

Institutional Development Proposal

1. INSTITUTIONAL BASIC INFORMATION

1.1 Institutional Identity

- Name of the Institution : **Jawahar Lal Nehru Govt. Engg. College,
Sundernagar, Distt. Mandi, H.P.-175018**
- Is the Institution approved : Yes
by regulatory body?
- Furnish approval no. : F. No. North-West/1-1413314562/2013/EOA
Dated 03rd April, 2013
- Type of Institution : Govt. Funded
- Status of Institution : Constituent Institution
- Name of Head of Institution and Project Nodal Officers:

Head and Nodal Officer	Name	Phone Number	Mobile Number	Fax Number	E-mail Address
Head of the Institution (Additional charge holder)	Prof. Lalit K Awasthi	01907-267199	94180-94770	01907-267199	lalitdec@yahoo.com
TEQIP Institutional Coordinator	Dr. Mohit Dhiman	01907-266728	94180-70377	01907-267199	mohit_mechanical@rediffmail.com
Nodal Officers for:					
Academic Activities	Dr. Champa Verma	01907-267688	94598-50050	01907-267199	Champaverma25@gmail.com
Civil Works including Environment Management	Ms. Madhu	01907-267688	098055-04509	01907-267199	gautamadhu@gmail.com
Procurement	Sh. Nag Singh	01907-266811	94180-00583	01907-267199	nagraj-ssamandi@rediffmail.com
Financial aspects	Sh. Nag Singh	01907-267291	94180-00583	01907-267199	nagraj-ssamandi@rediffmail.com
Equity Assurance Plan Implementation	Sh. Achhar Singh	01907-267688	94180-42605	01907-267199	asingh64@outlook.com

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1.2 Academic Information:

- Engineering Programs offered in Academic year 2013-14

S. No.	Title of Programs	Level (UG, PG, PhD)	Duration (Years)	Year of Starting	Sanctioned annual Intake	Total student strength
1	Mechanical Engg.	UG	4 years	2006	60+3*	63
2	Textile Engg.	UG	4 years	2006	60+3*	63
3	Electronics & Communication Engg.	UG	4 years	2010	60+3*	63
4	Civil Engg.	UG	4 years	2010	60+3*	63

- Whether Institution is accredited? Applied for
- Grade ---
- When ---
- Accreditation Status of UG programs:

Title of UG Programs being offered	Whether eligible for accreditation or not?	Whether accredited as on 31 st December, 2014	Whether "Applied for" as on 31 st December, 2014
Mech. Engg.	Yes	Applied for	Yes
Textile Engg.	Yes	Applied for	Yes

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1.3 Faculty Status (Regular/On-Contract Faculty as on March 31.11.2013)

Rank Faculty	No. Of Sanctioned Regular posts	Present Status: Number in Position												Regular Faculty	Vacancies	Total Number contract faculty in
		Doctoral				Masters				Bachelor						
		Engg. Discipline		Other Discipline		Engg. Discipline		Other Discipline		Engg. Discipline		Other Discipline				
		R	C	R	C	R	C	R	C	R	C	R	C			
Professor	7	1	-	-	-	-	-	-	-	-	-	-	-	1	6	-
Associate Professor	13	1	-	-	-	-	-	1	-	-	-	-	-	2	11	-
Assistant Professor	43	2	1	2	3	3	12	1	-	-	1	-	-	8	18	17
Total	65	4	1	2	3	3	12	2	-	-	1	-	-	12	35	17

Note: Vacancies of Professors will be soon filled up after entrance test.

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1.4 Baseline Data (all data given for the following parameters to ALL disciplines)

Year: 2015-16

S. No.	Parameters	
1	Total strength of students in all programs and all years of study	1045
2	Total women students in all programs and all years of study	220
3	Total SC students in all programs and all years of study	222
4	Total ST students in all programs and all years of study	54
5	Total OBC students in all programs and all years of study	161
6	Number of fully functional P-4 and above level computers available for students	150
7	Total number of text books and reference books available in library for UG and PG	7426
	Reference Books	1500
	Student-teacher ratio	1:15
8	% of UG students placed through campus interviews	59.37
9	% of PG students placed through campus interviews	-
10	% of high quality undergraduate(>75% marks) passed out	-
11	% of high quality postgraduates (>75% marks) passed out	-
12	Number of research publications in Indian refereed journals	20
13	Number of research publications in international refereed journals	16
14	Number of patents obtained	-
15	Number of patents filed	-
16	Number of sponsored research projects completed	-
17	The transition rate of students in percentage from 1 st year to 2 nd	100%
18	IRG from students fee and other charges (Rs in lakh)	194.55
19	IRG from externally funded R&D projects, consultancies (Rs in lakh)	2.72
20	Total IRG (Rs. In lakh)	3.75
21	Total annual recurring expenditure (Rs in lakh)	382.65

2. Institutional Development Proposal (IDP)

2.1 Executive Summary

Today, there is wide agreement that great universities/institutions have three major roles to play: (1) excellence in education of their students; (2) research, development and dissemination of knowledge; and (3) activities contributing to the cultural and civic life of the society. The crucial factors which makes the institutions prominent internationally is the quality and significance of academic research, student faculty ratio, adequate technical support for teaching and research, undergraduate-graduate student ratio, adequate funds and per capita student expenditure. This report has been prepared keeping in view these factors and steps have been proposed in this report to match these targets with top-ranking institutions.

In order to provide quality education and produce competent technical manpower to match the need of the country, the main focus of this IDP is to modernize various Labs and Workshops and to remove the obsolescence. The main concern of the modernization will be to enhance the functional efficiency of the Institution. During the implementation of the IDP, more effective procedures will be adopted in the recruitment of staff, provide career opportunities; improve the service conditions and consultancy norms. Besides teaching the students, teachers/ faculty will be involved in research projects and development of effective teaching and learning resources. In addition to this staff development programme will be integrated at State, Regional and National level.

More and more resources will be generated to enhance the capacity of the Institution, so that better services to community and Industry can be provided. Also at Institution level creative/innovative work, cultural activities and sports activities will be strengthened for the overall development of the students. Institute Industry interaction will be enhanced to benefit students and staff.

The definition of what makes a world class university is subjective. But the best universities/institutions are large with wide subject coverage. Jawahar Lal Nehru Govt. Engineering College, Sundernagar has evolved a strategic plan for five years (2014 – 2019) to enhance its competency and scope of coverage. Vision, mission, and goals of the institute are formulated to provide it a proper direction and growth.

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Vision

To impart quality technical education with skills and creativity dedicated to innovation and excellence that will prepare the students for leadership roles and socio-economic growth of the nation.

Mission

To deliver technical education programs and services that recognizes and embraces the importance of interdisciplinary collaborations and meet the changing needs of society and industry through excellence in education and research thus contributing to the advancement of society which will include

- Focus on students to provide quality education,
- Thrust on creativity, innovations and generation of new knowledge,
- Application of knowledge to develop and implement solutions for global problems,
- Interaction with industry and collaborations with top-tier institutions,
- Contributing to the well-being of the society, and
- Recognition of our activities.

2.2 SWOT Analysis

SWOT analysis was conducted by a group of faculty members and few students drawn from each discipline having different perspectives. This was done to bring the stakeholders together and encourage their participation in and their adherence to institutional resulting strategy. To get the best objective results, the team held a day-long brain-storming session to identify the key factors in each of the four categories viz. Strengths, weaknesses, opportunities and threats.

After finishing the brain storming session, a comprehensive list of key factors was prepared under each category within the context of institutes vision, mission, and purpose. Priorities were assigned to the listed factors. Finally the factors in each category were listed in order from highest priority at the top to lowest priority at the bottom thus completing the SWAT analysis. The final result of analysis, castigatory wise, is listed below:

Strengths:

- Aspiration of our Youth to pursue Technical Education Undergraduate education
- Increasing number of Committed Students
- Undergraduate education
- Adequate Govt. support
- Better location & connectivity

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Weaknesses:

- Lack of senior faculty
- Lack of technical manpower in labs and central facilities
- Lack of basic infrastructure - Land, Buildings, Residential and Sports facilities
- Lack of research facilities
- Lack of academic managerial and financial autonomy
- Absence of local industry
- Low ranking of the college

Opportunities:

- The World Bank Project (TEQIP) which is necessary resources for upgradation of technical education
- IT tools for Technology Enhanced Learning and for widening the reach of Technical Education
- Increasing interest of Industry Associations (such as CII, FICCI, ASSOCHAM) and of Professional Societies to partner and collaborate with academic institutions
- Networking of with R&D Laboratories and industry
- Collaboration with nearby institutions - IIT Mandi & NIT Hamirpur
- Support from alumni to their Alma Mater

Threats:

- No real job environment for graduates
- Young faculty turnover
- Entry of foreign institutions to India - offering foreign degrees - quality concerns need to be addressed immediately

2.3 Program Objectives and Expected Outcomes

(a) Programme Educational Objectives (PEOs)

The importance of education as the foundation for achieving national objectives and building a more inclusive, equitable and sustainable society is well known to every citizen. India in recent past has witnessed a number of reforms in education sector which have significantly affected the supply and demand and education quality. The concept of higher quality, lower cost of production and service are the emerging needs of today's customer. However, it is a matter of great concern for education institutions that the products (students) are not meeting the initial prerequisite standards of industries. Hence it is necessary that effectiveness and accountability of institution be increased so that the students are acceptable to the industry.

This, however require, integration of teaching with research with strong science base. Due importance has to be given to humanities and social science in engineering curriculum. The Institute has to be given more autonomy with adequate balance between autonomy and

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accountability. The institution need to show a greater commitment to the economic and social development of the region and contribution to the industry in particular.

Jawaharlal Nehru Govt Engineering College Sundernagar (JNGEC) identified Programme Educational Objectives (POEs) taking into account national vision, international policies, global scenario and stakeholders and regional needs. These POEs are described herein together with that the steps the college will initiate to achieve the vision and mission over the next five years. The stakeholders were actively involved in the process of defining and redefining the PEOs and are specific to the programmes being offered by the college. They are specifically aligned to the vision and mission of the college.

The college plans to achieve the vision through the pursuit of six distinct goals, each of which encompasses specific objectives, strategies, and action plan. These goals are listed here and are described in more detail in subsequent sections:

- PEO1. To develop comprehensive strategy to provide excellence in undergraduate education that will enable the development of leaders for our technology-driven society.
- PEO 2. Enhance Quality of Students.
- PEO 3. Establish centres of excellence to promote research and innovation.
- PEO 4. Technology development, industry collaboration and Entrepreneurship.
- PEO 5. Enhance external recognition for the Institution.
- PEO 6. To establish comprehensive strategy for increased funding.

Strategic Action Plan for Achieving the POEs

- PEO1. **To establish comprehensive plan to provide excellence in undergraduate education that will enable the development of leaders for our technology-driven society.**

Quality is the development of intellectual skills and knowledge that will equip the students to contribute to society as innovators, decision makers and leaders in the global economy. Faculty, curriculum, and industry-institution interaction are the basic inputs and good infrastructure, autonomy, faculty's research; development activities play a significant role in imparting quality education. The college plans to initiate the following steps to achieve this objective.

Strategies:

1. Recruit, develop, support and retain a world-class diverse faculty and instructional staff dedicated to education, research, technology development, and entrepreneurship.
2. To seek complete autonomy in academic, financial and administrative areas to devolve more authority for the institution to take all decisions including curriculum, examinations, etc. expeditiously.

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3. Offer curriculum that focuses on building student's competency, confidence, courage and passion for innovation and skill development to meet the needs of the stake holders.
4. To carry out the much needed academic reforms to impart better quality education that is oriented towards employability and innovation.
5. To seek accreditation for all the programs.
6. To provide opportunities for the faculty to enhance their qualifications.
7. To provide opportunities for the faculty to enhance their knowledge by attending various quality improvement programs viz. workshops, seminars, conferences, summer and winter schools, training programs, etc.
8. To provide a conducive atmosphere to the faculty to effectively discharge their duties, responsibilities and thus contribute to the growth of the institution.
9. To develop adequate learning resources and provide state-of-art laboratories, computing, and other facilities.
10. To boost the morale of the students by motivating them for learning and to develop and engage in international partnerships such as study abroad courses or courses that include a study abroad component.
11. To create a learning environment that allows the students to put theory in to action through project and design projects and provide opportunities for overall personality development that will enable them to achieve higher grades in their respective fields.
12. To arrange special lectures from eminent persons from industry, R & D organizations and other institutions on regular basis.
13. To arrange short term programs for faculty and students in collaboration with industry.

PEO2. Enhance Quality of Students

The quality of educators and curriculum are the most important factors in a student's scholastic performance, but the quality of infrastructural facilities – *where* students learn – is often overlooked. Overall ambiance can also significantly contribute to the enhancement of student's ability to learn by keeping them healthy, attentive and present. However, faculty engagement is broadly required to realize higher levels of educational quality and student attainment. The path to that broader engagement lies partly in addressing the changes and challenges that represent key aspects of the current context of our higher education.

At present, the vast majority of faculty are contingent, and more than half are part-time. The current working conditions of faculty in contingent positions compromise student attainment. That is particularly true of part time faculty, who are often “just in time” hired. We need to change this trend to bring a worthwhile change in the quality of education and recruit quality faculty. Keeping in view the challenges and the present context of higher education, we list below some of the steps for facilitating higher attainments by the students.

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Strategies:

- Continually improve and innovate engineering curricula, including content and method, to meet students' and stakeholders' changing needs.
- Align curriculum and educational offerings with college vision and mission
- Develop and support programs to help students become successful learners.
- Add larger interdisciplinary educational component to a strong fundamental disciplinary engineering education.
- Support student activities and leadership opportunities; provide an opportunity for a leadership experience to every student.
- Develop effective Internet-based learning approaches for both on-campus and off-campus students.
- Implement regular communications with graduate students regarding their expectations for progress.

PEO3. Establish centres of excellence to promote research and innovation

Research and development activity is very much essential for the educational institutions to take the nation on sustainable and inclusive growth path. Promoting quality research requires, apart from other things, quality programs; qualified, experienced research oriented and motivated faculty, research students and good infrastructure. Better environment, access to scientific Journals and other modern computing and library facilities are the other inputs to achieve the desired goals. Adequate financial provision must be present to carry out research activities.

Six key thrust areas have been identified to intensify the R&D efforts for a more sustainable R&D system in the college with greater competitive funding, and a more integrated, collaborative and vibrant research landscape.

Strategies:

1. To build facilities and infrastructure (labs, office spaces, advanced laboratories with high performance computing tools) in order to enhance research and to stimulate greater collaborations and innovations.
2. To fund and encourage the faculty to participate in national and international consultations, seminars, workshops, conferences, etc.
3. To encourage quality research with focus on use of international benchmarks such as Citation Indices, Patents, etc.
4. Start two new P.G. programs in each discipline over the next five years to accelerate the research activity in the college.

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5. Create an academic research fund to support novel research ideas, developing patent portfolios, converting research output to IP and returning the benefits of research to society by increasing the (i) Govt. research funding by 5% annually and (ii) annual R&D funding from industry by 5% by 2018.
6. To conduct Seminars and Conferences, Advanced technology workshops etc. that will help in promoting research, innovation and strengthen linkages with public and private sector R&D.

PEO4. Technology development, Industry collaboration and Entrepreneurship

Technology development, transfer and collaboration with industry are central to the evolving role of the technical colleges and university towards realising value in research and technology development. For effective management, the institute-Industry relations need to be governed by the institutes own policy, strategies and best practices.

Indian economy may grow faster if our institutions focus more on job and wealth creators instead of employees. Risk taking attitude, encouraging rags to riches stories and the desire to bring a positive change in governance and society can derive youngsters to think and do something offbeat. Innovative ideas are aplenty but the money available to support and mentoring them is scarce. Mechanisms have to be developed and fine-tuned over time for students to adapt to and take an active part in entrepreneurial development and in promoting technology transfer and commercialisation.

To foster institute-industry research collaboration, technology development, and a culture of entrepreneurship, we highlight some specific initiatives to be initiated by the college in close cooperation with government and industry in its quest to contribute to innovation and the technology development.

Strategies:

1. To bridge the gaps between academic research results and industry to realize highly effective and efficient innovation.
 - Understand industry's needs and develop solutions for industry's problems
 - Add 2 new industry partnerships annually
 - Provide technology support for start-up ventures
 - Form at least 2 viable alliances with other universities and with private sector for research partnerships and technology transfer by 2018.
 - Engage at least 20 students in the Innovation competitions by 2018 in each department.
2. Establish mechanisms to create student project opportunities with industry and government and create at least 2 project opportunities every year in each discipline that involve >20 students.
 - Industrial project publicity
 - Technology fairs and seminars

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3. Entrepreneurship programs (workshops, expert talks) for undergraduate students
 - To create a centre for entrepreneurship to support and nurture new ideas and entrepreneurship activities.
 - To identify local entrepreneur role models and involve them in educating the students to explore their own start-ups.
 - To bring industry angels to the classroom.

PEO5. External Recognition for the Institution

The institute's mission is to deliver technical programs and services to educate people who will contribute to the overall techno-economical development of the state and seek global recognition for its activities. In executing its mission, the Institution has to become a leading institution, providing an exceptional educational experience that prepares the students for successful careers in a highly-competitive and complex global environment. Its strategic road map has to be such that it can stake its claim as a world leader in select scholarly fields. It has to profoundly improve its capacity for performing leading research and publish it.

While many activities and accomplishments are needed to achieve our goals, one element of our task is to appropriately align our faculty activities to be consistent with the mission and vision and to contribute to the successful achievement of the goals. It is recognized that faculty cannot accomplish these goals alone. Significant improvements and expansion in facilities, faculty size, financial support and recognition of their efforts and performance of their activities are needed. These activities include:

Strategies:

1. Increased publications in top-tier journals by the faculty and students
2. Increased external publicity for effective research by faculty and students - Press releases, Newsletters, Presentation in national forums.
3. Support for professional development i.e. participation at and partnership with top tier-institutions, seeking fellowship of professional bodies and societies, etc.
4. Support and facilitate students to participate in prominent conferences.
5. Support and encourage faculty and students to submit papers for awards.

The support has, however, to be linked with the performance. There are many measures for evaluating the teaching and research performance which need to be identified and linked with the support that need to be provided.

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PEO6. To establish comprehensive strategy for increased funding

The quality of technical institutions hinges on the management and faculty running them, their approach to policymaking, and the governance structures that underlie them. Funds are required to quality education at affordable price and to carry out the various reforms - modernization and strengthening of laboratories, class rooms, capacity enhancement (training of faculty and staff), transfer of knowledge and of best practices in the form of capacity development services, etc.

Findings Strategy for technical Institutions should be in tune with the education policy environmental factors both in terms of external and internal and the resource potential of the institution. The steps envisaged to enhance funding to the college to carry out the reforms are listed below:

Strategies:

1. Recruit, select, develop, reward, and retain an increasingly diverse and productive faculty with expertise appropriate for strong research, grant, and contract productivity.
2. Provide more opportunities for faculty to meet with external groups, agencies, and officers to facilitate and refine future funding submissions.
3. Enhance the culture of personal contributions to advancement among faculty, staff, students, and alumni.
4. Increase recognition of faculty grants and scholarly activity.
5. Increase the institute-level pre-and post-grant support to facilitate external funding.
6. Identify significant collaborative opportunities with local, national, and international bodies, businesses, and educational institutions that can lead to new research, grants, and contracts.

(b) Program Outcome (POs)

For the purpose of achieving its objectives, the college has developed eleven Program Outcomes (POs). These outcomes are, in effect, what the students expected to know and achieve post graduation. Table 1.2 shows these program outcomes:

PO. No.	Outcome	Code
PO -1	An ability to apply knowledge of mathematics, science, and engineering appropriate to the discipline.	a
PO -2	Ability to outline and conduct experiments as well as analyze and interpret data	b
PO -3	Ability to design a system, component or process to meet desired needs.	c
PO -4	Ability to function on multi-disciplinary teams to analyze and solve problems.	d

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PO -5	Ability to identify, evaluate and solve engineering problems.	e
PO -6	Understanding of the responsibility of engineers to practice in Professional and ethical manner at all times.	f
PO -7	Ability to communicate effectively using oral, written, and graphic forms	g
PO -8	The broad education necessary to understand the potential impact of engineering solutions on society and the environment.	h
PO -9	Understanding of the need for up -to-date engineering tools and other knowledge acquired through life -long learning.	i
PO -10	Knowledge of contemporary issues related to engineering.	j
PO -11	Ability to use the techniques, skills and modern engineering tools necessary for engineering practice.	k

C. Mapping of POEs with POs

The program objectives (PEOs) have been mapped with the program outcomes (POs) so as to ensure the effectiveness of the objectives. The mapping is given in the table below:

Table 1.1: Mapping of POEs with POs

PEO1. To establish comprehensive plan to provide excellence in undergraduate education that will enable the development of leaders for our technology-driven society.	
PEOAction point	PO Code
1.1	a, k
1.2	c
1.3	f, h
1.4	j, i
1.5	g
1.6	j
1.7	d, i
1.8	i
1.9	b, k
1.10	h
1.11	b
1.12	i, j
1.13	f, k

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PEO2. Enhance Quality of Students	
PEOAction point	PO Code
2.1	f, k
2.2	c
2.3	h
2.4	d
2.5	f, i
2.6	d, j
2.7	e

PEO3. Establish centres of excellence to promote research and innovation	
PEOAction point	PO Code
3.1	b
3.2	h
3.3	j
3.4	a, d
3.5	c
3.6	j

PEO4. Technology development, Industry collaboration and Entrepreneurship	
PEOAction point	PO Code
4.1	f, j
4.2	f, k
4.3	f, i, k

PEO5. External Recognition for the Institution	
PEOAction point	PO Code
5.1	a, g, k
5.2	b, g
5.3	j, k
5.4	b, e
5.5	a, g, j

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PEO6. To establish comprehensive strategy for increased funding	
PEOAction point	PO Code
6.1	a, k
6.2	h
6.3	h
6.4	f
6.5	f
6.6	a, k

2.4 Action plan for :

a) Improving employability of graduates:

According to the survey, carried out by a number of agencies, more than 70 percent of our engineering graduates are not employable. The graduates lack other skills beside the academic or technical skills. The top three most important general skills identified are integrity, reliability and teamwork, while the top three most important specific skills are entrepreneurship, communication in English and use of modern tools and technologies.

If colleges want to improve the employability of their graduates, they have to focus on reducing these important skill gaps through improvements in curriculum and teaching methods. We need to develop professionals who are skilled and ready to face the challenges of increased competition. Each institution should define a set of skills that a graduate is supposed to have after each semester. Further, they need to change pedagogical style from teacher-centric to student-centric and independently analyse and apply tools on real life problems. Educational curriculum and Industrial training received by students needs to be examined from time to time in order to ensure that the education received by them is relevant and up to date. Only through such changes in the teaching-learning process the future engineers can become more employable.

Following action plan is envisaged to enhance the employability the graduates:

1. Enhancing basic facilities like Classrooms/Laboratories would give the students a good exposure to relevant and latest technology.
2. Taking the students to technical tours in various Industries to give them necessary exposure.
3. Students would be encouraged to undertake summer projects in relevant industries of their choice. This will increase the interaction between students and Industry thereby making the students aware of the needs of industry.

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4. Students will be trained in various advanced software during the course of their study. The Exposure to latest softwares will also make them readily acceptable to the prospective employers and industry.
5. Educational curriculum needs to be examined and updated from time to time in order to ensure that the education received by students is relevant and up to date.
6. Training and placement cell will be working closely with various industries so that more and more industries/firms visit the Institute for campus placements.

b) Increased learning outcomes of the students:

Please refer to PEO2 - Enhance Quality of Students

c) Obtaining autonomous institution status within 2 years:

Autonomy comes with responsibility, and this responsibility is much more for a publicly funded institution – something that is not always appreciated fully. The autonomy of an institution is possible only if the institute understands and shoulders its larger responsibilities. If an institution does not live up to its larger societal responsibilities and changes with time, then changes which seem desirable for the larger society will be imposed upon it by the government. Autonomous institutions have to make the necessary changes proactively to keep up with the changing responsibilities to the society.

Hence, the autonomous institutions always remain sensitive and alert to take care of the needs of students. They also offer flexibility in academic curricula and hence the scope to effect quick changes to teach, train and tune students to the latest developments and more useful courses and skills. In autonomous institutions, a continuous evaluation system promotes tension-free living as the students remain more focused on their studies on a regular basis. Speedy and uninterrupted implementation of academic programmes, examination and evaluation (on-site decisions!), and the fair and student friendly “Relative Grading System (RGS)” for evaluation and announcement of results are possible in autonomous institutions. RGS, which is practised only in a few colleges, is all about transparency in evaluation and grading for higher degree of acceptability from the stakeholders. In autonomous institutions, focus on continuous commitment to enhance institutional image building for improved student placement.

In view of the above obvious advantages, institutions both dream and strive to acquire this academic status. J.N. Govt. Engineering College, Sundernagar has initiated the process of obtaining autonomy at Govt. /University /UGC level as per UGC guidelines. It is expected that JNGEC will be able to obtain autonomous status within 1-2 years of time frame with the help of TEQIP funds and reforms being carried out under this project.

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- d) **Achieving the targets of 60% of the eligible UG and PG programs accredited within two years of joining the Project and 100% accreditation obtained and applied for by the end of the Project of the eligible UG and PG Programs:**

JNGEC has started the process of NBA Accreditation, Phase-I of registration process is already completed, the Registration fee amounting Rs.1,12,360.00 has been sent to NBA through DD No.449009 dated 13.11.2013 and NBA Accreditation, Phase-II of registration process is also completed, the Registration fee amounting Rs.7,86,520.00 has been sent to NBA through DD No.451565 dated 22.03.2014. Various laboratories and workshops are being furnished with modernized machinery and equipment under TEQIP grant. JNGEC shall be obtaining NBA Accreditation of all eligible degree programs within next 1-2 years.

- e) **Implementation of academic and non-academic reforms:**

- **Implementation of Curricular Reforms:**

Curricular reforms as and when proposed by the university are implemented from time to time.

- **Exercise of autonomies:**

The process of obtaining autonomy at the institute level is under process. The institute is expecting to get autonomy at various levels within 1-2 years of time frame.

- **Establishment of Corpus Fund for Faculty:**

A Corpus Fund for Faculty has been established at institute level to encourage the Faculty to participate in various researches oriented activities. At present Rs.711.27 Lac has been deposited in the fund.

- **Development Fund, Equipment Replacement Fund and Maintenance Fund:**

Development Fund, Equipment Replacement Fund and Maintenance Fund for the institute have been established. The status of the funds in these heads is appended below:

S.No.	Name of Fund	Amount in Lac
1	Faculty Development Fund	72.74
2	Equipment Replacement Fund	116.13
3	Maintenance Fund	411.89

- **Generation, retention and utilization of revenue generated through variety of activities:**

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The revenue generated through variety of activities undertaken through consultancies, research projects will be utilized for Staff Development as well as development of infrastructure at institute level. At present revenue is being generated through consultancy and from interest earned from bank. So far 3.75 Lac has been generated as revenue through these activities.

- **Filling up all existing teaching and staff vacancies:**

The vacancy position has been under consideration of H.P. Public Service Commission for quite some time. The process of recruitment has already been started and 17 faculty members have joined during last 1-2 years in various departments.

- **Delegation of decision making powers to senior functionaries with accountability:**

The decision making powers shall be delegated to senior functionaries as and when institute obtains autonomy. The process of obtaining autonomy within 1-2 years at the institute level is under process. College has applied for acquiring autonomous status vide office letter No.GEC/SNR/TEQIP/16/2010-3403 dated 26.12.2011.

- **Student Performance Evaluation:**

Students Performance is evaluated internally and externally through conducting Internal Examinations. Assignments, Quizzes, Debates and by the End Semester Examinations conducted by H.P. University/HP Technical University.

- **Implement performance appraisal of faculty by students:**

Appraisal of faculty by students is carried out by supplying feedback at the end of semester. Students are supplied feedback Performa at the end of semester. They fill up these performs and return back to their respective departments.

- **Faculty incentive for Continuing Education (CE), consultancy and R&D:**

The faculty will be rewarded suitably through merit recognition, fiscal and career incentives.

- **Obtaining accreditation:**

The institute will be accredited in 1-2 years of time frame. The process in this regard has already been initiated at college level. 1st phase of registration is complete.

f. Improving interaction with industry:

Technology development, Industry collaboration and Entrepreneurship is one of the important program objective for the institution. To improve industry collaboration and entrepreneurship in the college, the strategy to be adopted is already explained and outlined in PEO4. In addition to this the college would also line to initiate the following activities:

- Students of various branches will be encouraged to visit various industries and to take up their summer projects in collaboration with them. For this the, institution is to provide the necessary support.

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- Training and placement cell is working closely with various industries so that more and more industries visit the Institute for campus placements. Industry institute interaction cell has been established at institution level wherein two experts from industries have been included as its member. The Expression of Interest is being signed with four industries for industry academia collaboration. Out of these four EOIs, one has been converted into MoU with Central Tool Room, Ludhiana. Remaining three Eois are being processed and the college shall have MoU with Advance Technology Pvt. Ltd., Chandigarh, Altair Engineering Kailash Colony, New Delhi and Seimens Pvt. Ltd., Gurgaon. In addition this one special course is being arranged for the students from industry experts. Special efforts are made to interact with industries to invite them to campus. The details of the industries who visited the institute for campus placement in 2012-13 are as under:

- SEL Manufacturing Saluja Group, Ludhiana, Pb.
- Aarti International, Ludhiana, Pb.
- Vaddhman Textile Ltd, Ludhiana, Pb.
- Sambhav Spinning Mills Ludhiana, Pb.
- Nahar Group of Industries, Bhopal and Ludhiana, Pb.
- Singora Textiles Ltd., Ludhiana, Pb.
- Anglo Eastern Ship Management India Pvt. Ltd., Mumbai
- Beta Soft Systems Pvt. Ltd. Panchkula.
- Sanmar Engineering Corporation, Chennai.

g. Enhancement of research and consultancy activities:

- Proper programme would be forwarded for approval by BoG and State Govt. for providing incentives/promotion avenues/rewards to faculty members opting for research.
- Faculty shall be encouraged and supported to attend various technical Workshops, National and International conferences.
- Faculty shall be encouraged to take up research projects with various research and development bodies like CSIR, DST, etc. and industry.
- The college has identified various areas of expertise wherein consultancy services to the society can be rendered. The rules/norms have been prepared and got approved from Standing Finance Committee at Government level for the benefit of all consultants and project coordinators.
- Faculty members are being encouraged to carry out research. At present 4 faculty members are pursuing their Ph.D.

- 2.5 Provide an action plan for organizing a Finishing School and for improving the academic performance of SC/ST/OBC/academically weak students through innovative methods, such as remedial and skill development classes for increasing the transition rate and pass rate with the objective of improving their employability.**

College has established a finishing school with a view to improve the academic performance of academically weak students through innovative methods, remedial teaching and organising workshops on soft skills. So far 09 subjects of engineering and applied sciences have been covered under remedial classes. 04 workshops have been organized on up-gradation of technical/soft skills. 01 workshop had been organized in the month of January, 2014 in collaboration with Central Tool Room, Ludhiana. The key activities under the aegis of the Finishing School are:

- Conducting remedial teaching throughout academic sessions for improving transition rate and pass rate of students;
- Conducting specialized soft skills and professional skills development training during semester-breaks and vacations (preferably starting from 5th Semester onwards) for increasing employability;
- Conducting high intensity training (of at least 4-weeks duration) for development of soft and professional skills in the students that graduate but fail to secure any employment; and
- Organizing campus interviews and making other efforts to secure employment for graduate engineers that complete the training under activity (c) above.

- 2.6 Provide an action plan for strengthening of PG programs and starting of new PG programs.**

Post graduate programs which necessary to initiate research and quality are teaching will be started from the academic year 2014-15 in three disciplines. Facilities are being planned and necessary infrastructure shall be put in place before the commencement of teaching-learning process. The institution has already sought approval of the competent authorities to start these programs.

- 2.7 Attach a summary of Training Needs Analysis carried out. Also, provide Faculty Development Plan for the first 18 months for improving their teaching, subject area and research competence based on Training Needs Analysis in the following areas.**

- **Basic and advanced pedagogy:**

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To encourage the faculty in attending various workshops, training programs in Innovative Methods of Teaching, Teaching Training Methods, etc.

- **Subject / domain knowledge enhancement:**

To give emphasis to exhibit the latest technological advancement in areas of various fields of engineering by organizing seminars, workshops, conferences of National/International importance through active participation of all the faculty members of concerned branches.

- **Attendance in activities such as workshops, seminars:**

To encourage the faculty to attend various workshops, seminars of their areas of interest.

- **Improvement in faculty qualifications:**

Sponsoring faculty for Higher Education e.g. Ph.D.

- **Improving research capabilities:**

Sponsoring and encouraging the faculty to participate in National and International Conferences, and collaborate with various research organizations and industry.

2.8 Provide an action plan for training technical and other staff in functional areas.

- Technical Staff shall be encouraged to participate in various Workshops; Training Programmes intended to enhance the skill.
- Proper arrangements shall be made with the industries (which have manufactured/supplied the equipment or software) for training of technical staff in relevant disciplines

2.9 Describe the relevance and coherence of Institutional Development Proposal with State's/National (in case of CFIS) Industrial/Economic Development Plan.

The activities undertaken as per IDP of the institute will lead to

- Improvement in overall employability of Graduates,
- Enhancement in teaching skills of faculty through various short/long term training programmes and interaction with industries.
- Increase in amount of research undertaken at various levels as evident from publications in research journals and national and international conferences

These outcomes are relevant and co-herent with the overall Economic Development Plan of the State Govt. which has specifically underlined the need to develop technical education in a Hilly area like Himachal Pradesh. This will lead to increase in the growth and development of the State through development of technical Manpower.

2.10 Describe briefly the participation of departments/faculty in the IDP preparation.

All the Departments of the Institute have fully participated in the IDP preparation by supplying information related to modernization and enhancement of the learning

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resources and infrastructure respective departments, so that institute could cater in a better way to the society

2.11 Describe the Institutional project implementation arrangements with participation of faculty and staff.

The details of Institutional project implementation arrangements with participation of faculty and staff are **as per section No. 1.1 given on page No. 1** in this Institutional Development Proposal Document.

ACADEMIC PLAN (TEQIP-II) FOR PROJECT PERIOD UPTO 2015-16.

It is envisaged that faculty/staff will be given exposure to higher and advanced pedagogical

Sr.No.	Item	No. of days of Exposure /Training	Thrust Area	Tentative/Expected Expendature (Rs.)
1.	Short term training courses at IIT's, NIITs, and NITTRs and other Institutes within the country	One or Two week	Pedagogical Training Development of R&D capabilities	600000.00
2.	International Conference/training/Workshop within country	One/Two/Three days	Research areas of concerned faculty	200000.00
3.	Academic tours/exposure visit of faculty/administration to study various advanced academic practices implementation in various Institutes of National Importance/Excellence, e.g. visit to IITs, IIMs and such Institutions which are NBA/ABET accredited, both in North and South Zone (within Country) in two batches.	Ten to Twelve days	Best academic and professional practices/Better infrastructure/Institute academic accreditation	800000.00
4.	International (outside country) visit of faculty/senior administration of Institute /Deptt./secretariat for attending International Conferences/workshops of concerned research area and academic visit to expose the faculty /administrative to best academic, administrative and professional practices in internationally accredited Institutions (like NBA/ABET, etc.). The Government as per eligibility/norms under TEQIP and H.P. Government.	Ten days	Research area of concerned faculty/Administration/ Secretariat in concerned area of senior administrators of Institute/Technical Education Department.	4000000.00
5.	National/International Conferences, Workshops, Short Term Training Programmes conducted within the Institution.	One/Two days/One week/Two week	Pedagogical Training Development of R&D Capabilities/Research area of concerned faculty.	1200000.00
Grand Total				6800000.00

techniques. A brief plan is envisaged as under:

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TOTAL EXPENDATURE TILL DATE:

Centrally Funded, Government Funded and Government Aided Institutions

Name of the CFI/State:- Jawaharlal Nehru Govt. Engg. College Sundernagar, Distt. Mandi, Himachal Pradesh.

	Activities	Total funds received till date (Rs. In Lac)	Category of expenditure (Head of expenditure)	Cumulative exp.up to previous month of reporting since inception	Committed Expenditure	Expenditure in the pipe line
S r. N o.	1	2	3	4	5	6
1	Procurement of goods (equipment, furniture, books, LRs, software and minor items) and civil works for improvement in teaching, training and learning facilities	544.95(152.95+18.00+9.00+229.5 +40.50 Central Share+ 50.00+50.00 (-)as State Share)	Procurement	30,717,471.00	9,270,629.00	6,560,587.00
2	Provide Teaching and Research Assistantships to increase enrolment in existing and new PG programmes in Engineering disipilines		Assistantships	Nil	Nil	Nil
3	Enhancement of R & D and institutional consultancy activities		R&D	156,188.00	37,425.00	Nil
4	Faculty and staff development for improved competence		FSD	1,017,696.00	317,000.00	Nil
5	Enhanced interaction with Industry		I-I-I- Cells	524,422.00	Nil	Nil
6	Institutional Management Capacity enhancement		Capacity development	456,857.00	Nil	Nil
7	Implementation of Institutional academic reforms		Reforms	112,360.00	Nil	Nil
8	Academic support for weak students		Student support	92,400.00	Nil	Nil
9	Incremental operating cost		IOC	8,113,723.00	25,000.00	Nil
	TOTAL	544.95		41,191,117.00	9,650,054.00	6,560,587.00

PROCUREMENT PLAN FOR 2015-16 :

Phase-I: The item approved by all competent authorities and uploaded on PMSS portal on date 18th Dec.2014.

J.N. Govt. Engineering College Sundernagar, Distt. Mandi (HP)			
Perposed Procurement Plan under TEQIP-II for 2014-15 New Packages			
Sr. No.	Package Name	Cost of Package	Method Of Procurement
1.	IPBX Exchange	1,000,000.00	Shopping
2.	TEQIP Cell Furniture	100,000.00	Shopping
3.	CCTV Cembra	800,000.00	Shopping
4.	Seiling & Panelling of Confrence Hall	600,000.00	Shopping
5.	Air Conditionter For Institution	1,000,000.00	Shopping
6.	Biometric mechine	100,000.00	Shopping
Total =		36,00,000.00 (Thirty lacks only)	

Phase-II: The Procurement Plan No-II, the items uploaded on PMSS web portal (18th Dec.2014) which need approval from competent authorities after getting permission from NPIU to divert from minor civil work to Procurement head.

J.N. Govt. Engineering College Sundernagar, Distt. Mandi (HP)			
Perposed Procurement Plan –II under TEQIP-II for 2014-15 New Packages			
Sr. No.	Package Name	Cost of Package	Method Of Procurement
1.	Internet Combustion Engines lab-ME	9,50,000.00	Shopping
2.	CST Microwave Studio Specifications-ECE	990,000.00	Shopping
3.	DSO High Performance-ECE	465,000.00	Shopping
4.	Textile Testing Lab-TE	305,800.00	Shopping
5.	Materials Technology Lab ME	200000.00	Shopping
Total =		29,10,800.00 (Thirty lacks only)	

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Phase-III: The Procurement plan for the same will be reflected and communication here after gettingg permission from NPIU to utilize all the funds available in consultancy Service.

Phase-IV: The Procurement plan for the Phase-IV will be reflected and communication here after gettingg permission of re-appropriation of funds from programme assistantship to procurement of goods.

FUTURE STRATEGIES:

- Recruit, select, develop, reward, and retain an increasingly diverse and productive faculty with expertise appropriate for strong research, grant, and contract productivity.
- Provide more opportunities for faculty to meet with external groups, agencies, and officers to facilitate and refine future funding submissions.
- Enhance the culture of personal contributions to advancement among faculty, staff, students, and alumni.
- Increase recognition of faculty grants and scholarly activity.
- Increase the institute-level pre-and post-grant support to facilitate external funding.
- Identify significant collaborative opportunities with local, national, and international bodies, businesses, and educational institutions that can lead to new research, grants, and contracts
- If necessary permission to utilize funds available for minor civil work & consultant services head of expandature for Procurement of goods,then the procurement plan may be revised.

THANKING YOU