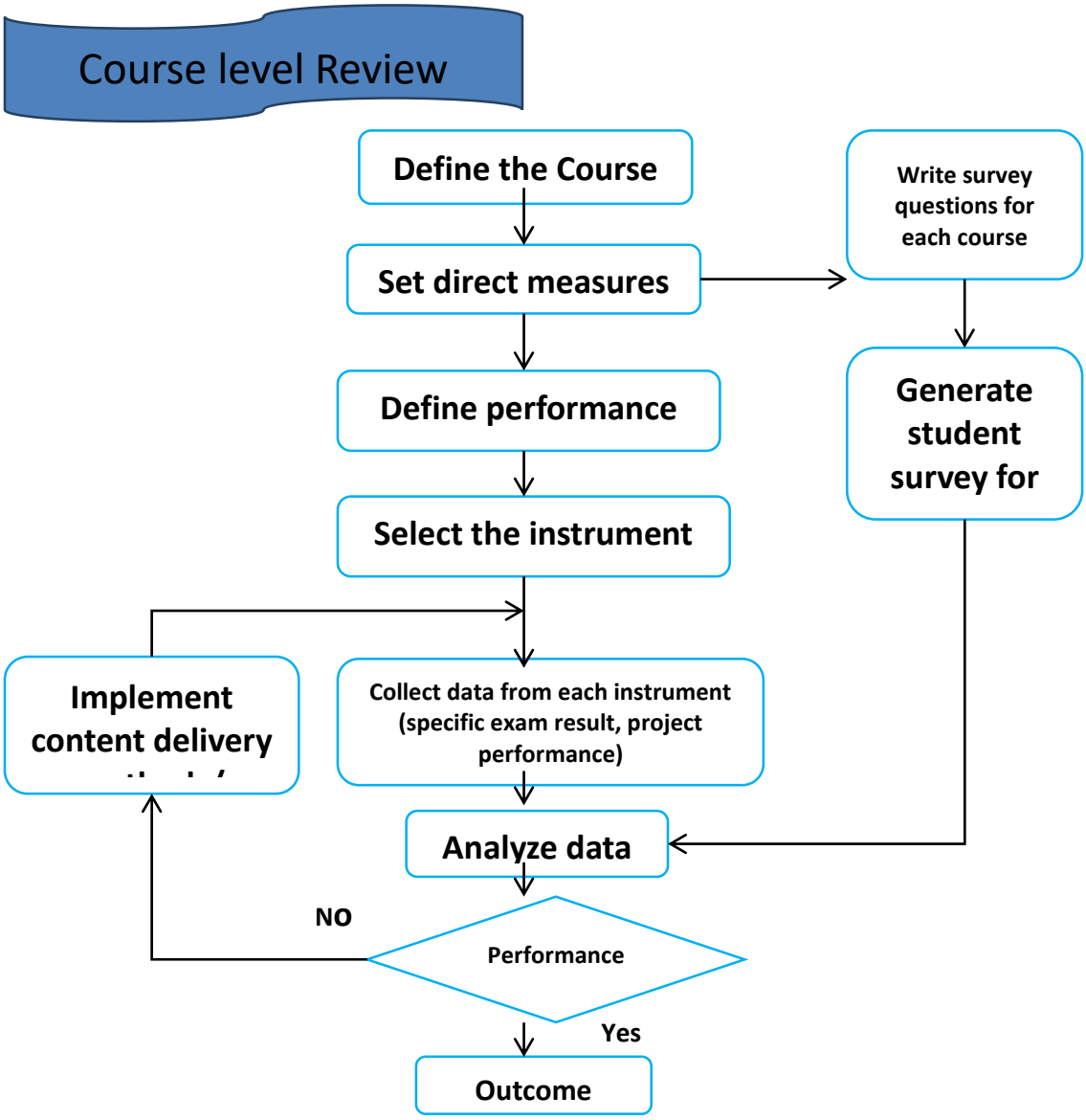


Figure 1: Assessment of attainment of CLO's for a course

Assignment/Examination level

Throughout the semester, the course instructor uses specific questions in tutorial or assignments, laboratories or examinations directly related to course outcomes. For example: in case of **Computer Aided Design** questions specifically targeting CLO1 were asked in end semester examination (EST). The student performance in this question is then summarized. At the end of semester, the course instructor looks at the overall performance of each student across all instruments used for evaluating each performance criterion.

The step by step assessment process for assessing the attainment of outcome for measuring attainment in course A using CLO1 is explained as under:

Assessment of course 'A'using CLO1

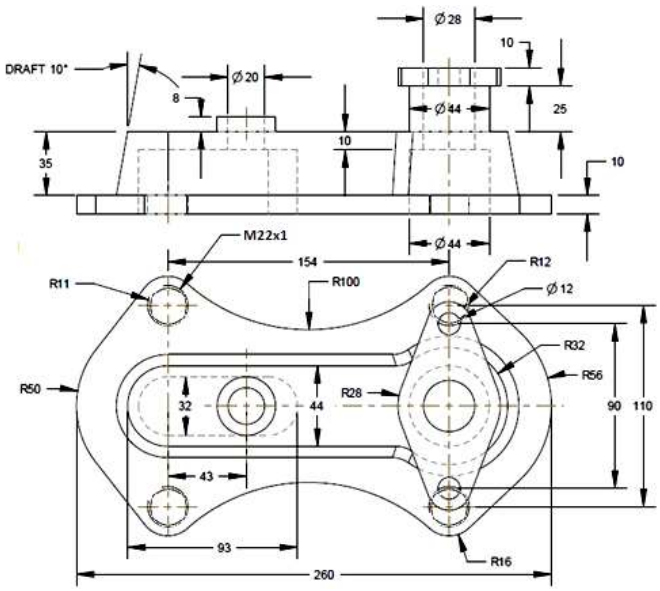
a.) Assessment Tool: Student's performance using course file

Course: Computer Aided Design (UME 401)

From the course portfolio the instructor identified the following question (Question No.:1 asked in EST, weightage 30 marks) specifically targeting CLO1 for assessing student's competency in achieving course outcome 'CLO1'.

Question:

Model the cover part below. Use pattern for the four M22 holes. To balance the weight of the part, the ∅44, 25 height pipe with the 110x R28, 10 height hydraulic joint connector above it is copied by translation to the left side of the part. Determine this translation distance.



The student performance in the above question is then analysed and the instructor scores the performance of each student using 1 to 5 rubric as shown in Table 1 below. Student's performance in the above question is given below:

Table 1: Student's performance in question targeting 'CLO1'; course: UME401

S. No.	Roll No.	Name	Marks (30)	Score (scale 1 to 5)
1.	101308083	PARAS	28	5

2.	101488012	MOHIT GOYAL	23	5
3.	101308102	SHREYAS BHAYANA	19	5
4.	101308098	SAMEER BHALLA	17	5
5.	101308123	VIVEK MITTAL	17	5
6.	101308117	VAIBHAV PRATAP SINGH	16	5
7.	101488018	VISHNU KALRA	16	5
8.	101308077	MANUTKARSH KIRPAL	15	5
9.	101308104	SHUBHAM BHAMA	15	5
10.	101308108	SIDDHARTH GHIYA	15	5
11.	101308116	UTSAV MUDGAL	14.5	5
12.	101308101	SHIKHAR GAUR	14	5
13.	101488016	SARANG VASHISHT	14	5
14.	101308112	SIMRANDEEP SINGH BHULLAR	14	5
15.	101308122	VISHAL SOLANKI	14	5
16.	101308094	SAGAR SINGLA	13	5
17.	101308103	SHUBHAM	12	4
18.	101308110	SIDDHARTH VASU	12	4
19.	101308113	SOURAV SINGLA	12	4
20.	101308118	VARMEET SINGH GULATI	12	4
21.	101308069	KIRAT SINGH BASUR (CR)	11	4
22.	101308070	KSHITIJ SHARMA	11	4
23.	101488014	NIKHIL GUPTA	11	4
24.	101308119	VARUN ATRI	11	4
25.	101308120	VEDANT MANSOTRA	11	4
26.	101308124	VIVEK PUNDIR	11	4
27.	101308114	TANJAY PATHAK	10	4
28.	101308082	PARAMJOT SINGH	9	3
29.	101308080	NIKHIL GANTA	9	3
30.	101308088	PULKIT KAPOOR	9	3
31.	101308105	SHUBHAM CHAUDHARY	9	3
32.	101308109	SIDDHARTH GUPTA	9	3
33.	101308111	SIDHANT	9	3
34.	101308033	EKANSH KUMAR SRIVASTAVA	8	3
35.	101308081	NITIN BANSAL	8	3
36.	101308078	NIDAN PRAKASH	8	3
37.	101308085	PRABHMAN VIR	8	3
38.	101308090	RAJAT GUPTA	8	3
39.	101308097	SAMDEEP SINGH SABHARWAL	8	3
40.	101488015	SANKIT	8	3
41.	101308115	TANUJ LAMBA	8	3
42.	101308091	RAMNISH KUMAR	7	2
43.	101308093	ROHAN KAUSHAL	7	2
44.	101308089	PUNEET SINGH	6	2
45.	101308096	SAHIL SHARMA	6	2
46.	101308099	SARTAJ SINGH GILL (CR)	6	2
47.	101308074	MANIK SAHARAN	5.5	2

48.	101308079	NIKHIL AGGARWAL	5	2
49.	101488013	NAVJOT RIHAL	5	2
50.	101308125	YASHWARDHAN SHARMA	5	2
51.	101308084	PRABAL SHARMA	4	1
52.	101488008	ISHAN	4	1
53.	101308071	LOKENDRA KUMAR	3	1
54.	101308075	MANISH PANDOH	3	1
55.	101488017	VARUN BANSAL	3	1
56.	101308073	Manavdeep Singh Grover	1	1
57.	101308106	SHUBHAM GUPTA	0	1
58.	101308121	VIKRANT NANDA	0	1

The rating on a scale of 1 to 5 has been done using a rubric which gives a score of 5 to top performers and 1 to poor performers. Accordingly scale of 2, 3 and 4 can be used for those in the middle.

The overall performance of students in the above question is then summarized as given in Table 2 below.

Table 2: Average score of student performance in CLO 1 for course A

Course	**% of students in each score**					**Average Score**
	5	**4**	**3**	**2**	**1**	
CLO 1	27.59	18.97	24.14	15.52	13.79	3.3

After completing this assessment directly from the questions given to students using various instruments, we also use in-direct instruments which include student course survey to get to a final assessment score for each CLO. These scores for each CLO are then summarized to obtain the attainment level for each student outcome.

The assessment completed using the surveys for CLO 1 is also provided below:

Assessment Tool: Course survey

Table 3: Average score of student course survey for CLO1; course: UME401

Course	**% of students in each score**					**Average Score**
	5	**4**	**3**	**2**	**1**	
CLO 1	25	34.1	27.3	6.8	6.8	3.64

Step 3- (a) Weighted average from CLO's

There were three CLO's which were used to assess the attainment of course objectives for course A. The course instructor(s) then decide that each CLO contributes to attainment does so at a varying level. The

faculty assigns weight on a scale of 1 to 5, describing how each CLO contributes to a particular course. Using these weights and scores from each CLO for the course, we compute the weighted average score for the CLO's using direct measurement. The sample calculation for evaluation of weighted average score of CLO 1 to CLO 3 using direct measurement is given in Table4 below:

Table 4: Weighted Average Student class performance (course portfolio) for CLO 1 to CLO 3 for course A

Courses	% of students in each score					Average Score	Weight
	5	4	3	2	1		
CLO1	27.59	18.97	24.14	15.52	13.79	3.3	5
CLO2	30	38	20	6	5	3.81	5
CLO3	40	32.5	25	2.5	0	4.1	4
Weighted average score	32.00	29.63	22.91	8.40	7.88	3.71	14

(b) Weighted average from student course survey

Assessment Tool: Course Survey

Table 5: Weighted Average student course survey for CLO1 to CLO 3 for course A

Courses	% of students in each score					Average Score	Weight
	5	4	3	2	1		
CLO1	25	34.1	27.3	6.8	6.8	3.64	5
CLO2	28	59	10	0	3	4.09	5
CLO3	18	70	12	0	0	4.06	4
Weighted average score	24.07	53.25	16.75	2.43	3.50	3.92	14

Step-4: Overall weighted average score for CLO attainment for course A (for example CLO1 to CLO3 in this case)

The program faculty decided to assign weights to each assessment tool. Using these weights along with weighted average student class performance, weighted average student course survey score (from tables above) and the score, we computed the weighted average for each course and is given in Table 6.

Table 6: Overall weighted average score of course A

Assessment tools	% of students in each score					Average weighted score	Assessment tool Weight
	5	4	3	2	1		
Weighted average student class performance	32	29.63	22.91	8.4	7.88	3.71	5
Weighted average student course survey	24.07	53.25	16.75	2.43	3.5	3.92	4

Overall weighted score for A3 performance criteria is given by

$$Overall = \frac{[3.71 \times 6 + 3.92 \times 4]}{6+4} = 3.79$$

The overall score for attainment of CLO's in course A is thus 3.79 on a scale of 1 to 5.

Annexure-V

Benchmarking scheme developed by Thapar Institute of Engineering and Technology University

The University has used most of the quality benchmarks as given by UGC to create radars for measuring performance. The benchmarks for various activities of the University are proposed as under:

ACADEMIC PARAMETERS			
S. No.	**Indicators**	**Method of Computation**	**Benchmark value**
1	Frequency of Syllabus revision	No of subject in which major revision was done in last review / No of subjects being taught	100%
2	Average no of working hrs of library	No of hrs library is open/ total no of hrs in a year	100%
3	Average no of activities like conducted / year 1. Workshops 2. Seminars 3. Symposia/Conference		Per Dept/ School 1. Two 2. Two 3. One
4	Demand Indicator	Total no of admissions in all courses per year / total no of candidates who applied	1:10
5	New programs introduced in last year	New programs launched / total no of programs	**15/42*100=35.7%**
6	Percentage increase in books/journal in last year	No of books/journals purchased in last year / No of books available at the beginning of the year	5%
7	Utilization of Central Library	Total no of visits / Total no of students and teachers x 180	30%
8	Assessment of teachers by students	No of courses in which assessment has been introduced / Total no of courses	75%
9	Number of NET/SET/GATE qualified students	Total No of GATE qualified students admitted / Total applications for PG programmes	**80%**
RESEARCH PROFILE			
1	No of research publications per teacher per year in refereed journals	Number of Research Publications / No of teachers	**1.95**
2	Research grant received per teacher per year	Total research grant received / No of teachers	**7.93 Lakhs**
3	Percentage of teachers attending seminars/ conferences by invitation or giving invited presentations per year	Total no of teachers attending seminars/ conferences by invitation or giving invited presentations / Total no of teachers	5%
4	Percentage of Departments/ Schools getting departmental	Total no of depts. who get support / Total no of departments/schools	**50%**

	support from various agencies like UGC, SAP, COSIST etc.		
5	Percentage of faculty getting awards, honors	Total no of awards/honors / Total no of teachers	2%
6	Citation Index	Citation value of all research papers/ Total no of research papers published	**14875/3041=4.9 per paper**
7	Percentage of full time research scholars	Total no of full time research scholars / Total no of research students	**60%**
GOVERNANCE			
1	Actual teaching days per yr		180
2	Minimum workload of teachers		40 hours
3	Teaching – Non teaching ratio		1 : 1
4	Percentage of teaching posts filled up	Teaching posts filled / Total no of teaching posts	100%
5	UGC Regulations: Whether UGC directions followed for minimum Qualification	No of teachers qualified as per UGC regulations / total no of teachers	100%
6	Timely declaration of results	No of exams in which results were declared in time / total no of exams	100%
8	Resources generated through external resources	Resources generated through external sources / total plan budget for the year	20%
9	Percentage of depts. Collaborating with other agencies	Total no of collaborations / total no of departments	100%
10	Percentage increase in physical infrastructure	Increase in physical space / space at the beginning of the year	5%

Annexure: V

SWOT Analysis

Strengths	**Weaknesses**	**Opportunities**	**Threats**
I – Faculty & staff			
• Excellent teaching skills • Team spirit-get along • Funded research projects • Commitment of staff to student education • Staff motivated and want international exposure • Conducive work environment • Financial support to attend conferences, workshops • Computer, internet facility at offices and residences • Awards of Excellence • Flexible cadre structure – growth opportunities • Establishing CAPSL (Centre for Academic Practice and Student Learning) to expose the 'entire faculty to in-house learning modules including e-learning during the next 3-5 years	• Technical staff • Faculty strength at senior positions • Student/teacher ratio is high in some programs • Less that 70% faculty with PhD in engg	• Need a flexible workload model that recognises the strengths of faculty • Promotion criteria should have regard to the workload model • Align teaching duties with staff interests • Review the recruitment criteria to enable the recruitment of best qualified suitable candidates • seek to improve staff:student ratio • Collaboration with reputed research labs. • Inter-departmental research & knowledge sharing • Consultancy	• Competition • Academic Leadership should be encouraged, recognised and promoted at all levels across the faculty • More strategic staff development planning • Seniority should not be the only factor in decision making and leadership appointments
• II – Research and Development			
• Sponsored research projects • PhD students • ME dissertations gets some research funding • International and national print and online journals • collaboration • Strong research areas and groups • Constituted the "Senate Research Committee" to discuss all the matters pertaining to policies of Ph.D. programmes and other research parameters like consultancy, testing and IPR cell.	• Publications in High Impact SCI journals • Number of full time research scholars • Number of patents • Dedicated area specific research labs/ group research • Computational facilities needs improvement (hardware and software)	• Create the culture whereby research is recognised and rewarded in terms of promotion and recognised as a significant contributor to the academic workload • Need an integrated research plan for the university, and the plan should identify selected areas in which Thapar can excel with regards to potential sources of research funding • Need to find mechanisms to get more and well-motivated Phd students (e.g. funded scholarships)	

		• Need to greatly increase collaboration within Thapar, across Indian and International universities, and with industry • Need to revisit their current industry – university relationship model • More staff should be encouraged and be enabled to seek out new funding sources and apply for research grants, particularly on a partnership basis • Funding earmarked to support staff publishing in high level international journals • Significant infrastructure investment, particularly in research laboratories • Research labs should also be used to support undergraduate curriculum • Research bulletin, book writing • Many funding sources in govt and private which can be tapped • Institute – industry collaborations • MoU's with institutions of repute • Establish centres of excellence in key areas • Tap talent from outside for knowledge up gradation • Encourage PhD/M.E. Dissertations on industry problems	
• III – Student Intake			
• Strong reputation • Calibre of undergraduate intake • Students want to get international exposure • Student satisfaction	• Intake quality of PG and PHD students' needs improvement	• Special coaching for weak students	

• Extra-curricular activities • Counseling cell • Overall personality growth through finishing school • Societies activities			
• IV – Teaching and Learning Process			
• Shift towards greater reliance on self -directed learning, mini-project within the modules, research-led teaching, use of project work and assignments • Monitoring of instruction delivery process • Periodic curriculum review • Variety of UG/PG programs • Project semester, students projects • Student feedback – SRS	• Lack of expertise in some areas • Number of free or professional electives	• Undergraduate programs in emerging disciplines • More industrial visits	
• V – Infrastructure			
• UG/PG Laboratories • Basic infrastructure • Multi-media facilities in classrooms • Enough campus space – infrastructure development opportunities	• Phasing out of obsolete equipment and slow Laboratory upgradation • Maintenance of machines/infrastructure • Inadequate built-up space • Renovation of faculty offices required & build a new seminar room • Number of class rooms • Power backup in some labs	• Department Library • Action on Industry Feedback • Involvement of industry in curriculum design • Seminar Room	
VI – Placement			
UG Student Placement is close to 100%	• PG students placement		
VII – General			
• Well established name of university brand name • Saleable & strong UG program • Accreditation NBA/NAAC • ABET accreditation for Mechanical Engineering program in final stage, formal results to be received in Aug 2016	• Some existing processes hinder good practices – example, the process to revise/update a course appears to be cumbersome • No central approach to research - Need to set up a research office.	• Need greater transparency and democracy and staff involvement in decision-making processes • Need a long term integrated strategic planning and include research, teaching and	

	• Inadequate admin and technical supports at department and central levels	learning, staffing, infrastructure, funding	

Annexure-VII

ACADEMIC CALENDAR 2014-2015

FIRST SEMESTER		
-	Registration* (***OTHER THAN FIRST YEAR STIET University DENTS***)	21.07.2014 – 25.07.2014
-	Commencement of Classes	21.07.2014 at 13:00 Hours
-	Late Registration (With late registration fee)	26.7.2014 to 11.08.2014(with late registration fee of Rs 1000/-)
-	Teaching (45 days)	21.07.2014 to 19.09.2014
-	Mid-Semester Test	22.09.2014 to 27.09.2014
-	Teaching (15 days)	29.09.2014 to 17.10.2014
-	Mid Semester Vacations * (05 days)	20.10.2014 to 24.10.2014
-	Teaching (30 days)	27.10.2014 to 05.12.2014
-	End Semester Examination	08.12.2014 to 20.12.2014
-	Winter Vacations* (12 days)	22.12.2014 to 02.01.2015
SECOND SEMESTER		
-	Registration*	05.01.2015 – 09.01.2015
-	Commencement of Classes	05.01.2015 at 13:00 Hours
-	Late Registration (with late registration fee)	10.01.2015 to 23.01.2015 (with late registration fee of Rs1000/-)
-	Teaching (45 days)	05.01.2015 to 06.03.2015
-	Mid-Semester Test	09.03.2015 to 14.03.2015
-	Teaching (45 days)	16.03.2015 to 15.05.2015
-	End Semester Examination	18.05.2015 to 30.05.2015
-	Summer Vacations * (47 days)	01.06.2015 to 17.07.2015
Summer Training for BE students after Second Year		
-	Survey Camp (4 weeks): For Civil Engineering Students	
-	Practical/Workshop Training (6 weeks): For the Students of Disciplines other than Civil Engineering	
New Session (2015-16) will start w.e.f. July 20, 2015		

Abbreviations:

CAS	-	Career Advanced Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CE	-	Centre for Excellence
COP	-	Career Oriented Programme
CPE	-	College with Potential for Excellence
DPE	-	Department with Potential for Excellence
GATE	-	Graduate Aptitude Test
NET	-	National Eligibility Test
PEI	-	Physical Education Institution
SAP	-	Special Assistance Programme
SF	-	Self Financing
SLET	-	State Level Eligibility Test
TEI	-	Teacher Education Institution
UPE	-	University with Potential Excellence
UPSC	-	Union Public Service Commission

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