

TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP) PHASE - III

INSTITUTIONAL DEVELOPMENT PROPOSAL (IDP)

for

Sub-component 1.3

*Twinning Arrangements to Build Capacity and Improve
Performance of Participating Institutes*



Submitted by

Basaveshwar Engineering College (Autonomous)

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Executive Summary

Basaveshwar Engineering College (BEC) is a premier technical institute located in northern Karnataka on a scenic stretch of land spread over 93.18 acres of land in the new township of Bagalkot. Basaveshwar Veerashaiva Vidyavardhak Sangha (BVVS) started the college in 1963, as a private engineering college offering three UG programs and came into Government Grant in-aid code from 1968. The college is permanently affiliated to Visvesvaraya Technological University (VTU), Belagavi. Presently, the college offers 10 undergraduate and 8 postgraduate programs in Engineering in addition to MCA & MBA programs. Eight departments are recognized as research centers by VTU and offer Ph.D and M.Sc Engg. (by research) programs. Five departments have been approved as QIP research centers by AICTE. Three UG programmes have been accredited by NBA from 2003-2006 and eight UG programmes accredited/reaccredited from 2006-2009. Applied for accreditation of all ten UG and eight PG programmes in 2010 of which five UG programmes have been accredited and awaiting for the expert committee visit for the remaining applied programmes. The college was granted autonomous status from 2007 to 2013 and has been extended up to 2018-19 by UGC and VTU.

In 2004, the college was selected under TEQIP-I and TEQIP-II in 2011. The college effectively utilized the support it received from the TEQIP-I & TEQIP-II and the results are visibly admirable. The college has been recognized as the best performing college in TEQIP-II by NPIU. Some of the remarkable achievements made through this project are:

- Modernized all undergraduate laboratories and infrastructure facilities
- Established and expanded campus wide networking including wired and wireless connectivity
- Set up digital library with necessary software
- Establishment of new PG laboratories
- High quality research facilities have been created in various departments
- Established laboratories in association with industries such as Bosch Rexroth, Intel Intelligent Systems Laboratory, MEMS Design Center, SCADA, etc.
- Converted 29 classrooms as smart classrooms
- Implemented ERP for effective campus management
- Developed and strengthened industrial linkages through conclaves
- Knowledge upgradation and Skill enhancement of faculty through 90 FDPs and students through 30 SDPs
- Provided financial assistanceship to meritorious 164 PG students/semester and 5 research scholars including students belonging to SC/ST categories, which has led to healthy academic competition among the students
- Enhancement of managerial capacity of 50% faculty through MDPs organized by IIMs.

This has resulted in increased number of PhDs, from 10% before TEQIP - I to 33.3% at the end of TEQIP - II. Research publications have increased remarkably (470 research publications in last five years), 69 faculty have presented their research finding in conferences abroad during TEQIP – I & II. The achievements made by the college through TEQIP support has given better visibility to the institution both at national and international levels.

Given the following strengths of the college,

- Its experience in and understanding of the higher technical education system
- Its highly qualified, experienced and synergy oriented faculty
- Its academic, administrative and campus infrastructure
- Eagerness of the key stakeholders to spur the college towards a preeminent position in higher technical education
- Its experience with the TEQIP phase-I and TEQIP phase-II

The college persistently works for national development by producing high quality technical graduates and proactively contributes to socially relevant technological services. Over the years, the college has emerged as a leading technical institution due to the valuable contributions of its management, faculty, students and alumni who hold key positions in government, industrial and business organizations across the globe.

It is now in an advantageous position to envisage and launch fresh initiatives for twinning arrangements to build capacity and improve performance of participating institutes by increasing its programs and activities.

The college has prepared the IDP conforming to the expectations and stipulations given in the Project Implementation Plan of NPIU. The college has adopted a Resource Centric approach for preparing this proposal and has revised its mission and vision in tune with its core activities and competencies, viz., imparting technical education, conducting high impact research, mentoring, providing need based training and consultancy services and contributing to community development. It is hence confident of executing the project meticulously adhering to the norms of NPIU.

Institutional Development Proposal under sub component 1.3 of BEC proposes to

- Improve the learning outcomes & employability of the students
- Strengthening of the research facilities and sharing with the mentee institution
- Improve the academic performance of SC/ST/OBC/academically weak students
- Increase faculty/Staff productivity & motivation
- Assist in establishing & strengthening state-of-the-art laboratories
- Assist in framing of Curriculum and academic reforms of mentee institution
- Provide support for establishing linkages with industries

The college has proposed other endeavours and joint activities that it would undertake with the institution of focus (under sub-component 1.1) as its role of twinning to build capacity and improve performance of the mentee institution. The college hopes that the support it may receive from the TEQIP phase-III will enable it to move to higher planes of excellence and also support the mentee institution to reach newer heights.

1. INSTITUTIONAL BASIC INFORMATION

1.1 Institutional Identity

- Name and address of the Institution : **Basaveshwar Engineering College (Autonomous)
Bagalkot - 587103, Karnataka**
- Year of establishment : **1963**
- Is the Institution AICTE approved? : **Yes**
 - Furnish AICTE approval No. : **F. No. South-West/1-2811893654/2016/EOA/
Corrigendum-1 dated 07.Jun.2016**
- Type of Institution : **Govt. Aided**
- Status of Institution : **Autonomous Institution**
- Name and Designation of Head of the Institution (Full time appointee) : **Dr. R. N. Herkal
Principal**

1.2 Academic Information:

- **Engineering UG and PG programmes offered in Academic year 2016 - 2017:**
 - i) **UG Programmes**

Sl. No.	Title of the program	Level (UG, PG, PhD)	Duration (years)	Year of Starting	AICTE Sanctioned Annual intake	Total student strength in all years of study
1.	Civil Engineering	UG	4	1963-64	120	546
2.	Mechanical Engineering	UG	4	1963-64	120	542
3.	Electrical and Electronics Engineering	UG	4	1963-64	60	279
4.	Computer Science & Engineering	UG	4	1983-84	90	374
5.	Industrial & Production Engineering	UG	4	1984-85	30	97
6.	Electronics & Communication Engg.	UG	4	1985-86	120	531
7.	Electronics and Instrumentation Engg.	UG	4	1991-92	30	115
8.	Automobile Engineering	UG	4	1992-93	30	116
9.	Information Science & Engineering	UG	4	1999-00	90	332
10.	Biotechnology	UG	4	2002-03	30	64

ii) PG Programmes

Sl. No.	Title of the program	Level (UG, PG, PhD)	Duration (years)	Year of Starting	AICTE Sanctioned Annual intake	Total student strength in all years of study
1.	Production Technology	PG	2	1986 - 87	18	24
2.	Structural Engineering	PG	2	1994 - 95	18	36
3.	Geotechnical Engineering	PG	2	1994 - 95	18	36
4.	Machine Design	PG	2	2002 - 03	18	27
5.	Environmental Engineering	PG	2	2003 - 04	18	29
6.	Computer Science and Engg.	PG	2	2003 - 04	18	28
7.	Digital Communication	PG	2	2004 - 05	18	30
8.	Power and Energy Systems	PG	2	2005 - 06	18	32
9.	Master of Computer Applications	PG	3	1997 - 98	60	99
10.	Master of Business Administration	PG	2	2009 - 10	60	77

• 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) : 18
- ✓ No. of programmes accredited : 05
- ✓ No. of programmes applied for accreditation : 13

• 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				Master's Degree				Bachelor Degree						
	Engineering Disciplines		Supporting Disciplines (Physics, Chemistry, Maths and English/other languages)		Engineering Disciplines		Supporting Disciplines (Physics, Chemistry, Maths and English/ other languages)		Engineering Disciplines		Supporting Disciplines (Physics, Chemistry, 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)
192 (UG)	38	-	10	-	103	1	12	-	5	-	-	-	168	192 - 168 = 24	1
24 (PG)	11	-	-	-	13	-	-	-	-	-	-	-	24	NIL	-

R = Regular, C = Contract

2. INSTITUTIONAL DEVELOPMENT PROPOSAL (IDP)

(Implementation period: April 2017 – March 2020)

2.1 Give the Executive Summary of IDP. Also, include the Mission and Vision statement of your institution (Max 2 pages)

Vision

To be recognized as a premier technical institute committed to developing exemplary professionals, offering research based innovative solutions and inspiring inventions for holistic socio economic development

Mission

- To pursue excellence through student centric dynamic teaching-learning processes, encouraging freedom of inquiry and openness to change
- To carry out innovative cutting edge research and transfer technology for industrial and societal needs
- To imbibe moral and ethical values and develop compassionate, humane professionals

Values

- Work is Worship** : The core essence of every activity of the college is inspired by the life and saying of Lord Basaveshwar the visionary of 12th century. The “Basaveshwar Engineering College” is named after the visionary
- Student Centric** : Academic and Administrative processes are devised and practiced to be student centric
- Innovation** : Encourage innovation and research for betterment of society
- Learning Centric** : To inculcate lifelong learning through teaching-learning and research activities
- Empathetical Campus Culture** : Cordial and harmonious living on campus through empathy
- Indian Ethos** : Nurture modern outlook imbibed with Indian ethos in BEC community

Quality policy

Teaching-Learning, research, administrative processes are quality driven and embellished with continuous improvements (Kaizen) to meet the global standards by rigorous adherence to set procedures and exhaustive quality audits.

This will be achieved through:

- Continuous upgradation, of qualification/ skills of faculty/staff and infrastructure
- Teaching-learning and mentoring with enhanced quality management system
- Providing multiple study options through perfect blend of academic flexibility and research emphasis
- Involvement of people at all levels

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. Faculty training (qualification up-gradation, subject up-gradation & research competence, Pedagogical training, participation in conferences, seminars/workshops etc.)

A. Up-gradation of qualifications and enhancement of Skills of faculty

- i. Encourage and depute faculty to acquire higher qualifications (Post Doc.Pgms., Ph.D)
- ii. Identify and depute faculty for need based training programmes
- iii. Management Capacity building
- iv. Pedagogical Training for Faculty
- v. Invite industry and R&D personnel for skill enhancement training
- vi. Depute Faculty to industries and R&D labs for on-site training
- vii. Depute faculty for attending Seminars/Workshops and presenting papers in reputed conferences

	2017 - 18				2018 - 19				2019 - 20			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Up-gradation of qualifications and enhancement of skills of faculty												
i. Encourage and depute faculty to acquire higher qualifications (Post Doc, Ph.D & M.Tech)												
ii. Identify and depute faculty for need based training programmes												
iii. Management Capacity building												
iv. Pedagogical Training for Faculty												
v. Invite industry personnel for in house skill enhancement training												
vi. Depute Faculty to industries and R&D labs for on-site training												
vii. Depute faculty for attending Seminars/Workshops and presenting papers in reputed conferences												

Q1: April-June, Q2: July-Sept., Q3:Oct.-Dec., Q4: Jan.-Mar.

B. Subject Up-gradation & Research Competence

- i. To depute faculty for domain specific training programmes
- ii. Depute faculty to higher learning institutes for research collaborations
- iii. Encourage faculty to engage in high quality research keeping societal concerns in mind
- iv. Provide financial assistance/incentive to faculty for publishing the research outcomes in international refereed journals/conferences
- v. Form inter & intra department research groups to promote collaborative research activities across the departments
- vi. Conduct programs on research methodologies for young faculty and post graduate students
- vii. Depute faculty for carrying out research at National/International R&D labs
- viii. Involve industry experts in identifying and supervising research problems
- ix. Conduct awareness programs about cutting edge technologies
- x. Research oriented innovative projects to be introduced at UG and PG levels

- xi. Arrange visits for UG and PG students to advanced research laboratories and institutions of higher learning
- xii. Invite renowned Science & Technology professionals/experts to inspire students and faculty to take up challenging research problems
- xiii. Organize National/International symposium, conferences and Faculty/Student Development Programmes (FDPs/SDPs)

	2017-18				2018-19				2019-20			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Subject up-gradation & Research competence												
i. To depute faculty for domain specific training programmes		■	■			■	■	■		■	■	■
ii. Depute faculty to higher learning institutes for research collaborations		■	■	■		■	■	■		■	■	■
iii. Encourage faculty to engage in high quality research keeping societal concerns in mind		■	■	■	■	■	■	■	■	■	■	■
iv. Provide financial assistance/incentive to faculty for publishing the research outcomes in international refereed journals/conferences	■	■	■	■	■	■	■	■	■	■	■	■
v. Form inter & intra department research groups to promote collaborative research activities across the departments		■				■				■		
vi. Conduct programs on research methodologies for young Faculty and Post graduate students		■				■				■		
vii. Depute faculty for carrying out research at National/International R&D labs		■				■				■		
viii. Involve industry experts in identifying and supervising research problems		■	■			■	■			■	■	
ix. Conduct awareness programs about cutting edge technologies				■				■				■
x. Research oriented innovative projects to be introduced at UG and PG levels			■			■					■	
xi. Arrange visits for UG and PG students to advanced research laboratories and institutions of higher learning		■				■				■		
xii. Invite renowned Science & Technology professionals/experts to inspire students and faculty to take up challenging research problems		■				■				■		
xiii. Organize National/International symposium, conferences and Faculty/Student Development Programmes (FDPs/SDPs)		■				■				■		

C. Pedagogical training

- i. Establishment of pedagogical training centre
- ii. Organize basic pedagogical training programmes for faculty
- iii. Depute faculty to advanced pedagogical training programmes

	2017-18				2018-19				2019-20			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<i>Pedagogical training</i>												
i. Establishment of pedagogical training centre												
ii. Organize basic pedagogical training programmes for faculty												
iii. Depute faculty to advanced pedagogical training programmes												

D. Participation in conferences, seminars/workshops

- i. Sponsor the faculty to attend conferences, seminars/workshops
- ii. Sponsor the faculty to present the paper in conferences/symposium as oral presentation, poster presentation, design contest presentation, etc.
- iii. Sponsoring more than one authors for a paper, if the conference is of high standard
- iv. Financial support for faculty to participate as session chair, key note speaker and expert in panel discussion
- v. Motivating the faculty to represent as technical programme committee/organizing committee member in reputed conferences, seminars/workshops
- vi. Appreciating the faculty by providing the honorarium for reviewing the papers of reputed conferences
- vii. Providing incentives to the faculty for publishing papers in high quality conferences with good h5-index and h5-median values

	2017-18				2018-19				2019-20			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Participation in conferences, seminars/workshops												
i. Sponsor the faculty to attend conferences, seminars/workshops												
ii. Sponsor the faculty to present the paper in conferences/symposium as oral presentation, poster presentation, design contest presentation, etc.												
iii. Sponsoring more than one author of a paper, if the conference is of reputed in nature												
iv. Financial support for faculty to participate as session chair, key note speaker and expert in panel discussion												
v. Motivating the faculty to represent as technical programme committee/organizing committee member in reputed conferences, seminars/workshops												
vi. Appreciating the faculty by providing the honorarium for reviewing the papers of reputed conferences												
vii. Providing incentives to the faculty for publishing papers in high quality conferences with good h5-index and h5-median values												

2. Staff training (Technical & Administrative staff)

- i. Encourage and depute staff to acquire higher qualifications from reputed institutes
- ii. Identify and depute for need based workshops, trainings and courses
- iii. Invite industry experts for in-house staff training on equipment servicing & maintenance and network administration.
- iv. Staff training on communication skills and motivation
- v. Training in the area of Enterprise Recourse Planning (ERP) tools
- vi. Operational management and Capacity enhancement training programme for administrative staff

	2017-18				2018-19				2019-20			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Staff training (Technical & Administrative staff)												
i. Encourage and depute staff to acquire higher qualifications from reputed institutes												
ii. Identify and depute for need based workshops, trainings and courses												
iii. Invite industry experts for in-house staff training on equipment servicing & maintenance and network administration.												
iv. Staff training on communication skills and motivation												
v. Training in the area of Enterprise Recourse Planning (ERP) tools												
vi. Operational management and capacity enhancement training programme for administrative staff												

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

- i. Attract high ranking/meritorious students for undergraduate (UG) programmes by providing financial assistance to such students
- ii. Organizing awareness/orientation programmes to motivate undergraduate students to take up higher studies
- iii. Attract meritorious students for post-graduation (PG) programs through teaching assistantships
- iv. Arranging internships and industry oriented projects for PG students in reputed industries
- v. Financial assistance for UG and PG innovative projects
- vi. Assisting students through collaborative efforts to get admissions in reputed universities within India and abroad
- vii. Providing modern state-of-art computational facility, Library, laboratory, access to online journals, hostels etc.
- viii. Increase in PG intake for selected PG courses
- ix. Establish new PG courses in emerging areas
 - x. Attract full time Ph.D. students through expertise in different research areas, by providing high quality research facilities and fellowships
- xi. Every year, one time research grant for identified PhD supervisors for carrying out high quality research
- xii. Establish recognized research/QIP centres in all departments
- xiii. To establish research laboratory in thrust areas identified by the departments to start new PhD programmes
- xiv. To establish centralized research and computing facilities
- xv. Providing seed money grant for young researchers to take up innovative research work

	2017-18				2018-19				2019-20			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Increasing capacity of UG, PG and PhD education (increasing enrollment and starting new UG, PG and PhD programmes)												
i. Attract high ranking/meritorious students for undergraduate (UG) programmes by providing financial assistance												
ii. Organizing awareness/orientation programmes to motivate undergraduate students to take up higher studies												
iii. Attract meritorious students for post-graduation (PG) programs through teaching assistantships												
iv. Arranging internships and industry oriented projects for PG students in reputed industries												
v. Financial assistance for UG and PG innovative projects												
vi. Assisting students through collaborative efforts to get admissions in reputed universities within India and abroad												
vii. Providing modern state-of-art computational facility, Library, laboratory, access to online journals, hostels etc.												
viii. Increase in PG intake for selected PG courses												
ix. Establish new PG courses in emerging areas												
x. Attract full time Ph.D. students through fellowships												
xi. Every year, one time research grant for identified PhD supervisors for carrying out smooth research activities												
xii. Establish recognized research/QIP centres in all departments												
xiii. To establish research laboratory in thrust areas identified by the departments to start new PhD programmes												
xiv. To establish centralized research and computing facility												
xv. Providing seed money grant for young researchers to take up innovative research work												

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.

- i. Upgrade all classrooms infrastructure through adoption of state of the art educational technologies and convert them as smart class rooms
- ii. Create a web casting studio facility for recording and transmitting lectures
- iii. Convert all seminar halls into video conference rooms
- iv. Upgrade existing internet bandwidth to meet 2 MBPS connectivity to each connection and upgrade existing Wi-Fi facility to all buildings in the campus
- v. Increase subscription to electronic resources and databases
- vi. Extend the existing internet connectivity / Wi-Fi connectivity in the hostels to all rooms

	2017-18				2018-19				2019-20			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
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.												
i. Upgrade all classrooms infrastructure through adoption of state of the art educational technologies and convert them as smart class rooms												
ii. Create a web casting studio facility for recording and transmitting lectures												
iii. Convert all seminar halls into video conference rooms												
iv. Upgrade existing internet bandwidth to meet 2MBPS connectivity to each connection and upgrade existing Wi-Fi facility to all buildings in the campus												
v. Increase subscription to electronic resources and databases												
vi. Extend the existing internet connectivity / Wi-Fi connectivity in the hostels to all rooms												

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

- i. Identifying weak students through diagnostics tests
- ii. Based on diagnostic test results the remedial classes will be planned and conducted
- iii. Tailor made soft courses will be organised
- iv. Workshops to improve cognitive and non-cognitive skills
- v. Academic counselling and mentoring of students will be done
- vi. For subjects perceived to be difficult for improving transition rate, special classes will be conducted after working hours
- vii. Organize training programmes to enhance personal traits for increasing employability

	2017-18				2018-19				2019-20			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
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												
i. Identifying weak students through diagnostics tests		Yellow				Yellow				Yellow		
ii. Based on diagnostic test results the remedial classes will be planned and conducted		Red				Red				Red		
iii. Tailor made soft courses will be organised			Green				Green				Green	
iv. Workshops to improve cognitive and non-cognitive skills				Blue				Blue				Blue
v. Academic counselling and mentoring of students will be done		Blue				Blue				Blue		
vi. For subjects perceived to be difficult for improving transition rate, special classes will be conducted after working hours	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
vii. Organize training programmes to enhance personal traits for increasing employability	Light Purple				Light Purple				Light Purple			

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

The College has received extension of Autonomy from 2013-14 to 2018-19 from UGC, vide No.F.22-1/2016 (AC) dated 27.05.2016. Five UG Courses (Civil, Mechanical, Electronics & Communication, Industrial & Production and Computer Science & Engineering) have been accredited during October 2016. Applied for accreditation of 5 UG and 8 PG courses during 2010 and awaiting for expert committee visit.

Academic Reforms during TEQIP - II

- Introduced Outcome Based Education (OBE)
- Scheme of the programme is designed with minimum 20 credits and maximum 30 credits every semester to facilitate both slow and quick learners. Students have choice to drop/withdraw few courses to match their pace of learning within the framework of 20 and 30 credits.
- Students have flexibility to choose the open electives of their choice.
- Introduced Basic Engineering Lab. at I-Year level to bring awareness of branches in Engineering and facilitate choice of branch selection
- Organized 40 Faculty Development Programmes in specific subject domain areas
- Organized Pedagogical training Programmes
- Providing financial support to faculty for presentation of papers in conferences outside India
- Participating in all 7 phases of Quality Enhancement in Engineering Education (QEEE) Programme and selected as Best College (Partner and Committed)
- Introduced new Composite materials in Workshop practice against traditional steel material
- Introduced more number of laboratories in every semester to provide more practical training

III. Revision of Curriculum

Revision of Curriculum is done on a regular basis as and when need arises based on feedback from stake holders

	2017-18				2018-19				2019-20			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Revision of Curriculum will be done on a regular basis as and when need arises based on feedback from stake holders												

(b) Improving employability of the students

1. Increasing interaction with industry

- I) The industries located in the vicinity are Cement, Sugar, Food processing, Textile and IT industries
- II) Role of Industry perceived for the Institute – Floor shop training for the Engineering Graduates, Internships for UG and PG students, Industrial Automation, Exposure to process industries, implementation of new technologies etc.
 - a) To organize executive meets regularly and nourish good relationship with industrialists
 - b) Identifying the common research areas with Industries
 - c) Building strategic alliance with industries through MoUs for enhancing excellence in education & research for community development
 - d) Organize guest lectures in specialized areas by industry experts
 - e) Deputation of faculty to industry for research collaborations and training
 - f) To engage industry, institute and alumni personnel in academic bodies
 - g) To motivate faculty to take up industry sponsored R&D projects
 - h) To conduct Continuing Education Programmes based on industry needs
 - i) To promote industrial training for students
 - j) Incorporate internship as part of curriculum
 - k) Organize Industrial visits
 - l) Offer sandwich programmes in collaboration with industry

	2017-18				2018-19				2019-20			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Increasing interaction with industry (What are the industries located in the vicinity? What role of industry is perceived for the institute?)												
a. To organize executive meets regularly and nourish good relationship with industrialists		■				■				■		
b. Identifying the common research areas with Industries			■	■			■	■			■	■
c. Building strategic alliance with industries through MoUs for enhancing excellence in education & research for community development		■				■				■		
d. Organize guest lectures in specialized areas by industry experts			■	■	■	■	■	■	■	■	■	■
e. Deputation of faculty to industry for research collaborations and training			■	■	■	■	■	■	■	■	■	■
f. To engage industry, institute and alumni personnel in academic bodies			■	■	■	■	■	■	■	■	■	■
g. To motivate faculty to take up industry sponsored R&D projects		■	■	■								
h. To conduct Continuing Education Programmes based on industry needs			■				■				■	
i. To promote industrial training for students							■	■			■	■
j. Incorporate internship as part of curriculum					■				■			
k. Organize Industrial visits			■				■				■	
l. Offer sandwich programmes in collaboration with industry						■	■			■	■	

2. Student career Counseling and Placement

- i. Establish MoU with leading HR organizations for training and placement assistance
- ii. Conduct high intensity and employer need based training programmes for graduates and postgraduates to secure employment
- iii. Increase campus interviews and make necessary efforts to secure employment for graduate engineers
- iv. Workshops for improving employability including intra-preneurial training, softer skills required by Industry.
- v. Provide incubation facility to student entrepreneurs
- vi. Nourish reciprocal relationship with leading industrialists
- vii. Identify and establish linkages with alumni entrepreneurs and post alumni contact group on web
- viii. Organize focused training through Centre for Entrepreneurship Development (CED) to build the entrepreneurial spirit and nurture it for socio economic development.
- ix. Facilitate academic projects towards product development
- x. Encourage and train students for competitive exams and higher studies.

	2017-18				2018-19				2019-20			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Student career counseling and placement												
i. Establish MoU with leading HR organizations for training and placement assistance	Yellow				Yellow				Yellow			
ii. Conduct high intensity and employer need based training programmes for graduates and postgraduates to secure employment		Green				Green				Green		
iii. Increase campus interviews and make necessary efforts to secure employment for graduate engineers			Red				Red				Red	
iv. Workshops for improving employability including intra-preneurial training, softer skills required by Industry.		Blue				Blue				Blue		
v. Provide incubation facility to student entrepreneurs	Orange	Orange										
vi. Nourish reciprocal relationship with leading industrialists				Brown				Brown				Brown
vii. Identify and establish linkages with alumni entrepreneurs and post alumni contact group on web	Green	Green										
viii. Organize focused training through Centre for Entrepreneurship Development (CED) to build the entrepreneurial spirit and nurture it for socio economic development.				Blue				Blue				Blue
ix. Facilitate academic projects towards product development			Red				Red				Red	
x. Encourage and train students for competitive exams and higher studies.		Light Blue	Light Blue			Light Blue	Light Blue			Light Blue	Light Blue	

(C) Increasing faculty productivity and motivation

1. Sponsored research, consultancy and other revenue generating activities

- i. Faculty are encouraged to apply for sponsored research projects to various funding agencies like DST, AICTE, DRDO, CSIR, VTU, VGST etc. and provide incentive
- ii. Provide incentive to faculty for publishing research papers in peer reviewed journals
- iii. Financial support for presenting papers in Conferences
- iv. Encourage faculty and students to take up industry related projects
- v. Motivate faculty and students to identify industry problems and provide solutions
- vi. Carry out joint research projects and industrial consultancy
- vii. Sharing laboratory facility/resources with industries
- viii. Extend faculty consultancy services to industries
- ix. Unearth areas for collaborative research programmes
- x. Identify areas and opportunities for MoUs between industry and institute

xi. Conducting Continuing Education Programmes (CEP) for knowledge sharing and revenue generation

	2017-18				2018-19				2019-20			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Sponsored research, consultancy and other revenue generating activities												
i. Faculty are encouraged to apply for sponsored research projects to various funding agencies like DST, AICTE, DRDO, CSIR, VTU, VGST etc. and provide incentive												
ii. Provide incentive to faculty for publishing research papers in peer reviewed journals												
iii. Encourage faculty and students to take up industry related projects												
iv. Carry out joint research project and industrial consultancy												
v. Motivate faculty and students to identify industry problems and provide solutions												
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vii. Sharing laboratory facility/resources with industries												
viii. Extend faculty consultancy services to industries												
ix. Unearth areas for collaborative research programmes												
x. Identify areas and opportunities for MoUs between industry and institute												
xi. Conducting Continuing Education Programmes (CEP) for knowledge sharing and revenue generation												

2.3 Describe the following in brief:

1. Is there an ERP/MIS system existing, if yes, then any improvement, modification suggested
 - i. ERP system exists and is in place, and is being used for college administration
 - ii. Existing system can be augmented with additional modules like Examination, Hostels, Stores, Training & Placement for integration of all activities in the college

2. Is there any mechanism i.e. special classes being conducted in the institution for improving the GATE score?
 - iii. Students are trained for competitive examinations and have secured high ranks in GATE
 - iv. Every department in the college has its own student's association by which the college will help the students to improve GATE score
 - v. Library has a books repository and additional material to support GATE appearing students
 - vi. Need based special classes are being conducted for those students who are appearing for GATE

- vii. The students are trained for competitive examinations and have secured ranks in GATE viz. 11th, 33rd and 36th during 2008

2.4 Please identify some endeavours and joint activities that you would undertake with the institution of focus state under sub-component 1.1 for twinning arrangement from among the ones listed below and/or any further ones and provide the yearly action plan for 3 years:

S. No	Suggested Activity/Indicator	Proposed Action	Target (number, %age, stage etc.) for institution under sub-component 1.1 over the baseline, if applicable		
			2017-18	2018-19	2019-20
1	Increase in student graduation rates	Helping in framing strategies to improve the students graduation rates such as: 1. Diagnostic tests 2. Remedial classes 3. Motivational classes	10% over existing datum line	15% over existing datum line	20% over existing datum line
2	Improved Placement of graduates a) Placement Rate b) Placement Package	Sharing the Industry contacts through industrial conclaves for placement activities	5% over existing datum line	10% over existing datum line	15% over existing datum line
3	Increase in GATE qualified graduates	Conducting special classes for GATE aspirants of both institutions through video lectures and sharing of GATE materials and other resources	2% over existing datum line	4% over existing datum line	6% over existing datum line
4	Smart classrooms	Smart classroom usage for conducting joint activities such as video lectures, webinars, subject related group discussions	20% over existing datum line	30% over existing datum line	50% over existing datum line
5	e-books and e-Journals	Sharing of e-books and e-journals for academic and research activities	10% over existing datum line	20% over existing datum line	30% over existing datum line
6	Increase in publications in refereed journals	Setting performance standards and rewards systems for faculty members to motivate them to publish papers in referred national and international journals	5% over existing datum line	8% over existing datum line	12% over existing datum line
7	Seminars, meetings and conferences for students and faculty for training and academic development	Training need based seminars, workshops, conferences and symposiums. Student Development Programmes (SDPs) can be organized in need based domain specific areas	15% over existing datum line	25% over existing datum line	40% over existing datum line
8	Sharing of faculty for teaching processes	Domain expertise cum need based expert faculty sharing	5% over existing datum line	10% over existing datum line	15% over existing datum line
9	Faculty exchange for research and development purposes	Identify the possible collaborative research areas and faculty exchange facilitated for research and development	5% over existing datum line	8% over existing datum line	10% over existing datum line
10	Student exchange at the PhD, Masters and Undergraduate levels	Programme wise interest of students are mapped between the mentoring and mentee institution and student exchange proposed for UG PG PhD	5% 10% 5%	5% 10% 5%	5% 10% 5%

11	Joint supervision of PhD and/or Masters' student	Identify research expertise of faculty in mentoring and mentee institution and the information is circulated amongst Masters and PhD students. Interested students encouraged to take up research based projects under joint supervision PG PhD	5% 5%	5% 5%	5% 5%
12	Joint activities with industry for joint R&D, internships and placement activities	Sharing industry contacts and conducting joint industry-institute activities (i.e., industrial guest lecturers, industry-academia conclaves, workshops etc.) which further results in joint R&D, internships and placement activities with industry.	2%	3%	5%
13	Seminars and learning forums on improving governance practices	Establishing joint forums for sharing best practices in TEQIP project implementation and good governance practices.	10%	15%	25%
14	Improvement in NBA accreditation (including applied for cases)	Guiding in framing out-based education system and sharing best practices in documentation and record keeping.	10%	25%	50%
15	Helping in Grant of UGC Autonomy for non-autonomous institution	Guiding and facilitating in preparation of UGC Autonomy grant proposal for non-autonomous institutions.	--	--	100%
16	Any other form of endeavour a) NAAC Accreditation b) Assist to fetch Research Grants	Guiding and facilitating in preparation of SAR Assist in writing of Proposals to funding agencies	-- 5%	100% 10%	-- 15%

2.5 Identify the outreach programmes and systems which are already in place in your Institute to succeed in your role of twinning for strengthening of other institutions viz. related to faculty/students/non-teaching staff/Industry etc.

“Life is a gift, and it offers us the privilege, opportunity, and responsibility to give something back by becoming more.” ~ Anthony Robbins

- i. BEC Bagalkot strives to reach out beyond its student community to the larger society. This reflects the institute’s inherent philosophy - to teach what we know and share what we have for the benefit of the community at large. The institute engages in several activities to reach out to the academic communities
- ii. In this regard, its major activities include:
 - a. Continuing Education Programmes (CEP)
 - b. Quality Improvement Programme (QIP)
 - c. Centre for Entrepreneurship Development (CED) programmes
 - d. Programmes conducted by Basaveshwar Engineering college-Science and Technology Entrepreneurship Park (BEC-STEP)

- e. Karnataka Biotechnology and Information Technology Services (KBITS) programmes
 - f. Students Social Responsibility through NSS & Red Cross Youth Wing activities
 - g. Industry Institute Partnership Cell (IIPC)
- iii. The knowledge gained through these activities are used by the institute for twinning and strengthening of other institutes
 - iv. The college has sufficient human resource and other infrastructural facilities to support the outreach programmes
 - v. The faculty have ample experience gained through TEQIP-I and TEQIP-II in conducting seminars, workshops, national/international conferences which can be used for twinning
 - vi. Faculty are experienced counsellors, and their knowledge can be utilized

2.6 Identify the academic and/or administrative challenges that you anticipate in your role of twinning and the mechanism that you have put in place and/or intend to put in place, to address these challenges

Anticipated Challenges	Address Mechanism
✓ Synchronization of Twinning and Mentoring institutes	Trust building programme and workshops
✓ Motivation level of Faculty, Staff and students	Workshops to improve motivation and institute belongingness
✓ Administrative functioning	Creating decentralised in administration
✓ Academic Autonomy	Mentoring to obtain academic autonomy
✓ Accreditation of UG and PG Programmes	Facilitating towards obtaining accreditation
✓ Student employability	Establishment of Finishing School and Instilling best practices to improve placements
✓ Sharing resources – Faculty Expertise and research facilities	To organise department level meetings of Mentee and Mentoring Institutes to identify the strengths and share
✓ Lack of Clearly defined Goals and deadlines	Define Goals and tie them to deadlines with clearly defined timelines to measure progress
✓ Lack of focus on priority areas of Collaboration	Prioritize the areas of collaborations in consultation with the twinning institution

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

The institute has no difficulty in Recruitment and selection of high-quality faculty. A systematic procedure for recruitment of teaching faculty is in practice.

2.8 Give an action plan for long term strategic partnership with the mentee institute after the end of the Project

- i. Develop inter college education workshops, short courses and technical symposiums with the mentee college
- ii. Develop long term dual education programmes and faculty residence/visit programmes
- iii. Exchange Best Practices and Teaching methodologies between Mentor and Mentee Colleges
- iv. Research activities, Joint collaborative research
- v. Joint Consultancy activities

	2020-2022	2022-2024	2024-2026
i. Develop inter college education workshops, short courses and technical symposiums with the mentee college			
ii. Develop long term dual education programmes and faculty residence/visit programmes			
iii. Exchange Best Practices and Teaching methodologies between Mentor and Mentee Colleges			
iv. Research activities, Joint collaborative research			
v. Joint Consultancy activities			

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

Basaveshwar Engineering College IDP under Sub-component 1.3 of TEQIP–III is prepared with the participation of a core group of faculty and staff. Various activities carried out for preparation of proposal are:

- Organized awareness programme for faculty and staff on TEQIP-III
- Constituted a core committee for proposal preparation consisting of 20 faculty members from various departments and levels.
- Conducted SWOT analysis
- Conducted brain storming sessions for outlining the procedure of SWOT analysis.
- College SWOT analysis was carried out by the core committee members and action plans were devised
- Coordinators for both College and department level are identified for successful implementation of the project