

**TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME
(TEQIP)**

PHASE-III

**FORMAT FOR
INSTITUTIONAL DEVELOPMENT PROPOSAL
for**

**Sub-component 1.1
Institutional Development for Participating Institutions**

(The filled-in proposal along with attachments should not exceed 20 to 30 pages)

For details, please see the attached reference material.

1. INSTITUTIONAL BASIC INFORMATION :

1.1 Institutional Identity

- Name and address of the institute :

**UJJAIN ENGINEERING COLLEGE, SANWER ROAD,
ENGINEERING COLLEGE CAMPUS UJJAIN (M.P) – 456 010**

- Year of establishment : **1966**
- Is the Institution AICTE approved? : **Yes**
Furnish AICTE approval No. : **F.No.Central/1-2812719764/2016/EOA**
Dated: 25- Apr-2016 (Encl. 1)
- Type of Institution : **Govt. funded**
- Status of Institution :

**Autonomous Institution Status granted by Govt. of Madhya Pradesh as
per the norms laid down by A.I.C.T.E (Encl. 2)**

- Name and Designation of Head of the Institution
(Full time appointee):

Dr. UMESH PENDHARKAR, PRINCIPAL (OFFICIATING)

1.2 Academic Information:

- Engineering UG and PG programmes offered in Academic year 2016-17:**

S. No.	Title of programmes	Level (UG, PG, PhD)	Duration (Years)	Year of Starting	AICTE Sanctioned Annual Intake	Total student strength in all years of study
01	B.E. – Civil Engineering	Under-Graduate	4 Years	1966	30	138
02	B.E. – Mechanical Engineering		4 Years	1966	60	276
03	B.E. – Electrical Engineering		4 Years	1966	60	276
04	B.E. – Electronics & Communication Engineering		4 years	1985	60	276
05	B.E. – Chemical Engineering		4 Years	1985	60	276
06	B.E. – Computer Science & Engineering		4 Years	2002	60	276
07	M.E. (Civil) in CASDD	PG	2 Years	2002	25	50
08	M.E. (Mechanical) in IEM	PG	2 Years	2002	18	36

S. No.	Title of programmes	Level (UG, PG, PhD)	Duration (Years)	Year of Starting	AICTE Sanctioned Annual Intake	Total student strength in all years of study
09	M.Tech. (Chemical) in Environmental Management	PG	2 Years	2002	25	50
10	M.E. (Elx & Comm) in Digital Comm.	PG	2 years	2011	18	36
11	Ph.D (Civil Engg.)	Ph.D	RGPV Bhopal Study Centre for Ph.D Research work in various Departments	2002		04
12	Ph.D (Mech.Engg.)			2002		04
13	Ph.D (Electrical Engg.)			2002		04
14	Ph.D (Elex. Engg.)			2002		02
15	Ph.D (Chemical Engg.)			2002		04
16	B.E. – Civil Engineering	Under-Graduate (Part Time)	5 years		15 (Self sponsored)	10
16	B.E. – Mechanical Engineering		5 years		15 (Self sponsored)	
16	B.E. – Electrical Engineering		5 years		15 (Self sponsored)	

- NBA Accreditation Status of UG and PG programmes as on 31st December 2016:**
 Total no of programmes eligible for accreditation (at least one batch pass out): **UG-6, PG-4**
 No. of programmes accredited: **At present Nil (Earlier NBA Accredited 5 UG courses, 2004-2007)**
 No. of programmes applied for accreditation: **UG- 05 (Application submission under process)**
- Status of Faculty Associated with Teaching Engineering Students (Regular & Contract) as on 31st December 2016:**

No. of Sanctioned Regular Posts	Present Status : Number in Position by Highest Qualification												Total Number of regular faculty in Position	Total Vacancies	Total Number of contract faculty in Position
	Doctoral Degree				Masters Degree				Bachelor Degree						
	Engineering Disciplines		Supporting Disciplines (Physics, Maths and English/ other languages)		Engineer ing Disciplines		Supporting Disciplines (Physics, Maths and English/ other languages)		Engineering Disciplines		Supporting Disciplines (Physics, Maths and English/ other languages)				
R	C	R	C	R	C	R	C	R	C	R	C				
1	2	3	4	5	6	7	8	9	10	11	12	13	14=(2+4+6+8+ 10+12)	15=(1-14)	16=(3+5+7+9+ 11+13)
88	30	--	08	--	17	--	02	--	--	--	--	--	57	31	

R=Regular, C=Contract

2. INSTITUTIONAL DEVELOPMENT PROPOSAL (IDP) (Implementation Period April 2017-March2020) :

2.1 Give the Executive Summary of the IDP (max 2 pages).

Ujjain Engineering College, Ujjain formerly Govt. Engineering College, Ujjain was established by the State Govt. of M.P. in 1966. It is an Autonomous institute declared by the Government of Madhya Pradesh (under the provisions laid down by the All India Council of Technical Education) in the year 2007 as per TEQIP conditions and had been conferred academic autonomy by the affiliating university namely R.G.P.V Bhopal in the year 2009. College has been certified ISO 9001:2008 for its quality system.

Ujjain Engineering College was associated with TEQIP Phase - I from March 2003 to March 2009 and had been instrumental in carrying out various activities quite successfully which were laid down under the purview of TEQIP. This time also we are keen to uplift the quality of technical education of our budding engineers by becoming a part of TEQIP Phase - III starting from April 2017.

Under Institutional Development Proposal the institute is looking and simultaneously working into the following broad guidelines required to be focussed in this scheme. These are as follows:

- (i) **Improving the learning outcomes of the students:** As the thrust of the scheme depends on the quality education this time, therefore the Faculty and staff responsible would be asked to undergo rigorous state-of-art training in various fields like subject upgradation, seminar/conference participation, research proposal etc.. Apart from this every department is already equipped with smart classrooms and Wi-Fi campus using the services of Geo Net has already begun. The college library is under the purview of full automation with e-library facilities. For improving the academic performance of SC/ST/OBC/academically weak students there are regular classes arranged in the evening for better outcome in this regard and at the same time remedial classes have also started. Time-to-Time quiz test and assignment being given to the students and thereafter the analysis has been carried based on the results so that chance of improvement could be executed in the next quiz and assignments.
- (ii) **Improving the employability of the students :** Summer/Winter Training for a maximum period of 6-weeks had been long introduced in the academic curriculum. This allows the student to train themselves not only the nearby industries but also can go across any industry across the nation of their choice. Our BOG also involves the industry people so that a balance between the industrial aspirations could be incorporated into day-to-day working of the institute both academically as well as administratively.
Student's placement and counselling has become the major issue everywhere. In order to interact with industries for better placement activities a Training and Placement cell is working in our institute since long time
- (iii) **Increasing faculty productivity and motivation:** Our main stake holder or output is our students, therefore the productivity of Faculty and their motivation are all linked with the better overall competency in all spheres be it academic, extra-curricular, co-curricular and managerial skills. This aspect will be enhanced by providing better environment to the faculty so that they can be motivated to apply for sponsored research project, consultancy activities etc.. This way the technical know-how of faculty as well as staff members will improve to a great extent which inturn be imparted to the budding engineers in a better way.
- (iv) **Action plan for obtaining autonomous institute from UGC and improving the NBA accreditation status :**

In order to obtain Autonomous Institution status from U.G.C, accreditation of UG/PG programmes is an important component. Therefore the action plan for getting

autonomous status goes parallel to the N.B.A accreditation status. The process for applying for accreditation has already begun and it is expected that both accreditation and autonomous institute status would be obtained by March 2018.

(v) **Action plan for getting assistance from ATU's, BOG strengthening, MIS system and mechanism for improvement of GATE score :**

Government of Madhya Pradesh has recently declared the Ujjain Engineering College as State Technical University. The proposed university mentor the students to enhance their technical knowledge and skill of this institute as well as students from nearby area.

Our BOG had been constituted by Govt. of M.P by following the guidelines mentioned in A.I.C.T.E. Therefore it is not in the jurisdiction of the institute to regulate or change the present set-up.

Ujjain Engineering College Ujjain is planning to work in Cloud Based Educational ERP Campus Active MIS software. Campus Active is a next generation MIS that is transparent, flexible, paperless, and easy to use and has been designed & developed to deliver real conceivable benefits to institutes. Hence Campus Active plays an important role in making the working as desired for fulfilment of all academic activities.

As discussed in the meeting arranged by N.P.I.U at New Delhi the barometer to gauge the quality of our students should be a National level competitive exam namely GATE. In order to impart quality education fulfilling the criterions laid down by this examination, discussion were held for involving some agency (outsourcing) at the central level so that each state will follow the guidelines accordingly.

(vi) **Twinning Plan with a high performing institute:**

Under a Twinning Plan a strategic partnership in terms of capacity building knowledge transfer could well be accomplished between the Ujjain Engineering College Ujjain and SGSITS Indore. These two institutes are under consideration for TEQIP Phase – III.

(vii) **Recruitment and selection of high-quality faculty:**

There are certain difficulties in recruitment as the establishment is still a subject matter of Govt. of M.P. New posts are not sanctioned for the Computer Science and Engg department since its inception and therefore no new permanent faculty is recruited in this department. The promotion scheme of state government is under revision from many years and higher posts in departments are vacant. However Career Advancement Scheme is implemented from time to time and recently 21 Associate Professors of the college are promoted to the post of Professor while 11 other got senior and selection grades as Assistant Professors.

Looking in to the crunch of faculty and staff members across the autonomous engineering institutes a meeting was convened by Director, Technical Education, Government of Madhya Pradesh at Bhopal on 3-4 February 2017 to see the shortfall of faculty and staff in line with the required 1:15 student/teacher ratio as prescribed by AICTE. Based on the shortage, creation of posts is underway to meet out the differences.

(viii) **Year wise budgetary allocation:**

The tentative year wise budgetary allocation required for implementation of project under TEQIP Phase – III is presented in tabular form as under:

S. No.	Year	Budgetary allocation required (in Crores)
1	April 2017-March 2018	6.00
2	April 2018-March 2019	5.00
3	April 2019-March 2020	4.00

(ix) **Action plan for ensuring that the project activities would be sustained after the end of the Project along with evaluating the ground realities in terms of SWOT analysis**

An action plan based on sustainability of the ongoing project activities once the project gets completed could be met out by ensuring that centre of excellence in different field of engineering would be established so as to improve the employability of students, curriculum of the UG/PG course will be revised by a committee which is constituted by industry expert and subject expert, creating a corpus fund out of portion of internal revenue generation will sustain the maintenance of the procured items etc.

But apart from the above action plan we must also evaluate our strength, weakness etc. in terms of the SWOT analysis which is presented below in a Tabular form.

SWOT ANALYSIS

Sr. No.	Strength	Weakness	Opportunities	Threats
	Experienced and highly qualified faculty	Dependent for decision making	Good environment for R&D&I with the active involvement of students	Fierce competition due to increasing no. of private engineering colleges / institutes
	Experienced and well qualified supporting staff with modern lab facilities	Inadequate focus on industry-institute interaction	Good facilities and experienced faculty available for offering job oriented courses	Frequent switching of faculty and staff due to transfers and inadequate growth opportunities
	Good quality of students at the entrance level.	Mixing of academic, financial & administrative responsibilities	Opportunities for consultancy / testing and technical advices	Low priority in government policies
	Use of advanced teaching, learning methodologies	Inadequate use of available resources	More opportunities available for industry institute interaction	
	Good communication among faculty, staff and students	Inadequate focus on publicity of good work	Better use of alumni for placement of students	Lack of motivation among faculty and staff members
	Visionary leadership at the top level	Procedural delay in the implementation of good plans	Liberal policy of AICTE for opening of new UG/PG courses	Eye of local/district administration on college land
	Good infrastructure / facilities for extra co-curricular activities to develop multidimensional personality of students	Inadequate autonomy (administrative + financial)	Development through world bank sponsored programme like TEQIP	Growing interest of structures towards specified branches of engineering
	High reputation and confidence of masses in capabilities of college	Non-professionalism at supporting / technical staff level	Grants available under MODROB, development and QIP sponsored programmes of AICTE	
	High strength of Class III & IV employees	Poor training facilities for faculty and staff	Up gradation of faculty through QIP	
	Accreditation by NBA for 5UG courses	No encouraging promotional policies for employees	Increase in intake strength of all UG courses	
	Availability of adequate land (more than 300 acres)	Poor infrastructure – Problems of maintenance – inadequate hostel facilities	Better utilization of land can help revenue generation	
	More than 5.5 crores in corpus fund	Vacant posts and inadequate establishment at faculty level		
	Availability of campus wide networking facility	Poor library facility, lack of books, journals and resources		
	New building of library	Insufficient transportation and medical facilities		
	Availability of basic facilities like bank, post office, cooperative stores, dispensary etc. within campus	Poor communication facilities for student (STD PCO, photocopy / Fax / internet parlors etc.)		
	Better sports grounds / facilities	Inadequate use of available sport facilities		

2.2 Provide an action plan with timelines for : (not more than 1 page for each sub-activity)

(a) Improving the learning outcomes of the students

1&2 Faculty training (qualification upgradation, subject upgradation & research competence, Pedagogical training, participation in conferences, seminars / workshops etc.) and Staff training (Technical & Administrative staff)

Annual assessment of training needs of faculty members, technical staff and supporting staff will be carried out before the start of each academic year(i.e. in June). A training need analysis (TNA) format is already in existence and based upon the outcomes of the exercise; a detailed training scheduled will be finalised in which specific time period, area of training and training agencies will be mentioned.

One/Two weeks short term training programs will be organised taking sponsorships with AICTE/ISTE/DTE for the faculty members in the area of common interest fulfilling the inhouse training needs. Faculty members may also be sent to other reputed Institutes like IITs, NITs, IIMs, NITTTRs as per their area of interest as per TNA. Special Training Programs may also be organised inhouse with the help of reputed training agencies if the adequate batch size is available.

Technical staff will undergo training in the specified area as per the finalised schedule with the recommendations of HOD. Inhouse training programs will be planned in the area of common interest. Staff will also be sent to other institutes for training in the specified area.

Supporting staff will be trained through inhouse training programs by taking help of trained faculty/staff within the institute. For any specialised area, institute may take help of the agencies like CRISP, IGTR etc.

Action Plan for Faculty/Technical Staff/Supporting Staff Training in an Academic Year (July –June)

Action	Month												
	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	
Performing TNA for faculty & Staff													█
Identifying Training Needs and preparation of Annual Training Calender of the Institute	█												
Organising Faculty Inhouse Training Programs		█					█						
Organising Inhouse Training		█					█						

for Technical Staff												
Organising Inhouse Training for Supporting Staff												
Sending Faculty members for short term training in other Institutes/Agencies												
Sending Technical Staff for short term training in other Institutes/Agencies												
This action plan will be repeated in every academic year and the practice will be sustained as per the guidelines.												

Institutional TNA format is hereby attached for reference (*Encl. 3*). The TNA is in the form of a standard formats for both faculty and staff members and is being prevalent since long time.

3. Increasing capacity of UG, PG and Ph.D education (increasing enrollment and starting new UG, PG and Ph.D programmes)

In order to increase the capacity of UG, PG and PhD education the following steps would be adopted:

- (i) Accreditation of UG programmes from National Board of Accreditation (N.B.A) and Autonomous status from UGC are stipulated within next March 2018 as mentioned in point 2.3 (1 and 2) through Gantt chart.
- (ii) Time bound academic calendar for post-graduate programmes with focus on strict compliance to ensure completion of courses in scheduled time frame.
- (iii) Increased component of on-job training, live projects and vocational training in appropriate industries to facilitate exposure of industrial environment, problems and problem solving procedure to prepare students for better adaptability after completion of degree.
- (iv) Increased opportunities for job through on campus placement drive.
- (v) Improved publicity and awareness efforts using electronic and print media.
- (vi) Provision of teaching assistantship scholarship for post-graduate and doctoral students under various AICTE schemes.
- (vii) Gainful employment of research scholars as research assistant / associate in “DST/AICTE/MHRD sponsored research projects.

Action Plan for Undergraduate Students:

- (i) Exposure of research methodologies/software driving self study/seminar periods.
- (ii) Motivating students to pickup live projects from industries that are challenging and research and problem solving oriented.

- (iii) Providing financial assistance for procurement, fabrication and visits to industries.
- (iv) Initiation of ‘best project awards’ at departmental level and college level.
- (v) Financial assistance to students for presenting their work in conferences / seminars.

The action plan for scaling up of enrollment into Masters and Doctoral programmes are as follows:

S. No.	Key Activities	Time period in months					
		1-3	4-6	7-9	10-12	13-15	16-18
1	Academic proposal to AICTE for new courses						
2	Establishment of new P.G. labs						
3	Up gradation of existing P.G. labs						
4	Motivational efforts for attracting M.Tech students						
5	Motivational efforts for attracting Ph.D students						
6	Collaborative research and development project with industry						

4. Investing in smart classrooms, campus Wi-Fi (24*7 broadband connectivity and Wi-Fi access in all academic and administrative buildings and hostels (with a minimum of 2 MBPS speed for each connection)), e-library etc.

The details of expected investment in Smart Classrooms, Campus Wi-Fi access and upgradation and Repairing of Campus Wide Network (CWN) and e-library is shown in a Tabular form as per below:

Smart Classrooms :

Sr. No.	Particular's	No. of Items	Rate	Approximate Amount in Rs.
A	Equipments :			
1	Wireless Multimedia	01	1,08,833	1,08,833
2	Projector 4000 lument Interactive Writing Board	01	40,425	40,425
3	Portable Interactive Pad	10	6685	6685
4	Visual Presenter	01	38,022	38,022
5	Electronic Lectern	01	1,53,739	1,53,739
6	Ceilip Mountp Kit	01	1475	1475
Sub Total [A]				4,09,381
B	Departmental Requirements :			

1	Chem. Engg. Deptt.	06	4,09,381	24,56,286
2	Civil Engg. Deptt.	06	4,09,381	24,56,286
3	Mech. Engg. Deptt.	06	4,09,381	24,56,286
4	Elex & Comm. Engg. Deptt.	06	4,09,381	24,56,286
5	Electrical Engg. Deptt.	06	4,09,381	24,56,286
7	Computer Sc. Engg. Deptt.	06	4,09,381	24,56,286
8	I st Year Block	06	4,09,381	24,56,286
Sub Total [B]				1,71,94,002
Grand Total [A+B]				17,603,383

Installation of Wi-Fi in Campus :

Sr. No.	Name of Equipment	Quantity	Rate Per Quantity/ items (in Rupees)	Total Price (lacs)
1	Wireless Controller	02	1,25,000	2.5
2	Wireless Access Points (Indoor)	15	40,000	6.0
3	Wireless Access Point (Outdoor)	05	50,000	2.5
4	Router	01	1,50,000	1.5
5	PoE Switches	10	20,000	2.0
6	3KVA UPS	02	15,000	0.3
7	1 KVA UPS	10	7,000	0.7
8	Miscellaneous	-	4,00,000	4.0
Total				19.5

4.3.7.2 Upgradation and Repairing of CWN :

Sr. No.	Name of Equipment	Quantity	Rate Per Quantity/ items (in Rupees)	Total Price (lacs)
1	UTM	1	2,50,000	2.50
2	Switch	5	50,000	2.50
3	Laptop	1	50,000	0.50
4	Battery (At Data Centre)	20	10,000	2.00
5	Battery (At Edge Level Switch)	60	60,000	0.60
6	AC 2.0 or 2.5 ton	2	60,000	1.20
7	Timer Switch	1	3,000	0.03
8	AMC (include 1+20 Switch, 4 servers, 20 Edge switches, Fiber)	1	4,00,000	4.00
Total				10.73

E-Library :

Sr. No.	ITEMS	SPECIFICATION	COST (Rs. in lacs)	REMARK
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1.	E-books(Reference Books)(400 Nos@Rs5000/- approx)	E-Books for Engg., Science, Mathematics Skill Development from different publishers i.e. springer, Wiley, Elsevier, McGraw Hill, Person, PHI, CUP, OUP, New Age, etc.	20.00	Multiuser pick & chose and perpetual basis
2.	E-Books(Text Books)(600 Nos.@Rs3000/- approx)	Mutiuser E-Books for Engg., Science, Mathematics Skill Development from different publishers i.e. springer, Wiley, Elsevier, McGraw Hill, Person, PHI, CUP, OUP, New Age, etc.	18.00	Multiuser pick & chose and perpetual basis
3.	Computers (5 No. @ Rs50000/- approx)	4 th Generation,I3 Processor, Latest S(Window),4GB RAM,1TB-HDD.	2.50	For accessing the e-books
4.	1.Software Solution	Single copy of library Automation software(eLIB Ver.2) Installation of the software at UEC.	0.70	Library Automation
	2.Barcode Laser Scanner/Reader (1)		0.25	Library Automation
	3.Training(Per person Rs5000/-)	(Training will be provided 5 days at CRIPS)	0.05	Library Automation
	4.Digitisation of Data. (Per entryRs10/-for 70000 Books)	* Entry of books and journals, Editing of records. * Generation of barcode for all books.	7.00	Library Automation
	5.Library Membership Card Printing with Barcode. (Per Member Rs 50/- for 3000 Members)		1.50	Library Automation
TOTAL			50.00	

5. Improving the academic performance of SC/ST/OBC/academically weak students through innovative methods, such as remedial and skill development classes, peer assisted learning for increasing the transition rate, non cognitive skills and pass rate

Academic improvement of SC/ST/OBC Students is one of the most important core elements of IDP. The strength of these Students in the institution in Current session is given below:

Students	SC	ST	OBC	Total
UG Programs	225	218	348	1435
PG Programs	14	04	34	98

It has been observed that majority of the students belonging to aforesaid category belongs to rural sector. Hence they naturally have hesitant response in the class. They also have poor communication and less contemporary exposure needed to cope with present academic requirement.

With a view to enhance academic performance of these students, 3-tier modules are proposed:

1. **Students Empowerment Program**

Students Empowerment program (SEP) (one/two week duration in a semester) steered by bonafide counsellor is proposed to explore the hidden talent and potential of these students. The SEP arranged periodically during the course of study would strengthen all round development of the students leading to cognitive learning with engineering attitude.

2. **Special Coaching Classes**

The provision for special coaching classes in the weekend or out of the office hours during the week would be instrumental in academic upliftment of SC/ST/OBC students. These classes featuring attention on identified subject(s) or as raised by the students at UG & PG level would lay strong foundation in the path of their academic growth.

3. **Teacher Guardian Scheme**

Each faculty would play role of guardian of a group of students to monitor their overall academic progress. The students are expected to feel free academically with their faculty guardian to receive peer assistance and desirable guidance in all walks of their academic program.

This 3-tier module would certainly produce promising results in academic development of SC/ST/OBC students with greater confidence and accuracy.

6. **Instituting academic and non-academic reforms including programme flexibility (Is there any need to revise the curriculum? When it was last revised?)**

Revision of Curriculum

Rapidly changing business scenario has lead to the fast paced advances ad innovations in technology. Research and developmental activities are getting top priority not only in developing countries but in developed countries like India also. Global competition, changing customer preferences, demand for customized products abd increased awareness about environment and sustainability of ecology have resulted in some serious transformation in all streams of engineering and technology.

A need of continuous up-gradation of curriculum of UG and PG courses can not be overemphasized in this transitional scenario. This college has revised the curriculum thrice since July 2009.

Ist Revision (July 2009): The college got the academic autonomy by R.G.P.V. Bhopal from session 2009-10 and revised the syllabus and scheme thoroughly in July 2009 to accommodate modifications and revisions felt necessary by the freshly constituted board of studies and academic council of the college.

IInd Revision (July 2010): Grading system replaced the erstwhile marks and percentage system of evaluation of students' performance and SGPA and CGPA system of performance evaluation was implemented with more focus on internal assessment and mid semester tests. This was in accordance of the guidelines of AICTE and UGC.

IIIrd Revision (July 2015): Choice Based Credit System (CBCS) replaced the grading system for Six UG programmes in July 2015. This was done to keep pace with the guidelines of UGC and AICTE to offer more flexibility to students to choose subjects of their own liking. Number of elective courses has been increased and concept of open elective courses was introduced enabling students to opt for courses offered by the departments other than their branch of specialization. This has also provided an opportunity to learn latest courses from various streams of engineering increasing the versatility and enhancing the skills to handle fusion of technology. The CBCS is in early stages of adoption in the college.

The college is likely to get the status of University institute of technology as a new technological University is proposed to establish in the present campus of the college from session 2018-19. This will provide yet another opportunity to revise the curriculum to adapt changes in various domains of technology.

(b) Improving the employability of the students

7. Increasing interaction with industry (What are the industries located in the vicinity? What role of industry is perceived for the institute?)

In the nearby region of Ujjain Engineering College Ujjain there are so many industries working like Chemical Industries (in Grasim Industries Nagda, Pharma Industries Ratlam etc.), Automobile Industries (Pithampur Industrial Area), Heavy Machine Industries (Gajra Gears Limited, Tata International Industries Dewas) etc..

Action plan for improving collaboration with the above industries is now being developed and broadly they are mentioned as under:

- 1 Frequent visits and interactions with top management / HR managers / of identified relevant industries.

- 2 Dissemination of skills and knowledge among identified industries to help them in problem solving and performance improvement.
- 3 Carrying out live projects in the identified industries.
- 4 Inviting managers / Specialist / Engineers from the identified industries in the college for lectures as resource person.
- 5 For fulfilling this purpose the industry interaction cell is already established in the college.

8. Student career counseling and placement
Action plan for Career Counseling (2017-2020)

Systematic action plan for **Career Counseling** of students of U.E.C., Ujjain.

Following are the important activities:

1. Regular communication with all the students of college for their academic improvement of to improve their employability.
2. Continuous counseling of college students for improving their communication skills to increase the possibilities of their placements.
3. Regularly organizing expert lectures for personality development of the college students.
4. Regularly organizing industrial visits to improve the practical knowledge of the students.
5. Regularly organizing seminars and workshops to make the students aware about their overall personality development

Gantt Chart for Action Plan for Career Counseling of U.G. and P.G. students of U.E.C., Ujjain (2017-2020)

S. No.	Key Activities	Time Period In Years					
		2017-18		2018-19		2019-20	
		Jan-July	July-Dec	Jan-July	July-Dec	Jan-July	July-Dec
1.	Regular communication with all the students of college for their academic improvement of to improve their employability						
2.	Continuous counseling of college students for improving their communication skills to increase the possibilities of their placements						
3.	Regularly organizing expert lectures for personality development of the college						

	students						
4.	Regularly organizing industrial visits to improve the practical knowledge of the students						
5.	Regularly organizing seminars and workshops to make the students aware about their overall personality development						

Action plan for training and placement (2017-2020)

Systematic action plan for improving training and placements of students of U.E.C., Ujjain.

Following are the important activities:

1. Regular communication with all the heads of college for academic improvement of college students to make them eligible for campus drives
2. Continuous communication with core companies of different branches for campus recruitment of eligible college students
3. Continuous communication with consultancies and software companies to organize campus drives
4. Regularly organizing various training programs to enhance the knowledge level of the students
5. Regularly organizing expert lectures for personality development of college students

Gantt Chart For Action Plan For Training and Placement of U.G. and P.G. students of U.E.C., Ujjain (2017-2020)

S. No.	Key Activities	Time Period In Years					
		2017-18		2018-19		2019-20	
		Jan-July	July-Dec	Jan-July	July-Dec	Jan-July	July-Dec
1.	Regular communication with all the heads of college for academic improvement of college students to make them eligible for campus drives						
2.	Continuous communication with core companies of different branches for campus recruitment of eligible college students						
3.	Continuous communication with consultancies and software companies to organize campus drives						
4.	Regularly organizing various training programs to enhance the knowledge level of the students						
5.	Regularly organizing expert lectures for personality development of college students						

(c) Increasing faculty productivity and motivation

- 9. sponsored research, consultancy and other revenue generating activities

2.3 Provide an action plan with timelines for

1. Obtaining autonomous institution status from UGC

Ujjain Engineering College Ujjain (Formerly Govt. Engg. College Estd. in 1966) had been declared Autonomous by Govt. of M.P in the year 2009. Since then the institute is registered as an Autonomous society named Ujjain Engineering College Society Ujjain. The college is affiliated to R.G.P.V Bhopal (a Technical University of Govt. of M.P) and since July 2009 the University has conferred an academic autonomy to our college.

In order to obtain Autonomous Institution status from U.G.C, accreditation of UG/PG programmes is an important component. Therefore the action plan for getting autonomous status goes parallel to the N.B.A accreditation status as shown in the Gantt chart given below for next 3- financial years (2017-18, 2018-19, 2019-20).

Gantt Chart For Action Plan For obtaining Autonomous status from U.G.C (2017-2020)

Sr. No.	Key Activities	Time Period In Financial Years					
		2017-18		2018-19		2019-20	
		Jan - April	March	April	March	April	March
1	Institute submits Accreditation Application and after following all the procedures and evaluation committee report finally NBA issues Accreditation letter to Institute						
2	Institute submits the format of proposal for Autonomous status to UGC						
3	Expert committee visits the college campus for inspection						
4	Expert committee submit its report to UGC						
5	EC approves the committee's recommendation						
6	UGC awards the autonomous status to college						

2. Improving the NBA accreditation status

Ujjain Engineering College Ujjain (Formerly Govt. Engg. College Estd. in 1966) declared Autonomous by Govt. of M.P was Accredited for 5 U.G Programmes (Civil, Mechanical, Electrical, Electronics & Comm., and Chemical Engineering) by National Board of Accreditation (N.B.A) for three years 2004 – 2007.

Now once again Ujjain Engineering College Ujjain is applying for Accreditation from N.B.A for 5 U.G programmes under new Washington accord signed by N.B.A India. The registration phase - I has already been completed as mentioned in the letter received from NBA after submitting the institute details. Meanwhile under this accord as a U.G Tier I institute the proforma for pre-qualifier has already been filled by the respective departments and we are waiting from NBA to allow us to pay the required fees for further action. The action plan for improving the NBA accreditation status of U.G programmes of Ujjain Engineering College in the academic year 2017-18 has already begun in January 2017 and has been shown below in the form of a Gantt chart for next 3-financial years (2017-18, 2018-19, 2019-20).

Gantt Chart For Action Plan For Improving the NBA accreditation status of U.E.C., Ujjain (2017-2020)

Sr. No.	Key Activities	Time Period In Financial Years					
		2017-18		2018-19		2019-20	
		Jan -April	March	April	March	April	March
1	Institute submits Accreditation Application						
2	NBA approves the application						
3	Institute submits the fee						
4	NBA approves the fee						
5	Institute fills the SAR and submit to NBA						
6	Institute proposes visit date						
7	NBA nominates the expert team						
8	NBA expert team visit the institute and submit its report						
9	NBA AEC evaluates visit report and gives its recommendation						
10	NBA EC approves the recommendation of AEC						
11	NBA issues Accreditation letter to Institute						

2.4 Describe the following in brief:

1. Is any enhanced assistance / mentoring that the institution is looking forward from its ATU?

Yes, some necessary assistance / mentoring are required for overall growth of the institute. Mentoring from ATU is a valuable strategy to provide students with emotional and instrumental support. By providing knowledge information, guidance and encouragement, the ATU can play an important role nurturing student's future. College aspiration, helping them to prepare for higher studies and advising them, how to make successful transition from first year to completion of the degree.

Government of Madhya Pradesh has declared the Ujjain Engineering College as State Technical University. The proposed university mentor the students to enhance their technical knowledge and skill of this institute as well as students from nearby area.

The following assistance/mentoring needed from the ATU-

- Approval of curriculum which fulfils the demand of industry and helps them to become entrepreneur.
- Make Trust/belief among the students which help them to enhance their confidence.
- Students who perceive high quality relationship with their mentors experience.
- Student's grievances resolve as per the charter of the ATU.
- Provide training / awareness program for community service to benefit to the society.
- Provide training/internship program for students to help them for getting placement/to become entrepreneur.
- ATU have its own centralise placement and entrepreneurship cell to guide the students.
- Every data of the student should be in MIS in which they can retrieve at any time.
- Conduction of all examinations within time and declare their result.

2. Does your BoG need strengthening, if yes, then how?

The present structure of our BOG consists of the following members as adopted by the Department of Technical Education and Skill Development, Government of Madhya Pradesh which follows the regulations prescribed by the All India Council of Technical Education (A.I.C.T.E).

01 Minister – Manpower Planning : President
(Presently Technical Education
& Training Department)

- | | | | |
|----|---|---|------------------|
| 02 | Principal Secretary / Secretary –
Manpower Planning (Presently Technical
Education & Training Department) | : | Member |
| 03 | Director – Technical Education, M.P. | : | Member |
| 04 | Nominee of Relevant University
Nominated by Vice Chancellor | : | Member |
| 05 | Two Representatives from Industries
Nominated by State Government | : | Member , |
| 06 | Representative of AICTE | : | Member |
| 07 | Two Representative from faculty
Nominated cyclically by Principal, UEC,
Ujjain based on seniority | : | Member |
| 08 | Two Representatives from General Body
Nominated by Chairman of General Body | : | Member |
| 09 | Representative of Donators, Nominated by
State Government | : | Member |
| 10 | Representative of District Magistrate
(as per Letter No.1391/137/06/42-1,
Dt. 07.07.06 from Principal Secretary,
M.P. Govt., Tech. Education &
Training Department) | : | Member |
| 11 | SC/ST Representative | : | Member |
| 12 | Principal of the College | : | Member Secretary |

It is a usual practice to conduct BOG two-three times in a year for smooth functioning of the financial and administrative affairs. So at present BOG does not need any strengthening.

3. Is there an ERP/MIS system existing, if yes, then any improvement, modification suggested.

Most of the academic and official activities in the institute performed by system of office automation in the institute. The attendance record system of students as well as staff recorded by a biometric attendance system (BAS) managed by Government of India. The student feedback, their grievances, communication to the parents, Performance evaluation are carried out and uploaded on web portal of the institute. Salary of all employees is prepared by software SWAN which is managed by Government of M.P. The results of the students are prepared and managed by CRISP Bhopal and available online on official web side of the institute. Employee's data maintained by system of automation.

During implementation of the project, improvement proposals are as follow-

- The MIS software will be purchased within 3 months after sanction the project.
- With the help of this user friendly management system software which help to manage and cater to the needs of all departments and functions of the whole institute. This enables to easily manage students, teachers staff and several activities in the institute.
- The following facilities provided by MIS software for students as well as for parents-
 - Smart Card
 - Class Time Table
 - Attendance of students and staff
 - Internal tests and final examination results
 - Curriculum
 - Academic Calendar
 - Subject notes
 - Lesson plan
 - book issue schedule of Library
 - Details of Transport facility
 - Communicate the information to students, parents and staff through SMS/e-mail.

Ujjain Engineering College Ujjain is planning to work in Cloud Based Educational ERP Campus Active MIS software. Campus Active is a next generation MIS that is transparent, flexible, paperless, easy to use and has been designed & developed to deliver real conceivable benefits to institutes. Hence Campus Active plays an important role in making the working as desired for fulfilment of all academic activities.

Normally ERP systems for college campuses cover the online application, admission, fees and marks entry procedures. However, there are a host of other academic and administrative functions that have been automated by us, with the aim to go paperless. Critical processes that take a lot of time when done manually, have been automated and give results at the click of a button.

4. Is there any mechanism i.e. special classes being conducted in the institution for improving the GATE score?

The mechanism to be adopted for arranging special classes in the institution for improving the GATE score is a subject of debate. Since involving the in-house faculty members or outsourcing some central agency faculties in the institute premises is to be decided.

As discussed in the meeting arranged by N.P.I.U at New Delhi the barometer to gauge the quality of our students should be a National level competitive exam namely GATE. In order to impart quality education fulfilling the criteria laid down by this examination, discussion were held for involving some agency (outsourcing) at the central level so that each state will follow the guidelines accordingly.

2.5 Provide a Twinning Plan with a high performing institute with the objective of capacity building knowledge transfer and developing long term strategic partnerships. (Twinning plan will be formalized into Twinning agreement after finalizing the twinning partner).

Ujjain Engineering College Ujjain had been a part of TEQIP Phase – I from 2003 to 2009 but due to some unavoidable reasons it could not match the conditions laid down in TEQIP Phase – II. The institute just 50 KMs away from our institute i.e SGSITS Indore was chosen for TEQIP Phase – III. Therefore considering SGSITS Indore as a high performing institute as compared to our institute, a strategic partnership in terms of capacity building knowledge transfer could well be accomplished between the two institutes which are under consideration for TEQIP Phase - III.

2.6 Is there any difficulty in Recruitment and selection of high-quality faculty? If yes, what are the reason & action plan to solve the issue?

Ujjain Engineering College, Ujjain is an Autonomous college declared autonomous by Govt of M.P. (Formerly, Govt. Engineering College, Ujjain) in the year 1997. It is presently affiliated to RGPV Bhopal. A society was formed and registered to run the college in its autonomous status and Board of Governors (BOG) was constituted to make policy decisions. The faculty staff comprises of members from Government set up and from the recruitment done by the society. There are certain difficulties in recruitment as the establishment is still a subject matter of Govt. of M.P. New posts are not sanctioned for the Computer Science and Engg department since its inception and therefore no new permanent faculty is recruited in this department.

The intake of fresh as well as lateral entry students has increased significantly but accordingly new posts are not created leaving a gap in student teacher ratio.

The promotion scheme of state government is under revision from many years and higher posts in departments are vacant. However career advancement scheme is implemented from time to time and recently 21 Associate Professors of the college are promoted to the post of professor while 11 other got senior and selection grades as assistant professors.

Last year (2016) an Assistant Professor is recruited in the electrical engineering department of the college through direct recruitment done by the directorate of technical education, Govt. of M.P., Bhopal.

It is evident that there are difficulties regarding sanctioning of posts, recruitment procedure and promotion policy but measures to streamline these processes are on top priority of Govt. of M.P. and soon a framework for continuous recruitment and selection of new faculty will be in place in this college.

Looking in to the crunch of faculty and staff members across the autonomous engineering institutes a meeting was convened by Director, Technical Education, Government of Madhya Pradesh at Bhopal on 3-4 February 2017 to see the shortfall of faculty and staff in line with the required 1:15 student/teacher ratio as prescribed by AICTE. Based on the shortage, creation of posts is underway to meet out the differences.

2.7 Give an action plan for ensuring that the project activities would be sustained after the end of the Project.

Ujjain Engineering College is fully committed in implementing this project, its specific objectives, and actions and in reaching the expected results. The institution plan to sustain the growth initiatives are as follow:-

- In the result of this project, the institution will establish Centre of Excellent in all field of engineering. This will scale up the research activities which produce employable engineers, Master degree and Ph.D. scholars to sustain the initiative of TEQIP-III.
- The institute will supply the knowledge based employable engineer and material resources to sustain research activity and the demand of human resources in industries even after the completion of TEQIP-III.
- The institute is committed to continue all collaborative programmes even after the project TEQIP-III.
- After the project closure, the institute will support the necessary operational cost to assure quality academic service to the students.
- It is predicted that the grant of TEQIP-III will inject the self sustaining ability to the institution and regular accreditation process will ensure that the institute will get rid of weaknesses and transform those area to its strength.
- Creating a corpus fund out of portion of internal revenue generation will sustain the maintenance of the procured items.
- Research based consultancy will boost up the internal revenue generation.
- The project will enhance the industrial relation for increasing the employment of the students.
- Curriculum of the UG/PG course will be revised by a committee which constituted by industry expert and subject expert. It will increase the employability of the student.
- Training of the faculties on continuous basis in every academic session.
- Abroad training is helpful for faculties in getting more projects and this will sustain the growth.

The action under taken during the project period will enhance the involvement of the faculty in future research and publishing of the research papers.

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

The preliminary meeting was held on 18th January, 2017 at India Habitat Centre, New Delhi which was organized by N.P.I.U for various institutes likely to be chosen as a part of TEQIP Phase – III.

Based on the theme of involving faculty members, staff and students for the preparation of IDP's, a meeting has been convened on 25th January 2017 in this regard (**Encl. 4**). Faculty members have participated whole-heartedly and extended their help in the preparation of IDP. Similarly the students were also asked to give their frank opinion on various points so that the IDP preparation could be completed in time.

Principal
Ujjain Engineering College
Ujjain (M.P.)

List of Enclosures (soft copy)

- Encl – I : Recent Extension of Approval (EOA) Letter for the Academic session 2016-17 from AICTE
- Encl – II : Autonomous Institution Status granted by Govt. of Madhya Pradesh as per the norms laid down by A.I.C.T.E
- Encl – III : Institutional TNA Format
- Encl – IV : Participation_IDP_Preparation_UECUjjain