

**TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME
(TEQIP) (PHASE-II)**



ADDENDUM

REVISED INSTITUTIONAL DEVELOPMENT PROPOSAL

for

2016

**Sub-Component 1.2: Scaling-up Postgraduate Education
and
Demand-Driven Research & Development and Innovation**

Submitted by:

G.H. RAISONI COLLEGE OF ENGINEERING, NAGPUR

**(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur
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1. PREAMBLE

G. H. Raisoni College of Engineering Nagpur, an Autonomous Institute was selected for TEQIP-II under Sub Component 1.2. Since its implementation institute got accreditation by NAAC with A grade. Institute had spent allocated amount of Rs. 4 Crores on the various parameters mentioned in the IDP as per the PIP document. Since the project implementation, 4 cycles of Performance Audit and Data Audits were completed. Internal Finance Audit, Statutory finance audit have been completed upto 2013-14. Institute has met all the 12 performance indicators and was termed as best performing institute in the recent 4th JRM meeting held in December 2014. All the eligible UG and PG programmes have been accredited/ applied for accreditation. The institute has completed all the till date data inputs into the MIS. Procurement plan has also been executed. Completion and implementation of good governance development plan. The faculty members and students have filed 70 patents during the period of TEQIP-II.

As the project has been extended upto December 2016, accordingly institute is submitting the revised IDP with updated target indicators for 2016. In addition to the activities mentioned in the IDP submitted at the time of inception of project, following additional activities to be taken up are mentioned as an addendum in the format of IDP.

IMPLEMENTATION OF INSTITUTIONAL REFORMS

Academic & Non-academic Reforms	Activities to be undertaken in brief
Implementation of Curricular Reforms	Strengthening six months industry internship with stipend
	Implementation of PEER teaching
	2 weeks social internship
	Adopting an institute for mentoring
	Strengthening incubation activities
	Promoting entrepreneurs activities
	Promoting digital learning using MOOCS, Flip teaching, etc
	Establishing center of excellence
	Teaching assistantships (TA)
	Research Assistantships (RA)
	Academic support to Weaker students
	Online Quality Circles
	Open house for students
Exercise of Autonomies	Implementation of Credit transfer scheme with Institutes of repute
	Implementation of Choice based Credit System (CBCS)
Generation, retention and utilization of revenue generated through variety of activities	Organizing National and International Conferences
	Organizing STTP
	Organisation of Skill Enhancement Programs
Institutions to fill up all existing teaching and staff vacancies	Conducting campus interviews at NITs and IITs
Delegation of decision making powers to senior functionaries with accountability	Adopting Good governance practices
	Adding stakeholders, students on BOG, Academic Council
	Staff Student Portal
Improved student performance evaluation	Open book exam for some courses
	Internal and External Academic Audit
	Best student award
	Gold medals and silver medals
	Adopting Outcome based education
	Program Exit Survey
	Best Innovation Award Competition
	R-Idea Competition
Incentives to faculty	Patent filing
	Deputing faculty members for training at IITs, IIMs
	Qualification enhancement of faculty members
	Management capacity development programs
	Refereed journal publications
Obtaining Accreditation	NBA accreditation as per Washington Accord
	NAAC Accreditation (Cycle 2)
	Lab accreditation by NABL

2. INSTITUTIONAL DEVELOPMENT PROPOSAL (IDP)

2.1 Give the executive summary of the IDP (maximum ½ page)

Engineering education consists of three well-defined aspects - knowledge, knowhow, and character. Education is a combined responsibility of academia, industries, professional associations and society. While Institute should focus on teaching the invariant core and the nature of empirical knowledge and tools, industry should focus on educating specific aspects of empirical knowledge, tools and application.

(Rs. In Crores)

S.N.	Activities	Additional Allocation	2015-16	2016-17
1	Infrastructure improvements for teaching, training and learning through:		↓	
	(i) Establishment of new laboratories for new and existing PG programmes, faculty research, etc.	0.00	0.00	0.00
	(ii) Updation of learning resources	0.00	0.00	0.00
	(iii) Procurement of furniture	0.00	0.00	0.00
	(iv) Modernization and strengthening of libraries and increasing access to knowledge resources	0.00	0.00	0.00
	(v) Refurbishment (Minor Civil Works)	0.00	0.00	0.00
2	Providing Teaching and Research Assistantships for significantly increasing enrolment in existing and new Masters and Doctoral programmes in Engineering disciplines	0.81	0.324	0.486
3	Enhancement of R&D and institutional consultancy activities	1.05	0.65	0.40
4	Faculty and Staff development for improved competence based on TNA	0.32	0.20	0.12
5	Enhanced interaction with Industry	0.4	0.25	0.15
6	Institutional Management Capacity enhancement	0.07	0.05	0.02
7	Implementation of institutional reforms	0.62	0.40	0.22
8	Academic support for weak students	0.28	0.18	0.10
9	Incremental Operating Cost	0.45	0.30	0.15
	TOTAL	4.00	2.354	1.646

Following are some of the initiatives that are proposed in association with Industry and Academia:

- Strengthening Incubation activities
- Promoting Entrepreneurship activities
- Strengthening 6 months industry internship with stipend
- 6 months industry projects
- Curriculum Development Cell
- Finishing schools
- Compulsory Industry Specific Training for UG and PG
- Industries and Institutes collaborative research
- Corporate Training Centre
- Departmental Industry Advisory Boards (DIAB)
- Electives & Subjects offered by Industries
- 100% PG admissions
- Quality Research
- Enhancing Intellectual Capital

Objectives of the Project:

The IDP has been prepared looking towards the enhanced research activities thereby leading to:

- Strengthening Institutions to produce high quality engineers for better employability
- Scaling-up postgraduate education
- Focused efforts towards Demand-driven Research & Development and Innovation,
- Establishing Centers of Excellence for focused applicable research
- Training of faculty for effective Teaching, and industry trends based on TNA
- Enhancing Institutional and System Management effectiveness & Efficiency.
- Maximum students registering for PG & Doctoral courses
- State of art Laboratories in cutting edge technology
- Increased Revenue & Consultancy
- More industry linkages & involvement
- More collaborations with Institute of National & International repute

- Patent awareness camps & more patents
- Quality Journal publications results into good citation & cross references
- More funded & sponsored projects and grants

All above activities are focused to have better acceptability and deliverables by PG students at industries.

2.2 • Provide the details (in terms of methodology used, analysis carried out of the data and information collected and inferences derived with respect to strengths, weaknesses, opportunities and threats) of SWOT analysis (see Annex-V of the PIP) carried out.

SWOT analysis, a strategic planning method, is used to evaluate the **Strengths, Weaknesses, Opportunities, and Threats** involved in a project. It involved specifying the objectives of the institution and identifying the internal and external factors that are favorable and unfavorable to achieve the objectives. It helped to focus on key issues. An agency, “G.H.Raisoni Academy of Human Excellence” was hired for carrying out the SWOT Analysis.

The need assessment is the first step in the establishment of a training and development programme. It was conducted using the SWOT format. The logic behind the SWOT format is the experience of all the stakeholders. The SWOT analysis was centered around systemic, motivational, organizational and skill issues. It also helped in making a plan, defining a problem and also solution of it, making a strategy and giving an analytic decision.

STEPS FOLLOWED FOR A SWOT ANALYSIS:

(i) Teamwork and Stakeholder Participation:

A team consisting of the key stakeholders of the Institution i.e. Staff and Students had carried out the consultations/brainstorming/meetings. The meetings were conducted at the departmental level. The heads of each department conducted the meetings and explained the meaning of the SWOT. The team members listed out the most important Strengths, Weaknesses, Opportunities and Threats, and prioritized the actions. This brainstorming session has resulted in the collection of individual SWOT forms.

ii) Data Analysis:

The individual forms were compiled to prepare the SWOT of the department. Then the departmental SWOT(s) were then analyzed to identify the similar points and the consolidated SWOT was prepared for the institution.

iii) Strategic Planning:

a. STRENGTHS: The Strengths were identified by thinking in terms of capabilities, recognition, competitive advantages, resources, assets, people (experience, knowledge, their culture, values, attitudes and behaviors), innovative aspects, quality of UG & PG programmes, accreditations, qualifications, certifications, and processes/systems & outputs reoriented.

b. WEAKNESSES: The Weaknesses were identified by thinking in terms of disadvantages, gaps in capabilities; lack of competitive strength, reputation, financial, timescales/deadlines, weak core activities, to increase & produce high quality PG Students & strong Research & Development based processes/systems.

c. OPPORTUNITIES: The Opportunities were identified by thinking in terms of market developments, Global influences, Employment & industry trends, growing PG student demand, Technology development & innovation, Industry Institution partnership and geographical expansion.

d. THREATS: The Threats were identified by thinking in terms of external forces such as Obstacles - Social, Political & Managerial, Retaining qualified faculty, Loss of key staff, Threats of having pace with changing technology, Declining quality of students, etc.

Following are the details of the strategic Plan developed for institutional development:

- Exercising Autonomy for flexible and interdisciplinary approach
- Signing MoU with reputed institutes for Credit Transfer Scheme
- Choice Based Credit System
- Making world class research laboratories
- MoU with leading industries and world class institutes for resource sharing
- Faculty development initiatives
 - Training of faculties in industries, institutes like IITs/IIMs and research labs in India and abroad
 - Qualification incentives

- Strengthening involvement of industries.
 - Industrial visits
 - Faculty visits
 - Setting up laboratories
 - Collaborative projects
 - Consultancy
 - Representation in BoS
 - Formation of Focused groups
 - Internships
- Encouragement on ICT
 - Digital learning
 - E-learning
 - Development of digital study material
 - Offering Teaching Assistantships
 - Offering Research assistantships & RA
 - Fellowship to teachers for training in industries, Qualification up gradation, attend conferences in India & abroad in their respective area of expertise.
- Promotion of Entrepreneurship Development & strengthening Business Incubation Centre
- Thrust on R & D & current problems
- More easy available funds for research available, Collaborative research
- R & D Norms
- Strengthening existing programmes
- Accreditation of Laboratories through NABL
- Focused projects
- Sponsored projects
- Paper in journal is compulsory for M.Tech
- To nurture undergraduate and postgraduate engineering education experiences
- To ensure opportunity for life-long success, innovation and leadership.
- Joint Programmes

2.3 State the specific objectives and expected results of your proposal in terms of, “Scaling-up Postgraduate Education and demand-driven Research & Development and Innovation”. These objective and results should be linked to the SWOT analysis:

➤ **Objectives for Scaling up Postgraduate Education and demand driven R & D and Innovation:**

Institute has established R&D Cell in 2003 in order to promote research and innovation. The norms are framed to encourage faculty and UG- PG - Doctoral students for undertaking research activities. To promote research in newly emerging frontier areas of science and engineering including multidisciplinary fields following objectives have been set.

- To offer Teaching Assistant-ships.
- To offer Research Assistant-ships.
- Patents awareness/training.
- Financial & technical support for Patent filing
- Exposure to industrial technologies during the course.
- Setting up world class laboratories.
- To encourage the researchers to take up challenging R & D activities in thrust areas of National importance.
- To assist the researchers in the commercialization of their innovation and research
- Global Acceptance and recognition to faculties and research scholars.
- Collaborative research with abroad institutes.
- Certification of the laboratories by NABL.
- Technology transfer to Society and industry.
- To promote the utilization of innovations, inventions and research findings.
- To research and design experiments to provide new technologies or new uses for existing technologies that will lead to new products and product claims.
- To develop core research technologies that enables the development of new ideas in engineering and technology.
- To increase linkages with the industries.
- More collaborative research training at all level

➤ **Expected results:**

- Increased number of patents.
- Increased refereed Journal publications.
- Increased employability of PG and Doctoral students.
- More number of entrepreneurs
- More technology transfer
- More R&D products
- More academic products
- Enhanced IRG through consultancy & testing.
- New technologies, innovative formulations, processes, products will be developed and will be commercialized to industries.
- Centre of Excellence
- Change of mindset
- Synergy between industry & institute
- Industry based R & D Projects

➤ **Justification for additional grant:**

G.H. Raisoni College of Engineering (GHRCE) is an Autonomous and premier research institute in the Central India. Established in 1996, it has a proud standing of 18 years. The institute has achieved many milestones over a short span of existence. It is offering 31 courses including 7 undergraduate, 16 postgraduate and 7 doctoral programmes. All the eligible courses are accredited by NBA under Washington accord and some of the courses are reaccredited.

Since its implementation of TEQIP-II, institute got accreditation by NAAC with A grade. Institute had spent allocated amount of Rs. 4 Crore on the various parameters mentioned in the IDP as per the PIP document. Since the project implementation, 4 cycles of Performance Audit and Data Audits were completed. Internal Finance Audit, Statutory finance audit have been completed upto 2013-14. Institute has met all the 12 performance indicators and was termed as best performing institute in the recent 4th JRM meeting held in December 2014. All the eligible UG and PG programmes have been accredited/ applied for accreditation. The

institute has completed all the till date data inputs into the MIS. Procurement plan has also been executed. Completion and implementation of good governance development plan.

Quite a large number of doctoral faculty members are working with the institute. It has filed 70 patents over a short span. It has taken many faculty development initiatives. Many faculty members have exposure to International conferences held abroad. There are around 4000 plus conference publications and around 700 plus refereed journal publications by faculty members. The institute has organized many International events including IEEE sponsored International conferences, workshops/STTPs and symposia. The institute is progressing with a strong leadership resulting in a very good brand image & resulted into a premier engineering & research institute in Central India.

With autonomy in place, Institute is marching towards excellence in academics & with extended period of TEQIP II and additional funding it will be possible to boost /provide thrust on R & D & will able to attract quality input in PG courses resulting into getting world class ranking.

2.4 Provide an action plan for scaling-up enrollment into Masters and Doctoral programmes (include measures to attract qualified students and maintain high quality standards):

➤ **Action plan for scaling up enrolment in PG and Ph.D.**

S. N.	Activities	2015-16	2016-17
1	Research assistantships to 5 Ph.D candidates		
2	To provide teaching assistantships to meritorious financially weak PG students under “Learn and Earn Scheme” (10 no.)		
3	Promotion of digital learning		
4	Industries to offer courses		
5	Encouragement and rewards for innovation in teaching and research to the Faculty.		
6	Encouragement and rewards for patent filing		
7	To recruit and retain qualified and talented faculty from across the world.		

8	R&D Brochure		
9	Quarterly issues of international journal		
10	Digitizing library-Converting to ebooks		
11	Promoting and widening scope of IIPC Cell-More MoUs, Sponsored Projects, Industry sponsored labs, Industrial trainings		
12	Credit transfer		
13	Compulsory summer projects/internships in areas of practical interest		
14	To provide access to digital media in Institute- allocate more funds for better libraries and laboratories-Subscription to more no. of journals		
15	To involve dedicated researchers in direct training of the students at the undergraduate level and encourage them to go for the Masters or Ph.D degrees.		
16	Joint research and publications in International Journals of repute.		
17	MoU with reputed institutes & collaborative research with International Institutes/universities		
18	Faculty Development initiatives		
19	R&D support to Undergraduate Students-TA/DA & Registration dues for project cost		
20	Incentives to UG/PG students for journal publications.		
21	R&D support to Ph.D scholars –To attend conferences and reading paper at abroad		
22	Training for filing patents		
23	MoU with industries		
24	Product development initiatives		
25	Credit Based Course Registration System		
26	Increased industry linkages through a) Evaluation by industry, b) Teaching, c) Elective courses by industry		



Indicates the span for proposed activities


2.5 Provide an action plan for improving collaboration with Industry:

According to the report of NASSCOM, there is wide gap between the requirements of the industries and the skills developed in the engineering graduates. This is the major source of concern which affects the employability nationwide.

GHRCE has received grant from AICTE to set up Industry Institute Partnership Cell. This cell is functioning in a vibrant manner and has undertaken many projects with the collaboration of industries. The TEQIP-II project will certainly boost this activity. Hence there is requirement of setting up action plan for collaboration with industries.

S. N.	Key Activities	2015-16	2016-17
1	Industry funded laboratories		
2	Mentoring Incubates		
3	6 months Industry Internship & project		
4	Finishing school		
5	Collaborative research		
6	Industry participation in Board of Studies, focused Groups, Curriculum Development workshops		
7	Faculty training in industries		
8	Guest lectures by industry personnel		
9	Conduction of seminars, workshops, conferences in association with Industries		
10	Signing MoUs		
11	Assistance in Business expansion		
12	Sharing infrastructure for testing the product		
13	Product Development		
14	Creating companies based on innovation		
15	Revival plan for sick industries		
16	Sharing of library resources		
17	In house training for industry persons		
18	Calibration of industrial equipments		

19	To set up Center of Excellence.		
20	Open house for UG/ PG projects		
21	Evaluation of PG and Doctoral students by industry people		
22	Frequent industrial visits		
23	Joint Entrepreneurship awareness camp with industries		
24	Participation in National / International Technical Fair		
25	To provide consultancy services to small and medium scale industries- in & around Nagpur- involved in design, development and marketing of engineering products satisfying local consumer needs.		

 Indicates the span for proposed activities

2.6 Provide an action plan for:

- o quantitatively increasing and qualitatively improving research by their faculty individually, jointly and collaboratively,

Action plan :

S.N.	Activities	2015-16	2016-17
1	Encouraging the research projects undertaken by faculties.		
2	Sponsoring the faculties to attend 8 international and 20 national conferences (IEEE, ACM etc) and present the research work.		
3	Deputation of 10 faculties for collaborative research in the field of interest at national/international labs.		
4	Institute grant for creating R&D facility.		
5	Instituting R&D fund for U.G./P.G./Doctoral and faculties,		
6	To increase the publications in refereed journals		
7	Joint publications with National and International authors.		
8	Organizing conferences, seminars or workshops		
9	Encourage the faculty by way of giving financial incentive for		


	publications in journals with high impact factor.		
10	Financial support for filing national and international patents		
11	Financial incentives for writing books and monographs by standard publishing houses.		
12	Financial incentives to grantees of sponsored research projects		

 Indicates the span for proposed activities

- **Developing research interest among undergraduate students**

Action Plan:

S.N	Activities	2015-16	2016-17
1	Project allocation & evaluation with the involvement of industry people.		
2	Seed money to faculty & students		
3	Best research student award.		
4	Incentives for association with sponsored research projects.		
5	Flexible Credit transfer facility for industrial training/ projects.		
6	Research Methodology Workshops		
7	Financially supporting the activities such as Project competition, attending specialized training, presenting paper at national conventions, etc.		
8	Conducting annual technical festival.		
9	Compulsory 6 month industrial internship		
10	To conduct patent awareness programmes for students		
11	Skill Enhancement Workshops on latest simulation tools in specialized areas		

 Indicates the span for proposed activities

- Collaborating with Indian and foreign institutions in academic and research area through MoUs*

S.N	Activities	2015-16	2016-17
1	Reward the publication of high quality journal articles/books with authors of Indian and foreign institutions		
2	Signing MoU with industries in the region (08)		
3	Strengthening existing MoU with industry		
4	Strengthening existing MoU with Indian institutions.		
5	Strengthening existing MoU with foreign institutions.		
6	Signing New MoUs with Indian institutions.		
7	Signing New MoUs with foreign institutions.		
8	Organizing international conferences/workshops with foreign institutions		
9	Organizing international conferences/workshops with research labs.		
10	Identify priority partners and utilize programmes, networks and funding for the individual academic priority areas		
11	Online student portal		
12	Intensive summer courses with foreign researchers.		
13	Joint consultancy		
14	Joint sponsored research projects.		
15	Collaborative publications		
16	Wide publicity across the globe through interactive website, news-bulletins, brochures & other effective media.		



Indicates the span for proposed activities

2.7 Attach the summary of Training Needs Analysis carried out. Also, provide Faculty Development Plan from the first 18 months to achieve improved competence based on Training Needs Analysis (TNA) in the following areas.

- Subject / domain knowledge enhancement
- Attendance in activities such as workshops, seminars, etc.

- Improvement in faculty qualifications.
- Improving research capabilities

The institute conducted series of activities to identify present and future requirements in the context of Institutional Development. This analysis specifically defined the gap between the current and the desired individual and institutional performances. Training needs analysis was conducted in a systematic manner and it was based on specific information provided by the faculty in-line with the plan of development of the department. Also the training needs are identified on the basis of areas of specializations.

Accordingly the faculty members and staff have attended various trainings in pedagogy, technical domain, management capacity development, research areas, updation of qualification etc at IITs, IIMs, NITs, IISc, and other reputed organizations. This has resulted in improved competency in teaching, learning and research. Also the faculty members were sponsored to attend conferences, seminars and workshops at India and abroad.

Now the training has become a continuous activity wherein the faculties and staff are deputed as per the need and recommendations by the department.

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

- IDP is focused to increase the employability of P.G. students(Industry will be benefitted)
- IDP is also focused to create and ignite R& D areas which will lead to R&D products of commercial use.
- Focus of the IDP is to create entrepreneurs which is need of the hour (EDP & Technology incubation)
- IDP is also focused on faculty development Initiatives which will enhance the quality of faculties thereby strengthening the academic structure and labs.
- IDP also focuses strengthening linkages with academic institutions in India and abroad which will result into collaborative research.
- IDP is focused to develop the institution as Centre of Excellence for Advanced Studies.

2.10 Describe briefly the participation of departments/faculty in the proposal preparation and implementation.

- The institute has formed centralized unit of TEQIP with one of the professor as TEQIP coordinator.
- The unit has senior professors as nodal officers. In addition to that, departmental co-ordinators have been appointed to coordinate the activities with the various departments.
- Director along with Heads and senior professors had brain storming session for preparation of IDP, new P.G.programs to be proposed and existing programs to be strengthened.

2.11 Describe the institutional project implementation arrangements.

The project is looked after by TEQIP coordinator and Nodal Officers. There are different committees to take care of academic activities, R&D activities, I.I.I. activities, equity action plan, procurement, finance, quality assurance etc. The office is equipped with all the facilities.

There are coordinators from the department to synchronize the project activities. The action plan has also been reviewed from time to time. Institute has decentralized the various portfolios for implementing the institutional activities under IDP of TEQIP- II.

- Academic cell led by Dean Academics having Associate Dean and one representative from each department.
- IIPC cell: The cell is led by Dean Industry Relations who organizes the collaborative activities including industry experts.
- Academic quality assurance committee led by convener and six team members who are doing mentoring, counseling and also evaluating the teachers performance within the classroom and laboratories.
- R&D cell led by Dean R&D to frame the R&D norms and promote and execute R&D activities.
- Dean PG and advanced studies looks after all the PG programmes.
- Dean- Training and placement looks after placement activities.
- Library committee led by one Professor and one member from each dept to look after the library issues.

2.12 Provide an institutional project budget in Table No.34.

**Table-34:
Institutional Project Budget for Sub-Component 1.2**

Note: For details of permissible and non-permissible expenditures, please see Table-18 (for Government funded and aided institutions) and Table-19 (for private unaided institutions)

(Rs. In Crore)

S.N.	Activities	Additional Allocation	2015-16	2016-17
1	Infrastructure improvements for teaching, training and learning through:		↓	
	(i) Establishment of new laboratories for new and existing PG programmes, faculty research, etc.	0.00	0.00	0.00
	(ii) Updation of learning resources	0.00	0.00	0.00
	(iii) Procurement of furniture	0.00	0.00	0.00
	(iv) Modernization and strengthening of libraries and increasing access to knowledge resources	0.00	0.00	0.00
	(v) Refurbishment (Minor Civil Works)	0.00	0.00	0.00
2	Providing Teaching and Research Assistantships for significantly increasing enrolment in existing and new Masters and Doctoral programmes in Engineering disciplines	0.81	0.324	0.486
3	Enhancement of R&D and institutional consultancy activities	1.05	0.65	0.40
4	Faculty and Staff development for improved competence based on TNA	0.32	0.20	0.12
5	Enhanced interaction with Industry	0.4	0.25	0.15
6	Institutional Management Capacity enhancement	0.07	0.05	0.02
7	Implementation of institutional reforms	0.62	0.40	0.22
8	Academic support for weak students	0.28	0.18	0.10
9	Incremental Operating Cost	0.45	0.30	0.15
	TOTAL	4.00	2.354	1.646

2.13 (a) Provide the targets against the deliverables given in Table 35.

TABLE - 35
Project Targets for Institutions under Sub Component 1.2

Sr. No.	Deliverables	Baseline	Targets to be Achieved	
			At the end of 2 years of Joining the Project	By Project Closing (Dec 2016)
1	Number of students registered for (a) Masters in Engineering Programme	158	195	314
	(b) Doctoral Programme in Engineering	30	67	170
2	Revenue from extremely funded R&D projects and consultancies in total revenue (Rs. In lacs)	42.1	80.0	200
3	Number of (a) Research Publications in referred ▪ National journals	54	139	10
	▪ International journals	123	185	700
	(b) Citations	69	171	2000
	(c) Patents obtained / filed	02	06	85
	(d) Books	10	15	15
	(e) No. of R&D projects commercialized	-	02	07
4	IRG as % of total recurring expenditure	3.33%	10%	15%
5	Number of co-authored publication in referred journals			
	(a) National	34	75	02
	(b) International	51	73	100
6	Student credentials (a) Campus placement rate of ▪ UG students	34%	50%	70%
	▪ PG students	20%	30%	70%
	(b) Average salary of placement package for (Rs. In lacs) ▪ UG students	3.25 (PA)	4(PA)	4.5(PA)
	▪ PG students	2.91(PA)	3.5(PA)	4.5(PA)
7	Number of collaborative programmes with Industry	3	9	9
8	Accreditation Status (obtained & applied for)	Accredited	75% of eligible UG programmes and 60% of eligible PG programmes	100% UG 100% PG of eligible programmes
9	Vacancy position for faculty and staff	35%	25%	Nil
10	Percentage of f regular faculty with PhD in engineering disciplines	9.54%	23.33%	25%

11	Any other (maximum three)			
i.	Hosting International Conferences	2	3	8
ii.	MOU with University	4	7	8
iii.	MOU with Industry	10	20	25
iv.	Membership of professional societies	273	360	1500
v.	Publication in conferences	1250	1500	2000

2.14 Give an action plan to ensure that the project activities would be sustained after the end of the Project.

The Institute had mechanism for curriculum development and implementation through Board of Studies, Focused groups, Academic Council, Board of Governance. Also institute has R&D Cell, Patent Cell, Entrepreneurship Development Cell, Industry Institute Partnership Cell, Skill Enhancement Programme Cell, Training Coordinator, Dean Students Activities & Counseling, etc. Under these, the Institute is conducting various activities. The same activities shall be continued after the project period as most of these activities do not involve financial implications. Even if funding is required, the establishment of four corpus funds will be sufficient to cope up with the execution of these activities. Moreover, the bond between industry, entrepreneurs, alumni, society and institute will be strengthened during the project period and once the inter dependability is increased the activities will keep on going. The training undertaken by faculty members will strengthen the academics as well as Research Domain.

2.15 Provide Procurement Plan for the first 18 months for Goods and Civil Works in Table-36 and Consultant Services in Table-37 with budget and timeframe.

Not Applicable

2.16 Provide any other information related to special academic achievements as given in Eligibility Proposal of the institution.

- G.H.Raisoni College of Engineering Nagpur, established in 1996, is one of the Premier & Esteemed Institutes in Maharashtra & Central India which has made its mark on global scenario.
- 07 UG & 14 PG courses in Engineering & Master in Technology Management (MTM) course. Also having MBA & MCA courses.
- Approved Research Center for Ph.D for 09 disciplines

- All the eligible courses are accredited for the upper span by NBA (Some are accredited under Washington accord). Some of the courses are reaccredited.
- It has filed 70 patents in a short span of time.
- The Institute has an impressive infrastructure and is one of the best in the region.
- The academic environment is conducive for carrying out quality education practices for advancements and dissemination of knowledge.
- The students and faculty members have gained recognition at National & International level to come out with flying colors.
- 47 faculty members have completed Ph.D & 74 are pursuing.
- 4000 plus publications by faculty members at International and National level conferences and around 700 plus publications in refereed Journals.
- Faculty members have 15 books/book chapters on their account.
- Many of the faculty members have worked as Reviewers, Session chairs, Technical Committee members at worldwide conferences/journals. The institute is rarest to have such a kind of intellectual capital.
- Institute has deputed senior faculty members to visit foreign universities/institutes, sponsored teaching faculty members to attend International conferences at abroad.
- Financial incentive for Consultancy is in the ratio of 70:30 for faculty and institute respectively.
- The institute has the policy of giving study leaves for updation of knowledge and for qualification upgradation.
- Vehicles with allowances are provided to Deans, Heads and Professors.
- Received 31 grants like MODROBs/RPS and IEDC (Entrepreneurship Development) from reputed agencies like AICTE, DST etc including 3 grants for SDP/STTPs and many travel grants.
- Organized many International/National level Workshops, Seminars & Symposiums including 06 International and 30 National level quality conferences.
- It has on its count many MoUs and collaborations with International/National level reputed Universities and Organizations.
- The Institute has student chapters/branches of major Professional societies like IEEE, CSI, ISTE etc. It has spent around 2 Lacs per year for the membership of students and faculty members.

- The Institute has sponsored around 115 faculty members to visit abroad for attending International Conferences/ extending collaborative research at various renowned Universities.
- The Institute routinely organizes the guest lectures and expert lectures by eminent and veteran personalities from Technical Education and Industries.
- The organization of International Conferences, training programmes, CEP courses, seminars, workshops have resulted in strong networking of institutions.

2.17) Organising 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.

S.N	Activities	2015-16	2016-17
1	Remedial Teaching (At 3 stages)		
2	Soft skills development workshop		
5	Career guidance		
	Skill Enhancement Programs		
6	Psychological counseling.		
7	Focused training for aptitude development for competitive exams.		
8	Conduction of mock interviews and group discussion sessions.		
9	Seed Money		
10	Language lab		
11	Digital learning		
12	Financial support for attending training seminars, workshops and conferences.		
13	Promotion of Entrepreneurship through Incubation		



Indicates the span for proposed activities