TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP)

PHASE-III

INSTITUTIONAL DEVELOPMENT PROPOSAL

for

Sub-component 1.3

Twinning Arrangements to Build Capacity and Improve Performance of Participating Institutes

Deenbandhu Chhotu Ram
University of Science & Technology
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1. INSTITUTIONAL BASIC INFORMATION

1.1 Institutional Identity

- Name and address of the : **Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonipat, Haryana-131039**
- Year of establishment : 2006 **(**upgraded from a college established in 1987**)**
- Is the Institution AICTE approved? : Yes
  Furnish AICTE approval No. **:** F No. North-West/1-2814237401/2016/EOA dated 05-04.2016
- Type of Institution : Govt. funded
- Status of Institution : Autonomous, Technical University
- Name and Designation of Head of the Institution (Full time appointee) : Prof. Tankeshwar Kumar, Vice Chancellor

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
Under Graduate Programmes						
1	Mechanical Engineering	B. Tech	4	1987	60+12*	276
2	Electronics and Communication Engineering	B. Tech	4	1987	60+12	276
3	Electrical Engineering	B. Tech	4	1989	60+12	276
4	Computer Science and Engineering	B. Tech	4	1989	60+12	276
5	Chemical Engineering	B. Tech	4	1990	60+12	276
6	Bio-Technology	B. Tech	4	2004	60+12	276
7	Civil Engineering	B. Tech	4	2009	60+12	276
Post Graduate Programmes						
8	Mechanical Engineering	M. Tech	2	2003	36	72
9	Electronics and Communication Engineering	M. Tech	2	2006	36	72
10	Electronics and Communication Engineering (VLSI)	M. Tech	2	2014	18	36
11	Electrical Engineering (Instrumentation and Control)	M. Tech	2	2003	18	36
12	Electrical Engineering (Power System)	M. Tech	2	2009	36	72
13	Computer Sc. & Engg	M. Tech	2	2009	36	72
14	Bio-Technology Engineering	M. Tech	2	2009	18	36
15	Chemical Engineering	M. Tech	2	2009	18	36
16	Civil Engineering (Highway Safety & Engineering)	M. Tech.	2	2014	18	36
Doctorate of Philosophy (Ph.D.)						
17	Mechanical Engineering	PhD	2/3	2009	As per norms of UGC	27
18	Electronics & Comm.Engg.	PhD	2/3	2009		18
19	Electrical Engineering	PhD	2/3	2009		18
20	Computer Sci. and Engineering	PhD	2/3	2009		24
21	Chemical Engineering	PhD	2/3	2009		05
22	Bio-Technology Engineering	PhD	2/3	2009		31
23	Civil Engg.	PhD	2/3	2013		03

*Admitted in 3rd semester through LEET

- **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): 15
  No. of programmes accredited: 06
  No. of programmes applied for accreditation: 08

- **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, 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)
120	53		-	-	34	3	-		03			-	90	30	03

R=Regular, C=Contract

2. INSTITUTIONAL DEVELOPMENT PROPOSAL (IDP)
(Implementation period: April 2017- March 2020)

2.1 Executive Summary of the IDP

University has much strength but some weaknesses as well that have to be addressed through appropriate means and methods to overcome these and be in a position to take advantage of the opportunities after facing the challenges. By virtue of the University being located within a highly industrialized belt and close to others within the National Capital Region of the country, with other industrial estates spread out in other States like Rajasthan, UP and Delhi, forming part of the NCR, the potential exists for the University to expand its operations and, through this, to generate revenues internally for sustaining growth in areas where opportunities are aplenty. Keeping in view the resource constraints and inadequate faculty, facilities developed in TEQIP-I & II and starting 2 new PG programmes, the opportunities have been exploited to the levels considered satisfactory. The erstwhile Chhotu Ram State College of Engineering had programmes for UG courses, to meet the needs of the market at the time. From 2006 the College has been upgraded to a University and it is only after placement of new full-time Vice Chancellor that thrust was made in expansion of the programmes vertically not only in the basic disciplines of Engineering, Technology, Architecture, Management etc. but in multi-disciplinary areas as well. The University has drawn up elaborate plans for the next three years which will enable the University to face the challenges from the competitors. A lot, however, needs to be done for taking care of the weaknesses that require to be addressed through fast track measures to gain from the current programmes as well as those that are planned for the next five years. The issues that need to be addressed are:

1. Reserves with the University are enough which need to be augmented by adequate availability of resources at the right time for discharge of commitments for infrastructural developments in hand and those planned.
2. Facilities for faculty: These need to be augmented for high level and quality research.
3. Development of research infrastructure for which the faculty need to be exposed to the new technologies for adapting these to the needs of the industry nearby.
4. A higher dose of industry/ University interaction is needed to assess the needs of the industry and matching this by the infrastructural facilities for research to enable generation of internal reserves through consultancy.
5. Tapping other funding agencies for filling up the gaps in demands & availability of financial resources.

In view of high costs on infrastructure (per capita) for the students, it is planned to increase the number of courses and increase intake in some of the existing programmes. Details of the existing and programmes planned for the next three years are given in departmental proposal with the intake and the expected additional resource requirements for laboratories etc. Faculty positions are already covered by the existing sanctioned strength against which recruitments action is already in hand. An estimate of the gaps is indicated separately which include estimates for other faculties of Management and Humanities as well as for Urban and Rural Planning. Eighty Eight lab equipments are procured from the grant under TEQIP-II. Research scholars and Master's students are using these facilities developed in the University for their research work. Faculty

members may also use these facilities to work on consultancy project to generate revenue. Infrastructure for research has also been planned to strengthen for intensive research programmes in collaboration with the industry. The faculty too will have the motivation since all such consultancy projects will be on benefit-sharing basis.

During the TEQIP-II project:-

- The publications in referred journals by the faculty members have been increased by 25.96% in 2014-15 and 42.31% in 2015-16 as compared to 2010-11. Co-authored publications is increased by 30% in refereed journals as compared to (2010-11) which shows effectiveness of collaborations made with other Institutions in India and abroad.
- The enrolment in PG has been increased significantly (13.53% increase in 2014-15 & 23.13% increase in 2015-16 as compared to 2010-11). Similarly, the enrolment in Ph.D. has been increased significantly (94% increase in 2014-15 & 154 % increase in 2015-16 as compared to 2010-11).
- 35 faculty members attended International / National Conferences held in India and 7 faculty members attended International Conference held at abroad (Brazil, California, London, USA). Three conferences were also organised in the University from the grant of TEQIP-II.
- Fifteen faculty members upgraded their qualification from M.Tech. to Ph.D. and fifteen more are registered to Ph.D. programme out of total 90 faculty members of FET.
- 17 faculty members attended Management Capacity Development training at various IIMs to enhance management skills. Vice Chancellor & Nodal officer attended leadership development programme managed by MHRD at NUS Singapore to get the exposure of University ranked number one in Asia.Vice-Chancellor and 3 other faculty members also got the chance to visit Research Labs and Universities in Europe for R & D interactions as part of study and Networking tour.
- A total amount of Rs. 43.42 lakhs has been secured through Structural Consultancy, Highway Consultancy and University Testing House Consultancy during 2012-2016.
- Industry personnel for participation in curriculum development, revision, Institutional bodies (mandatorily included in the UG and PG board of studies of the departments), and for delivering expert lectures (Industrial experts have been invited to deliver expert lecture on the emerging areas of technology from time to time), arranging tutoring by industry experts to prepare students on campus placement. On the other hand a few industry personnel attended workshops/STTPs organized by the institute and also registered for Masters and Doctoral programmes of the University. All these measures are aimed at improving the employability of students

VISION

To facilitate and promote studies and research in emerging areas of higher education with focus on new frontiers of Science, Engineering, Technology, Architecture and Management, leading to evolution of enlightened technocrats, innovators, scientists, leaders and entrepreneurs who will contribute to national growth in particular and to international community as a whole.

MISSION

To achieve excellence in education and research in main and related areas of Applied Science, Cleaner Technologies, Sustainable Architecture & Healthy Management and to occupy a place of pride amongst the most eminent organizations of the world.

2.2 Provide an action plan with timelines for :

(a) Improving the learning outcomes of the students

1. Faculty training (qualification upgradation, subject upgradation & research competence, Pedagogical training, participation in conferences, seminars/workshops etc.)

   -Details are given in departmental proposal and equity action plan.

2. Staff training (Technical & Administrative staff)

   Technical Staff: The Technical Staff in laboratories and workshops need to be trained in their functional areas including operation and routine maintenance of both the existing and new equipment. They also need training on workshop instructions, upkeep of institutional service facilities, etc. The technical staff will be motivated and encouraged to participate in training and to use the newly acquired expertise for the benefit of students and the institution. Institutions will encourage staff to upgrade their qualification. If the facilities are available within the institution, the same need to be maximally utilized. Alternatively, the staff will be deputed to other institutions (within India) for enhancement of qualification. The details are given in departmental proposal and equity action plan

   (ii) Administrative Staff: The Administrative Staff also need training in respective functional areas, particularly in the use of modern office equipment, software, office automation, maintenance of records, procedures, etc. The training should also cover motivation for time and material efficiency, and friendliness towards faculty and students.

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

Programme	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**Remark**
B.Tech.	0	30	0	0	Additional research
M.Tech.	0	0	54	36	laboratories required-18
Ph.D	0	15	25	19	
Men Power Requirements (Additional)					
Professor	0	2	6	0	- Estimated
Associate Professor	0	5	5	1	requirement will be
Assistant Professor	0	4	5	1	Rs. 540 Lakhs
Lab Technician	0	3	5	0	

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 institute already has broadband connectivity in Academic area, Administrative Offices, library and Wi-Fi connectivity in all hostels.
   - Partially smart classrooms are developed in all the departments
   - For further development
     - A number of classrooms need to be upgraded to smart classrooms
     - New latest e-books and journals needs be added to strengthen the library

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

The equity action plan is as under:-

S. No	Items	Actions	Frequency
(i)	To identify weaknesses in all students and take remedial steps	To plan and conduct diagnostic tests at the beginning of each semester in order to identify the types of assistance required. - To arrange extra classes, tutorials by faculty and other measures to bring all students to the required level of proficiency to cope with the main subjects	Diagnostic tests at the beginning of each semester; continuous remedial measures thereafter
(ii)	To improve language competency, soft skills and confidence levels	The preparation of guidance tools for teachers to transact with students that are culturally or linguistically less exposed to professional technical education / by including English as part of the main syllabus	Continuous
(iii)	Institution to improve non-cognitive and soft skills including communication and presentation skills through their wide use in curricula / project based work, and where needed, to provide special skills training to students with priority to the weak students	The special labs or workshops or sessions with external experts/ consultants	Continuous
(iv)	Give under-qualified teachers priority in opportunities to upgrade their domain knowledge	To identify needs and indicate in the Faculty Development Plan to build equity to upgrade faculty qualifications and skills	Yearly
(v)	Training of teachers in subject matter and pedagogy, particularly to improve the performance of weak students	Training Needs Analysis (TNA) to be carried out for all teachers by appropriately qualified/ trained experts, especially to teach weak students	TNA to be done before deputing to Faculty Development Plan
		To prepare Faculty Development Plan for the Project period giving priority to the teachers with the most significant gaps in knowledge and skills as diagnosed by the TNA	
		Domain training on the basis of need/ link up with industry to keep abreast of cutting edge technology	

S. No	Items	Actions	Frequency
(vi)	Make campuses physically and socially gender-friendly; especially provide adequate and suitable facilities to women students and faculty	The actions would be taken to ensure a gender—friendly campus, both soft actions, and minor civil works would be done where necessary.	Actions will be implemented as proposed
(vii)	Provide appropriate infrastructure for physically challenged students	Providing ramps, lifts, toilets and hostel facilities	As required
(viii)	Special efforts for training/ internship/ placement of weak students	Networking with industry	Continuous
(ix)	Peer Learning Groups of students	Develop Peer Learning Groups of students for joint study and joint projects (Senior student and faculty may be the resource person)	Continuous
(x)	Appointing Student Mentors and Faculty Advisers for Students	Assigning Student mentors for 6-8 junior students and Appointing Faculty Advisers for 10-15 Students/student mentors. Faculty Advisors can guide the students and monitor their progress	Continuous

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?)

Academic and Administrative Reforms:

S. No.	SUBJECT	ACTION PLAN OF THE UNIVERSITY
1	Semester System	Semester system is applicable right from the time courses had been started in the erstwhile C.R. State College of Engineering which was upgraded to a University from November, 2006. In the light of advances in the subjects curriculum content is being upgraded regularly. Boards of Studies constituted for the purpose are assigned to update as and when required. Credits Based System has been introduced and each of the items of the curricula including class-room work, laboratory work, workshop etc. have been allocated credits separately and objectively. Time distribution has been clearly spelt out for all the activities and sub-activities. Extension of time during the week and the week end is utilised for making up the shortages that occur inadvertently. .
2	Choice Based Credit System	Curricular content is reviewed regularly. All the activities and sub-activities of the curriculum are allocated points objectively. This is done by the Boards of Studies constituted for each of the Departments. Choice Based System for credits has not been introduced in the

		University as yet. Action is, however, in hand for allowing students to have choices of the electives for earning credits of their choice. A Committee of senior faculty members is looking into it.
3	Curriculum Develop-ment	Curriculum last revised in 2012-13 and next revision is under process for the academic session w.e.f. 2017-18 for all UG and PG programmes. Boards of Studies of the Departments are assigned the responsibility for revision of the curriculum which is set to be revised in accordance with needs. Revision takes into account the developments taking place in the fields of studies and research in the area. Emphasis is being laid on research with a view to improve upon teaching and vice versa. Library of the University has over 500 CDs/ DVDs etc. with lectures on different subjects of Engineering, Technology, Architecture and Management which are available to the students and faculty on the intra-net. Internet facilities are available to the students and faculty through around 450 terminals available within the University. Hostels are also linked up through Wi-Fi facility. The University Library subscribes 101 printed Indian Journals. The University Library has undertaken the subscription to the Online Journals of J-Gate, Emerald – 150, EBSCO (Art and Architecture-239), IEEE/IEL and ASME e-jouranls. Being a member of INFLIBNET an IUC of UGC the University Library is provided with e-resources of Taylor and Francis (2918), Springer (1389), American Chemical Society (37) and American Physical Society (10).
4	Admission Procedures	Admissions to the B.Tech. courses are conducted on-line through Haryana State Technical Education Society(HSTES). For PG courses open advertisements are given for a wider choice for selection of the students. Open advertisement is given for registration of research scholars for research leading to the degree of Ph.D. Departmental Research Committees approve their candidature based on open presentations for those who clear the entrance test conducted by University. In line with the directives issued by the University Grants Commission registration for research leading to the degree of Ph.D. has been adopted. Academic calendar is followed. Written examinations are conducted on schedule and results declared on time. Regular seminars based on internship training and other researches being carried out are held with open participation by both teachers and students. Remedial assistance is being provided particularly in the field of improvement of their communication skills for the students with under-privileged background..
5	Examination reforms	Internal evaluation is a continuous process and credits objectively defined are awarded. One-to-one system of reviews of internal evaluation is done with the students to provide total transparency. Around 33% evaluation is internal comprising sessionals, class participation, assignments etc. Answer sheets are encoded immediately after the examinations. In accordance with Credit Based System adopted necessary weightages are provided in the total evaluation system.
6.	NBA	B.Tech. (ME, ECE, CSE, EE & CHE) were accredited in 2012

	Accredita-tion	up to March, 2015 and B.Tech (BTE) was accredited up to August, 2015. In second cycle, NBA has approved the accreditation upto 30.06.19 for the three UG programme (EE, ECE & ME) & upto 30.06.2018 for the three PG programme (ECE, ME & CSE). NBA team visit is pending for rest of the programmes.
7.	NAAC	NAAC peer team visited the University on 13.02.2017 to 15.02.2017.
8.	Online File Tracking System	The system for Online File Movement and Tracking System is under trial with URL http://web1.hry.nic.in/cfmstraining.

(b) Improving employability of the students

1. Increasing interaction with industry (What are the industries located in the vicinity? What role of industry is perceived for the institute?)
2. Student career counseling and placement

A regular full time training and placement officer is available in the University. T & P Cell arranges four weeks training to all UG students at the end of 4th and 6th semester. There is an industrial area at Rai and Kundli nearby the institute.
The placement of the students (especially UG) is very good,. 60-70 % students are placed every year through campus interviews.

Few of the industries in the vicinity are listed below:

S. No.	Name & address of the company
1	Aroma Paints, M-12, Industrial area, Sonipat, Haryana
2	NELCHEM Engineers 1034, Sector15, Sonipat
3	Minda Industries Ltd., 34-35 KM G T Road, Village Rasoi, Sonepat
4	Roulunds Braking India Pvt. Ltd, Liwaspur village, Gt.Road, near Bahalgarh chowk, Liwaspur, Sonipat
5	Rubber Reclaim co. of India Ltd,Bahalgarh, Sonipat
6	Forech India Ltd., G T Karnal Road, RAI (Sonipat)
7	Diary Prime, Industrial area, Murthal, Sonipat
8	First Pure diet Milk products, Plot No. 325, HSIIDC, Barhi, Sonipat
9	Nutri Herbals Private limited, Dhaturi, Sonipat

(c) Increasing faculty productivity and motivation

1. Sponsored research, consultancy and other revenue generating activities

- The sponsored research projects are as under:

Sr. No.	Name of Project	Name of Funding Agency	Name of Principal Investigator/Co-Investigator	Cost of Project in Rs. & Grant Received (Rs. in Lakhs)	Date of Commencement of Project & Duration of the Project	Date of Completion
1.	CoE on "Renewable Energy Test Centre"	DST, Haryana	Prof. S.K. Singh,PI	100.00	July, 2010	continued
2.	Investigations on solid state materials---IC Engines.	DAE Mumbai	Prof. S.K.Singh, PI	21.50	2009 (04 years)	completed
3.	Lab. Development & Scholarships for M.Tech. students of CEEES	MNRE,H GOI Delhi	Prof. S.K.Singh, PI	50.00	2014	Continued

5.	Design of Multiflow Gasifier	UGC	Dr. Awdhesh Sharma	10.7	2011-14	Completed
6.	Polymer based Super Capacitor	DST, Govt. of India	Prof. Ashok Sharma and Dr. B. S. Dehiya	32	2011	Completed
7.	Nanostructured composites as electrode material for supercapacitors	UGC	Prof. Ashok Sharma	11	2013	Continued
8.	Investigation of Large Pore ordered Mesoporous Semiconducting Material Application or Gas Sensing	CSIR	Dr. Surender Duhan	21	2017	Continued
9.	Design and Synthesis of pH-responsive denritic amphiphiles	DST	Dr Sumit Malik	Lacs	2012	Completed
10.	To study and develop some natural occurring substances as corrosion inhibitor for mild steel	UGC	Dr Suman Lata	11.70	2015	Continued
11.	Design of artificial hand with artificial fingers	DBT	Prof. Suresh Verma and others	32.78	2014	Continued
12.	Design of Smart FES for Physically Challenged Person	DST	Dr Dinesh Bhatia and Dr Suresh Verma	42.91	2012	Completed
13.	Electrical, optical and thermal properties of oxide glasses	UGC	Prof. Satish Khasa	10.8	2012	Completed
14.	Molecular Mapping of Aphid Resistance In Rapeseed-Mustard	UGC	Prof. J S Rana	11	2014	Completed
15.	Development of Enzyme based Biosensors for Testing Fruit Maturity	DBT	Prof. J S Rana	31	2014	Completed
16	Investigation of Manufacturing Supply Chain Performance With Saler & C Initiatives	AICTE	Dr. M.N. Mishra	7.75	2014	Completed

- University has formulated Consultancy Rules for sharing in the benefits accruing to the faculty and the University. Sharing is done 30:70 for the University and faculty after deducting the expenditure incurred for services of the laboratory and other incidental expenditure. Some of the consultancy projects under implementation, including completed, by the department of Civil Engineering are detailed below:

  Structural Consultancy:

Sr. No.	Year	Consultancy Amount in Rs.
1	2013	65,000
2	2014	1,74,158
3	2015	4,26,734
4	2016	8,99,483

Highway Consultancy:

Sr. No.	Year	Consultancy Amount in Rs.
1	2014	62,922
2	2015	96,565
3	2016	1,93,770

University Test House Consultancy:

Sr. No.	Year	Consultancy Amount in Rs.
1	2014	9,80,108
2	2015	4,65,759
3	2016	2,20,275

Third Party Inspection:

Sr. No.	Year	Consultancy Amount in Rs.
1	2013	65,000
2	2014	1,660,259
3	2015	1,984,526
4	2016	827,900

2.3 Describe the following in brief:

1. Is there an ERP/MIS system existing, if yes, then any improvement, modification suggested.
   Partially exists. Need improvements.

   Our University is planning to implement Digital University. As NIC offers state-of-the art e-services, the various services offered by NIC are being explored for effective utilization. Moreover, University is in the process of signing MoU with HKCL for implementing its Digital University framework.

2. Is there any mechanism i.e. special classes being conducted in the institution for improving the GATE score?
   No.

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	Expert lectures and guidance to students in the participating institution, Remedial Classes	10%	20%	20%
2	Improved Placement of graduates a) Placement Rate b) Placement Package	More Industry interaction	5%	10%	15%
3	**Increase in GATE qualified graduates**	In house mentoring and motivation efforts, Special	10%	20%	30%

		Coaching, Expert lectures and guidance to students in the participating institution			
4	Smart classrooms	Setting up of smart class rooms in each teaching dept of the participating institution	2 nos.	4 nos.	4 nos.
5	e-books and e-Journals	Procurement of e-resources through inflibnet, and electronic study materials	20%	20%	30%
6	Increase in publications in refereed journals	By coauthor-ship / Collaboration and sharing R&D facilities to publish in already released list of refereed journals by UGC	5%	10%	15%
7	Seminars, meetings and conferences for students and faculty for training and academic development	Peer-to-peer learning groups & mentoring by faculty to carry out such activities	10%	15%	15%
8	Sharing of faculty for teaching processes	The University has outstanding meritorious faculty having won accolades at national level and can undertake teaching processes, more training through FDPs	5%	10%	15%
9	Faculty exchange for research and development purposes	The outstanding faculty exchange based on mutual need analysis	5%	10%	10%
10	Student exchange at the PhD, Masters and Undergraduate levels	Relevant provisions in ordinances. Statutes shall be effected, exchange based on mutual need analysis especially for Ph.D. students	5%	10%	10%
11	Joint supervision of PhD and/or Masters' student	Relevant provisions in ordinances already exist, exchange based on mutual need analysis	2 nos.	3 nos.	2 nos.
12	Joint activities with industry for joint R&D, internships and placement activities	The industry-academia cell for joint activities	2 nos.	4 nos.	6 nos.
13	Seminars and learning forums on improving governance practices	e-governance and portals /ICT tools development activities	2 nos.	4 nos.	4 nos.
14	Improvement in NBA accreditation (including applied for cases)	The mentored institute shall be mentored in this regard	-	40%	60%
15	Helping in Grant of UGC Autonomy for non-autonomous institution	The mentored institute shall be mentored in this regard	-	-	yes
16	Any other form of endeavour	-	-	-	-

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.

These, inter alia, are:

- The institution has some financial reserves to take care of the current liabilities but the needs of infrastructural development will call for higher doses and at the right time.
- Funding from the State is satisfactory for the current requirements.
- Faculty and non-teaching members are satisfied with the salary structures (UGC pay scale).
- Communication both upward and downward channels, both formal and informal, is satisfactory creating a very congenial working atmosphere.
- UGC recognition under Section 12 (B) & 2(f) of UGC Act, 1956 in March, 2009
- Course structures are flexible accommodating changes as necessary from time to time (Revised within 4-5 years).
- Placement services are fairly good.
- Geographical location of the University within heavily industrialized area and along the National Highway no.1 provides for good industry/ University interaction and easy access from outside.
- Adequate land available provides for ample scope for expansions.
- The University workshop is equipped with the best equipment configuration for excellent hands on training.
- University has ample space for accommodating girl and boy students creating in them confidence in the environment.
- Establishment of different Cells for anti-ragging, Women, SC/ ST and for anti-sexual harassment provide for the confidence of both the students and the faculty in the University administration providing for a congenial environment for all to function effectively.
- Business Management Department of the University is capable of imparting training to working professionals and the University personnel developing their managerial skills and periodic evaluation of all as a matter of routine for assessing their performance and taking appropriate corrective measures, where so dictated, for making up the deficiencies.
- Easy accessibility from outside makes the University amenable to high level of collaboration with the outside world.
- Location of the University within a highly industrialized belt can enable the University to become consultancy hub for the industries, existing ones as well as those coming up in the newly laid industrial estates closeby.
- Rural surroundings provide for high mental attainments.
- Good rapport with the community provides for the needed support in the matters of land needed for infrastructure etc. The present land of the University was also donated by the community.
- As part of the Institutional Social Responsibility the University through volunteer services adopted six villages of Sonipat District.
- Independent unit with separate power supply, water supply and sewage treatment for low dependence on community services.
- Ample scope for tapping both solar and wind energy because of open campus without any high-rise structures.
- The faculty members with highest degree (Ph.D) in all the departments for joint supervision for Ph.D. scholars and Masters' students. The 60% of existing faculty members are having Ph.D. degree.
- Very good laboratory infrastructure developed for research and consultancy under TEQIP-I & II.
- Central instrumentation laboratory (CIL) furnished with advanced sofiticated instruments.

- Highly qualified faculty members with technical and administrative experience are available in all the departments to participate as expert in various bodies like BoS, DRC and to deliver expert lectures in Workshop, Seminars, STTPs etc.
- More than seven hundred research publications in reputed refereed journals in the last 5 years.
- Department of Biotechnology has been awarded a Fulbright specialist invitation programme under which Prof. Louise Temple from James Madison University visited the department of Biotechnology from 28th August 2016 for 42 days.
- Most of the UG and PG programme are NBA accreditated.
- Internal quality Assurance Cell (IQAC) established in University.
- Four funds maintained under TEQIP-II (Corpos, Faculty Development, Equipment replacement and Equipment maintenance)

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.

Academic & administrative challenges are to be find out by conducted SWOC analysis of a particular institute. However we can anticipate the following things:-

Sr. No.	Anticipated Challenge	Proposed Action
1	Shortage of Faculty	Appointment of qualified faculty members
2	Placement	Appointment of Regular Training & Placement Officer Soft skills development of the final year students to enhance placement
3	Lack of R&D facilities	Joint supervision of Ph.D and/or Master students Procurement of equipments to enhance R&D activities
4	Academic Reforms Out dated curriculum	Improvement in NBA accreditation To enhance/add more number of programmes at UG and PG level
5	Lack of Quality Publication	To develop new labs/strengthen the existing laboratories/research lab
6	Financial Constraints	Delegation of financial / administrative power to dean / chairperson / faculty members

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

Institute does not have any problems in recruitment and selection of high quality faculty. As per University Act:

1. All appointments to teaching posts are made by the Executive Council on the recommendations of the Selection Committees.
2. Appointments to non-teaching posts carrying an initial pay of Rs.8000/- or more are made by the Executive Council, on the recommendation of the Establishment Committee.
3. For posts carrying an initial salary not exceeding Rs.7999/- appointments are made by the Vice-Chancellor.
4. Notwithstanding anything contained in clauses (1), (2) and (3) above, the Vice-Chancellor may, where he considers necessary, make an adhoc or temporary appointment for a period not exceeding six month, if it is not possible or desirable to make regular appointment

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

The following activities are proposed for long term strategic partnership with the mentee institute after the end of the Project-

- MoU with the Institute
- Scope of Online teaching
- To use infrastructure/facilities like Laboratories, library resources etc.
- Joint research activities
- Exchange of students
- Common placement drives

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

The input provided by the participating departments are summarised as follows:-

Department of Civil Engineering

(Rs. In Lakhs)

S.No.	Activity Heads	2017-18	2018-19	2019-20	Total expected Expenditure from 2017 -2020
		(i)	(ii)	(iii)	(iv= i+ii+iii)
1	Faculty training (qualification upgradation, subject upgradation& research competence, Expert Lectures, Pedagogical training, participation in conferences, seminars/workshops etc.)	10	10	10	30.00
2	Teaching and Research Assistantships	18	18	18	54.00
3	Staff training (Technical & Administrative staff)	2	2	2	6.00
4	Increasing capacity of UG, PG and PhD education (increasing enrollment and starting new UG, PG and PhD programmes)	10	10		20.00
5	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.	4	4	4	12.00
6	Academic support for weak students, Software training, Soft skill development	5	5	5	15.0
7	Instituting academic and non-academic reforms including NBA accreditation, programme flexibility (Is there any need to revise the curriculum? When it was last revised?)	2	2	2	6.0
8	Incremental operating cost	2	2	2	6.00
Total					149.00

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	Remedial classes	10 %	10 %	10 %
2	Improved Placement of graduates a) Placement Rate	Remedial classes and soft	10%	10%	10%

	b) Placement Package	skill development			
3	Increase in GATE qualified graduates	Special coaching in the university	10 %	20 %	20 %
4	Smart classrooms		2	-	-
5	e-books and e-Journals		15%	15%	15%
6	Increase in publications in refereed journals	Through Research projects and PG courses	10 %	20 %	30 %
7	Seminars, meetings and conferences for students and faculty for training and academic development	By organizing seminars and training programmes	20 %	20 %	20 %
8	Sharing of faculty for teaching processes	To the concerned Deptt	15%	-	-
9	Faculty exchange for research and development purposes	Through research projects	10%	10%	10%
10	Student exchange at the PhD, Masters and Undergraduate levels	Through research projects	10%	10%	10%
11	Joint supervision of PhD and/or Masters' student	Through research projects	10%	10%	10%
12	Joint activities with industry for joint R&D, internships and placement activities				
13	Seminars and learning forums on improving governance practices				
14	Improvement in NBA accreditation (including applied for cases)	Application to be submitted for NBA			
15	Helping in Grant of UGC Autonomy for non-autonomous institution				
16	Any other form of endeavour				

Equipment Required in Civil Engineering Department:

(Rs. in Lakhs)

S.No.	Activity Heads	Quantity	Total expected Expenditure
1	Projector Full HD With wireless dongal	2 nos.	4.0
3	Total Station	2 nos.	10.0
4	DGPS	1 no.	12.0
5	student soft skill development program	5 nos.	5.0
5	STAAD Software	10 nos.	10.0
7	Executive office chair	15 nos.	1.5
8	Potentiostat	1 no.	5.0
9	wifi router for smart rooms	1 no.	1.00
11	Learning resources	as per requirement	5.00
12	Oven	1 no.	0.5
13	Geology Lab Mineral/ Rock Samples	as per requirement	5.0
14	Glass Door Almirah	12 nos.	2.4
15	Workstations	25 nos.	12.5
16	Digital Auto Levels	5 nos.	5.0
17	Math CAD	5 nos.	2.5
18	GEOPACK software	5 nos.	8.0
20	Design Builder Software	1 no.	8.0

Department of Chemical Engineering

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	Excellent Resource persons shall be shared	5%	7%	10%
2	Improved Placement of graduates a) Placement Rate b) Placement Package	Placement companies shall be approached more often. Core companies shall be invited for better package	4%	8%	12%
3	Increase in GATE qualified graduates	Inhouse mentoring & motivation efforts will be stepped up	5%	9%	13%
4	Smart classrooms	Design of smart room (including video conferencing with mentored institute(s)) is being readied	50%	25%	20%
5	e-books and e-Journals	Already being procured & more in pipeline	20%	25%	30%
6	Increase in publications in refereed journals	UGC has already released a list of refereed journals	10%	12%	15%
7	Seminars, meetings &conferences for students and faculty for training and academic development	Peer-to-peer learning groups & mentoring by faculty shall usher in greater no. Of such activities	10%	12%	15%
8	Sharing of faculty for teaching processes	yes	5%	12%	15%
9	Faculty exchange for research and development purposes	yes	5%	10%	15%
10	Student exchange at the PhD, Masters and Undergraduate levels	yes	5%	10%	15%
11	Joint supervision of PhD and/or Masters' student	yes	2	3	4
12	Joint activities with industry for joint R&D, internships and placement activities	yes	2	4	6
13	Seminars and learning forums on improving governance practices	Portals & e-governance / ICT tools shall be developed	5	4	3
14	Improvement in NBA accreditation (including applied for cases)	-	-	100%	-
15	Helping in Grant of UGC Autonomy for non-autonomous institution	-	-	-	-
16	Any other form of endeavour				

Department of Electronics & Communication Engineering

S.No.	Activity Heads	2017-18	2018-19	2019-20	Total expected Expenditure (In Lakhs) 2017 -2020
		(i)	(ii)	(iii)	(iv= i+ii+iii)
1 (a)	Faculty training (qualification upgradation, subject upgradation& research competence, Expert Lectures, Pedagogical training, participation in conferences, seminars/workshops etc.)	10	10	10	30.00
1 (b)	Teaching and Research Assistantships	6	6	6	18.00
2	Staff training (Technical & Administrative staff)	3	3	3	9.00
3	Increasing capacity of UG, PG and PhD education (increasing enrollment and starting new UG, PG and PhD programmes)	-	10	10	20.00
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.	6	-	-	6.00
5	Academic support for Academically weak students/SC/ST/OBC, Software training, Soft skill development	2	2	2	6.0
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?)	2	2	2	6.0
Total					95.00

Activities to be organized at the Department level:

S.no	Event details	Number	2017-18 Cost (Rs. in lakhs)	2018-19 Cost (Rs. in lakhs)	2019-20 Cost (Rs. in lakhs)
1	One week workshop	01	3..0	3..0	3..0
2	Two/Three days conference	01	3.0	3.0	3.0
3	One/Two days seminar	02	3.0	3.0	3.0
4	Guest Lectures	10	1.0	1.0	1.0
5	Students visit (Industrial/ Academic) summer training (organization at the campus in collaboration with institutes/ industries)	As per requirement	5.0	5.0	5.0
		Total cost	15.0	15.0	15.0
Total expenditures for three years			**Rs. 45.0 Lakhs**		

S.No.	Item description	Cost (in Lakhs)
1.	**Hardware:**	
a.	Kits for PLC Lab	4
b.	DSO	5
c.	ARM/AVR Microcontroller with interfacing Modules	5
d.	Dual Power Supplies	1
e.	Function Generators	1
f.	Multimeters	1
2.	**Development of Research Lab**	
a.	Workstations (25)	20
b.	Multifunctional Printers (2)	0.5

c.	Air conditioners	1
d.	UPS with Batteries	5
3.	Antenna Fabrication lab	10
4.	**Softwares**	
a.	HFSS (Antenna Software- 15 users)	5
b.	COMSOL Multiphysics Software	7
c.	Cadence with perpetual license	8
d.	Estinet with perpetual license	7
e.	Netsim with perpetual license	7
	Total cost:	**87.5 Lakhs**

Department of Computer Science & Engineering

(Rs. In Lakhs)

S. No.	Activity Heads	2017-18	2018-19	2019-20	Total expected Expenditure from 2017 -2020
		(i)	(ii)	(iii)	(iv= i+ii+iii)
1	Faculty training (qualification upgradation, subject upgradation& research competence, Expert Lectures, Pedagogical training, participation in conferences, seminars/workshops etc.)	10	10	12	32.00
2	Teaching and Research Assistantships	15	15	15	45.00
3	Staff training (Technical & Administrative staff)	2	2	2	6.00
4	Increasing capacity of UG, PG and PhD education (increasing enrollment and starting new UG, PG and PhD programmes)	10	10	10	30.00
5	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.	7	5	5	17.00
6	Academic support for weak students, Software training, Soft skill development	4	4	5	13.0
7	Instituting academic and non-academic reforms including NBA accreditation, programme flexibility (Is there any need to revise the curriculum? When it was last revised?)	3	2	2	7.0
8	Incremental operating cost	2	2	2	6.00
Total					156.00

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	Remedial classes	5 %	10 %	15 %
2	Improved Placement of graduates a) Placement Rate b) Placement Package	Remedial classes and soft skill development	5%	10%	15%
3	Increase in GATE qualified graduates	Special coaching in the university	5 %	10 %	20 %
4	Smart classrooms		1	1	1
5	e-books and e-Journals		5%	10%	15%
6	Increase in publications in refereed journals	Through Research projects and PG courses	5 %	10 %	20 %
7	Seminars, meetings and conferences for students and faculty for training and academic development	By organizing seminars and training programmes	20 %	30 %	30 %
8	Sharing of faculty for teaching processes	To the concerned Deptt	5%	10%	15%
9	Faculty exchange for research and development purposes	Through research projects	5%	10%	10%
10	Student exchange at the PhD, Masters and Undergraduate levels	Through research projects	10%	10%	20%
11	Joint supervision of PhD and/or Masters' student	Through research projects	10%	10%	20%
12	Joint activities with industry for joint R&D, internships and placement activities		10%	10%	20%
13	Seminars and learning forums on improving governance practices		10%	10%	20%
14	Improvement in NBA accreditation (including applied for cases)		5%	10%	20%
15	Helping in Grant of UGC Autonomy for non-autonomous institution		10%	10%	10%
16	Any other form of endeavour		10%	10%	20%

Department of Mechanical Engineering

	Activity	Beneficiary	Details	Total Expenses
Faculty training	Qualification Upgradation, subject upgradation & research competence, Pedagogical training, FDP's participation in conferences, seminars/workshops etc.)	Faculty members of the department	FDP's for faculty National conference for faculty International conference for faculty Once per three year (Rs. 1.5 lacs per faculty)	3 lacs for three years 7.5 lacs for three years 17.5 lacs for three years
Staff Training	i) Training at NITTR, ESCI, reputed training institutes in india Tool Rooms etc. ii) Administrative Staff at NIRM Central secretariat institutes etc.	For Technical staff members Administrative Staff	Rs 15000/-per training Rs 10000/-per training	3 lacs for three years 1 lac
Total				32 lacs

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	Expert lectures and guidance to students in the participating institution	20%	40%	40%
2	Improved Placement of graduates a) Placement Rate b) Placement Package				
3	Increase in GATE qualified graduates	Expert lectures and guidance to students in the participating institution	20%	30%	50%
4	Smart classrooms	Setting up of smart class rooms in each teaching dept of the participating institution	2 nos.	4 nos.	4 nos.
5	e-books and e-Journals	Procurement of e-resources through inflibnet, and electronic materials	20%	30%	50%
6	Increase in publications in refereed journals	By means of coauthor and sharing facilities	20%	40%	50%
7	Seminars, meetings and conferences for students and faculty for training and academic development	Two expert lectures/ seminar per department per semester,	30%	40%	30%
8	Sharing of faculty for teaching processes	Expert lectures per semester in each department to expedite course work	2 nos.	2 nos.	2 nos.
9	Faculty exchange for research and development purposes	Exchange based on mutual need analysis	2 nos.	2 nos.	2 nos.
10	Student exchange at the PhD, Masters and Undergraduate levels	Exchange based on mutual need analysis	2 nos.	2 nos.	2 nos.
11	Joint supervision of PhD and/or Masters' student	Exchange based on mutual need analysis	2 nos.	2 nos.	2 nos.
12	Joint activities with industry for joint R&D, internships and placement activities				
13	Seminars and learning forums on improving governance practices	One seminar in each year	1 nos.	1 nos.	1 nos.
14	Improvement in NBA accreditation (including applied for cases)	based on need analysis of the participating institution		40%	60%
15	Helping in Grant of UGC Autonomy for non-autonomous institution				
16	Any other form of endeavour				

List of Equipments required in Department of Mechanical Engineering

S. No.	Proposed Equipment/s	Number of Units	Estimated Cost (Rs. in Lakh)
1	Stir Casting Furnace	1	12.0
2	Double Disc Polishing Machine	1	1.0
3	Metallurgical Microscope	1	7.0

4	Aluminum Alloy	100 kg	0.45
5	SiC Powder	15 kg	0.25
6	Laptop with Printer and Camera	01 each	1.0

Sr. No.	Equipment	Units	Estimated cost (Rs. in Lakh)
1	Structure Software (10 Licenses)	1	3.5
2	Buckling of struts apparatus	1	4.8
3	Stiffness apparatus	1	2.6
4	Spring testing apparatus	1	0.6
5	Dekstop	12	5.2
6	UPS	1	1.3
7	Printer	2	0.5
8	Specimens for Tensile, hardness, Fatigue, Torsion and Impact tests	250	1.5

List of Research Equipments Required for RAC laboratory:

Sr. No.	Item	Cost (Rs. in Lakh)
1	Vapor absorption Refrigeration system	2 (1 in no.)
2	Air conditioning tutor	3 (1 in no.)
3	Steam Jet refrigeration Kit	3 (1 in no.)
4	Liquid Desiccant based A/C system	5 (1 in no.)
5	Hot wire anemometer	1 (2 in no.)
6	Vane type anemometer	1 (2 in no.)
7	Air quality- temperature, RH, CO2 & Air flow measurement	4 (2 in no.)
8	Environmental Test Chamber	30 lakhs

Annexures

1. **NBA Accreditation letters**
2. **List of faculty members with specialization**

NATIONAL BOARD OF ACCREDITATION

NBCC Place, East Tower, 4th Floor, Bhisham Pitamah Marg
Pragati Vihar, New Delhi-110 003
Tel: +91 11 2436 0619 - 22, 2436 0654 Telefax: +91 11 2436 0683

Dr. D.K. Paliwal
Member Secretary, NBA

File No. 21-37/2010/NBA

03rd April, 2012

To,

The Registrar
Deen Bandhu Chhotu Ram University of Science & Technology
Murthal
Sonepat-131039
Haryana

Subject:- Accreditation status of programmes offered by Deen Bandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat, Haryana.

Dear Sir

This has reference to your applications filed in the year 2003 and 2006 seeking accreditation of National Board of Accreditation to various Programmes.

2. An Experts Committee conducted an on-site evaluation of the programmes. The report submitted by the expert committee was considered by the Engineering & Technology Accreditation Evaluation Committee (EAEC) for the concerned programmes. The Executive Committee(EC) of the National Board of Accreditation considered the recommendations of the Accreditation Evaluation Committee for each programme on 15.03.2012. The Executive Committee has approved the accreditation status of each programme applied by your institution which is as under:

Sl. No.	Name of the Programmes	Accreditation Status	Period of validity w.e.f 15.03.2012
1.	B. Architecture	Accredited	3 Years
2.	B.E. Chemical Engineering	Accredited	3 Years
3.	B.E. Computer Science & Engineering	Accredited	3 Years
4.	B.Tech. Electronics & Communication Engineering	Accredited	3 Years
5.	B.Tech. Electrical Engineering	Accredited	3 Years
6.	B.Tech. Mechanical Engineering	Accredited	3 Years

3. The accreditation status awarded to the programmes as indicated in the above paragraph does not imply that the accreditation has been granted to the **Deen Bandhu Chhotu Ram University of Science & Technology** as a whole. The complete name of the programme(s) accredited, level of programmes (UG or PG as the case may be) and the period of validity of accreditation, as well as the date from which the accreditation is effective, should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.

4. The accreditation status of the above programmes is subject to change on periodic review by the NBA Secretariat if major deficiencies are noticed. It is desired to comply with the mandatory disclosure of pertinent information in respect of accredited programmes indicated in table in paragraph 2 above in proforma prescribed on the website of the National Board of Accreditation. The same information is also required to appear on the website and information bulletin of your institution.

D.K. Paliwal

Contd../-

5. The accreditation status awarded to the programmes as indicated in table in paragraph 2 above is subject to maintenance of the current standards during the period of accreditation. If there are any changes in the status (major changes of faculty strength, organizational structure etc.), the same are required to be communicated to the NBA, with an appropriate explanatory note.

6. A copy of the comprehensive Report submitted by the Chairman of the Expert Committee which visited your institution is enclosed for reference and taking necessary action to overcome the shortcomings, if any, observed by the Expert Team.

7. If the institution is not satisfied with the decision of NBA, appeal may be filed within thirty days of receipt of this communication giving reasons for the same and by paying the requisite fee.

Yours faithfully,

D.K. Paliwal

(Dr. D.K. Paliwal)
Member Secretary

Encls: Copy of Report of Chairman of the Visiting Team

Copy to:-

1. The Director
   Department of Technical Education
   Government of Haryana
   Sector-17 A
   Chandigarh-160017
   Haryana

2. The Member Secretary
   All India Council for Technical Education (AICTE)
   7th Floor, Chandralok Building
   Janpath
   New Delhi-110001

3. Accreditation File.

4. Master accreditation file of the State.

For kind information

17/4/12

Vice-Chancellor

Registrar

17/4/12

19/4/12

Dean (Acad)

18/4

A copy be sent to D R (Accred)

Prof S P
Dean (AA)

NATIONAL BOARD OF ACCREDITATION
NBCC Place, East Tower, 4th Floor, Bhisham Pitamah Marg
Pragati Vihar, New Delhi-110 003
Tel: +91 11 2436 0620, 2436 0654 Telefax: +91 11 2436 0682

NATIONAL BOARD OF ACCREDITATION

No. F. 21-37/2010-NBA **Dated: 14th August, 2013**

To,

The Registrar,
Deen Bandhu Chhotu Ram University of Science & Technology,
Murthal,
Sonepat - 131039 (Haryana)

Sub: Accreditation status of Programmes offered by Deen Bandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat (Haryana)

Dear Sir ,

This has reference to your application dated 24-02-2011 seeking accreditation of National Board of Accreditation to various programmes offered by your University.

2. An Expert Committee conducted an on-site evaluation of the programmes during 14-16th September, 2012. The report submitted by the Expert Committee was considered by the Engineering Accreditation Evaluation Committee (EAEC) at its meeting held on 16-02-2013. The Executive Committee of the National Board of Accreditation considered the recommendations of EAEC at its meeting held on 5th August, 2013. The Executive Committee approved the accreditation status of the programmes as given in the table below:

Sl. No	Name of the Programme	Accreditation Status	Period of validity w.e.f. 05-08-2013
(1)	(2)	(3)	(4)
1.	B. Tech - Biomedical Engineering	Provisionally Accredited	2 years
2.	B. Tech – Biotechnology	Provisionally Accredited	2 years

3. The accreditation status awarded to the programmes as indicated in the above table does not imply that the accreditation has been granted to **Deen Bandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat (Haryana)** as a whole. **As such the University should nowhere along with its name including on its letter head etc., write that it is accredited by NBA because it is programme accreditation and not institution accreditation. If such an instance comes to NBA's notice, this will be viewed seriously.** Complete name of the programme(s) accredited, level of programmes (UG or PG as the case may be) and the period of validity of accreditation, as well as the date from which the accreditation is effective, should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.

4. The accreditation status of the above programmes is subject to change on periodic review, if needed by the NBA. It is desired that the relevant information in respect of accredited programmes as indicated in the table in paragraph 2, appears on the website and information bulletin of your University.

D. K. Baliwal

NATIONAL BOARD OF ACCREDITATION

NBCC Place, East Tower, 4th Floor, Bhisham Pitamah Marg,
Pragati Vihar, New Delhi-110 003
Tel: +91 11 2436 0620-22, 2436 0654 Telefax: +91 11 2436 0682
Website: www.nbaind.org

NATIONAL BOARD of ACCREDITATION

File No. 21-43-2013-NBA **Date: 27-12-2016**

To

The Director
Deenbandhu Chhotu Ram University of Science and Technology,
Murthal-131039, Sonepat
Haryana

Subject: Accreditation status of programmes applied by **Deenbandhu Chhotu Ram University of Science and Technology, Murthal-131039, Sonepat, Haryana.**

Sir,

This has reference to your Applications ID No 429 dated 08/08/2013 and ID No. 1059 dated 201/10/2014 in Tier-I format seeking accreditation by National Board of Accreditation to PG/UG Engineering programmes offered by **Deenbandhu Chhotu Ram University of Science and Technology, Murthal-131039, Sonepat, Haryana.**

2. An Expert Team conducted on-site evaluation of the programmes during **21st to 23rd October, 2016**. The report submitted by the Expert Team was considered by the concerned Committees constituted for the purpose in NBA. The Competent Authority in NBA has approved the following accreditation status to the programmes as given in the table below:

Sl. No.	Name of the Programme (UG/PG)	Basis of Evaluation	Accreditation Status	Period of validity	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
1.	UG- Electronics & Communication Engineering	Tier-I Document	Provisionally Accredited	Academic Years 2016-2017,2017-2018 and 2018-2019 i.e., upto 30-06-2019	Accreditation status granted is valid for the period indicated in col.5 or till the program has the approval of the competent authority, whichever is earlier
2.	UG- Electrical Engineering		Provisionally Accredited		
3.	UG- Mechanical Engineering		Provisionally Accredited		
4.	PG- Electronics & Communication Engineering		Provisionally Accredited	Academic Years 2016-2017 and 2017-2018 i.e., upto 30-06-2018	
5.	PG- Computer Science & Engineering		Provisionally Accredited		
6.	PG- Mechanical Engineering		Provisionally Accredited		

4. It may be noted that only students who graduate during the validity period of accreditation, will be deemed to have graduated with an NBA accredited degree.

5. The Programmes have been granted Provisional Accreditation. **Deenbandhu Chhotu Ram University of Science and Technology, Murthal-131039, Sonepat, Haryana** should submit the Compliance report at least 6 months before the expiry of validity of accreditation mentioned above. In respect of UG Engineering programmes submission of compliance report will make them eligible to be considered by the concerned Committee in NBA for further processing of the accreditation status. This could entail further extension of accreditation or a revisit, as deemed appropriate by NBA Committees.

Contd..2/-

6. The accreditation status awarded to the programmes as indicated in the above table does not imply that the accreditation has been granted to **Deenbandhu Chhotu Ram University of Science and Technology, Murthal-131039, Sonepat, Haryana** as a whole. **As such the Institution should nowhere along with its name including on its letter head etc. write that it is accredited by NBA because it is programme accreditation and not Institution accreditation. If such an instance comes to NBA's notice, this will be viewed seriously.** Complete name of the programme (s) accredited, level of programmes and the period of validity of accreditation, as well as the date from which the accreditation is effective should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.

7. The accreditation status of the above programmes is subject to change on periodic review, if needed by the NBA. It is desired that the relevant information in respect of accredited programmes as indicated in the table in paragraph 2, appears on the website and information bulletin of the Institute.

8. The accreditation status awarded to the programmes as indicated in table in paragraph 2 above is subject to maintenance of the current standards during the period of accreditation. If there are any changes in the status (major changes of faculty strength, organizational structure etc.), the same are required to be communicated to the NBA, with an appropriate explanatory note.

9. Copies of the Report of Chairman of the Visiting Team and Evaluators' Reports in respect of the above programmes are enclosed.

10. If the Institute is not satisfied with the decision of NBA, it may appeal within thirty days of receipt of this communication giving reasons for the same and by paying the requisite fee.

Yours faithfully,

(Dr. Anil Kumar Nassa)
Member Secretary

Encls: 1.Copy of Report of Chairman of the Visiting Team.
2.Copies of Expert Reports of the Visiting Team.

Copy to:

Master Accreditation folder of the State

List of Faculty members with specialization

DEPARTMENT OF BIOTECHNOLOGY

Name	Qualification	Designation	Specialization	Experience (yrs)	Ph.D. students guided
Dr. J.S. Rana	Ph.D	Professor	Animal Biotechnology	22	Completed: 06Enrolled: 04
Dr. Kiran Nehra	Ph.D	Associate Professor	Microbial and Molecular Genetics	09	03 Enrolled
Dr. Anil Sindhu	Ph.D	Associate Professor	Genetic Engineering	09	03 Enrolled
Dr. Reeti Chaudhary	Ph.D	Asstt. Prof.	Biochemistry and Biosensor Technology	08	01 Enrolled
Dr. Dharmender	Ph.D	Asstt. Prof.	Molecular and Microbial Biotechnology	08	02 Enrolled
Dr. Pamela Singh	Ph.D	Asstt. Prof.	Immunology and Microbiology	08	01 Enrolled
Dr. Aditi Arya	Ph.D	Asstt. Prof.	Genetic Engineering and Molecular Biology	05	01 Enrolled
Dr. Krishan Kumar	Ph.D	Asstt. Prof.	Microbiology and Industrial Biotechnology	3.5	01 Enrolled

DEPARTMENT OF CHEMICAL ENGINEERING

Name of Faculty	Designation	Area of Interest
Dr. D. P. Tiwari	Professor & Chairperson	Environmental Pollution Abatement, Heat Transfer, Thermodynamics, Chemical Reaction Engg., Energy Engg., Chemical Calculations
Mr. S. K. Sharma	Assistant Professor	Process Control
Ms. Sunanda	Assistant Professor	Adsorption Engineering
Dr. Manju Rani	Assistant Professor	Solution Thermodynamics, Chemical Reaction Engineering
Ms. Nidhika Bhoria	Assistant Professor	Nanocatalysis
Mr. Anil Yadav	Assistant Professor	Separation Techniques , Energy Engg., Nanomaterials
Dr. Mamta Bhagat	Assistant Professor	Environmental Pollution control, Chemical technology, waste water treatment
Mr. Yashwant Verma	Assistant Professor	Turbulence measurement and modeling using CFD, Secondary flows, micro channels, flow visualisation study.

DEPARTMENT OF CIVIL ENGINEERING

Name	Designation	Highest Qualification	Area of Specialization
Dr. Dhirendra Singhal	Professor and Chairperson	Ph.D.	Structural Engineering
Er. Pankaj Agarwal	Assistant Professor	M.E.	Geotechnical Engineering
Er. Gyanendra Singh	Assistant Professor	M.Tech	Transportation Engineering
Er. Arti Chouksey	Assistant Professor	M.Tech	Computer Aided Design
Er. Sunita Kumari	Assistant Professor	M.Tech.	Environmental Engineering
Er. Aman Ahlawat	Assistant Professor	M.Tech.	Construction Technology & Management
Er. Sachin Dass	Assistant Professor	M.Tech	Transportation Engineering
Er. Parveen	Assistant Professor	M.Tech	Structural Engineering
Er. Sourabh Jaglan	Assistant Professor	M.Tech	Transportation Engineering
Er. Atul Garg	Assistant Professor	M.Tech	Structural Engineering

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	Name of the Faculty	Designation	Highest Qualification	Total Experience in years	Specialization
1	Dr. Anita Singhrova	Professor	Ph.D	21	Heterogeneous Networks, Mobile communication, Wireless sensor networks
2	Dr. Parvinder Singh	Assoc. Prof.	Ph.D	15	Information Security,, Information Hiding
3	Dr. Amita Malik	Assoc. Prof.	Ph.D	16	Mobile Ad hoc and Wireless sensor networks and their applications, Cloud computing, Speech Processing
4	Dr. Sukhdip Singh	Asstt. Prof.	Ph.D	15	Software Engineering, Computer Architecture, Software Testing
5	Ms. Suman	Asstt. Prof.	Ph.D	15	Heterogeneous Wireless Networks, Adhoc Networks,Sensor Networks
6	Ms. Suman Deswal	Asstt. Prof.	M.Tech	14	Wireless Networks, Heterogeneous Networks
7	Dr. Dinesh Singh	Asstt. Prof.	Ph.D	13	Wireless Sensor Networks, Adhoc Netwroks, Software Engineering, Bio Metrics
8	Sh. Sanjeev Indora	Asstt. Prof.	M.Tech	11	Wireless Sensor Networks
9	Sh. Ajmer Singh	Asstt. Prof.	M.Tech	8	Software testing, Databases, Datamining

10	Sh. Rajvir Singh	Asstt. Prof.	M.Tech	9	Software Testing, Software Engineering, Computational Intelligence, Image Processing
11	Ms. Kavita Rathi	Asstt. Prof.	M.Tech	6	Cloud computing, information Security and Data Hiding
12	Ms. Neetu Verma	Asstt. Prof.	M.Tech	8	Wireless Sensor Network, Neural Network
13	Sh. Jitender Kumar	Asstt. Prof.	M.Tech	6	Cloud Computing, Mobile Computing

DEPARTMENT OF ELECTRICAL ENGINEERING

Name of Faculty	**Designation**	**Highest Qualification**	**Specialization**
Dr. J.S. Saini	Professor	Ph.D.	Control & Instrumentation, Intelligent Control, Fuzzy Logic Systems, Genetic Algorithms, Chaotic Systems
Dr. D.K. Jain	Professor	Ph.D.	Power Systems, Electric Power Quality, Electric Machines
Dr. S.K. Gupta	Professor	Ph.D.	Power System Dynamics & Control, FACTS, Deregulation
Dr. Surender Dahiya	Associate Professor	Ph.D.	Electrical Machines, Power Systems, Electric Power Quality
Sh. Sandeep Nandrajog	Associate Professor	B.E.	Electrical Engg., Entrepreneurship Development, Career Counseling, Organizational Development, Educational Technology
Sh. Mukesh Kumar	Associate Professor	B.Tech.	Electrical Engg.
Sh. Ajay Kumar Singh	Assistant Professor	Ph.D.	Instrumentation, Optimal Control, Control Systems, Microcontroller & Microprocessor
Dr. Mukhtiar Singh*	Assistant Professor	Ph.D.	Power Systems, SCADA
Mrs. Sanju Saini	Assistant Professor	Ph.D.	Control Systems, Instrumentation, Neural Networks, Chaos Theory
Dr.. Naresh Yadav	Assistant Professor	Ph.D.	Power Systems, Deregulation, Protection, Custom Power Devices
Sh. Rajneesh Pawar	Assistant Professor	Ph.D.	Fuzzy Logic, GA's, Control System, Power System, Energy Audit
Dr. Manish Kumar	Assistant Professor	Ph.D	DSP, Image Processing, Power Quality
Sh. Rohtash	Assistant Professor	Ph.D.	Advanced Control Systems
Ms. Deepika	Assistant Professor	M.Tech	Power Systems
Mr. Ravi	Assistant Professor	Ph.D. pursuing	Power Systems, Electric Power Quality, Electric Machines
Mr. Anil Kumar	Assistant Professor	Ph.D. pursuing	
Dr. Naresh Kumar	Assistant Professor	Ph.D	Power Systems
Sh. Deepesh Sharma	Assistant Professor	Ph.D. pursuing	Deregulation in Power System Electrical Machine Power System

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

S No.	Name	D.O.J.	Qualification	Area of Specialisation
1	Dr. Manoj Duhan	23.10.2008	Ph.D	Wireless Communication, VLSI, Reliability, Analog Electronics
2	Dr. Amit Kumar Garg	03.05.2012	Ph.D	Optical fiber Communication Systems and Networks, D.S.P
3	Dr. S. K. Grewal	26.09.1994	Ph.D.	Electronics, Comm., Control and Instrumentation
4	Dr. Poonam Singhal	21.03.1996	Ph.D.	Communication, Optical Communication
5	Sh. Manish Jain	16.11.1999	B.E.	Communication, Image Processing, VLSI
6	Dr. Priyanka	21.112008	Ph.D	D.S.P., Image Processing, Multimedia Comm., SAW filter
7	Dr. Gitanjali Pandove	23.05.2002	Ph.D	Optical Communication, D.S.P.
8	Dr. Pawan Kumar Dahiya	31.07.2002	Ph.D	Embedded Design, Digital VLSI, Evolutionary Computing, Intelligent Transportation System
9	Sh. Mridul Chawla	31.07.2006	M.E.	Electronics Product Design and Technology
10	Ms. Prachi Chaudhary	24.10.2008	M.Tech.	Digital Signal Processing
11	Dr. Rajeshwar Dass	24.10.2008	Ph.D.	DSP, Image Processing , Wireless Communication
12	Smt. Sunita Malik	05.02.2010	M.E.	Microelectronics, Wireless Communication
13	Smt. Rekha Yadav	05.02.2010	M.Tech.	VLSI Design
14	Ms. Himanshi Saini	04.04.2012	M.Tech.	VLSI and Optical Communication
15	Ms. Kusum Dalal	03.04.2012	M.Tech.	Wireless Communication, Image Processing
16	Ms. Rajni	11.04.2012	M.Tech.	Image and Signal Processing
17	Mr. Charanjeet Singh	06.04.2012	M.Tech.	Wireless Communication, Antenna, Low Power VLSI Design
18	Mr. Vikas Nehra	20.09.2012	M.Tech.	Analog and Digital VLSI, Embedded Systems

DEPARTMENT OF MECHANICAL ENGINEERING

Name	Designation	Highest Qualification	Specialization
Dr. K.D. Gupta	Professor	Ph.D.	Mechanical Design, Vibration, Rotodynamics, Tribology
Dr. Raj Kumar	Professor	Ph.D.	Thermal , CFD
Dr. R. Singh	Professor	Ph.D.	Manufacturing Engg. CAD/CAM/CIM
Dr. R.K. Garg	Professor	Ph.D.	System Design, Production & Industrial Engg.
Dr. M.N. Mishra	Professor	Ph.D.	Product Engineering, Operation & Supply Chain Management, Modelling and Simulation of Manufacturing and supply chain.
Dr. R.K. Soni	Professor	Ph.D.	Automobile Engg., CAD, Mechatronics, Reliability Engg.
Dr. A.K. Sharma	Professor	Ph.D.	Thermal Engg (Heat Transfer, Nanofluids, Design of Thermal/

			Energy Systems, Gasifier-Engine Technology)
Dr. Suresh Verma	Professor	Ph.D.	Mechanical Design, Tribology & FEA
Dr. S.K. Jarial	Assoc. Prof.	Ph.D.	Rotodynamic Machines & Industrial Engg.
Dr. A.K. Gupta	Assoc. Prof.	Ph.D.	Production & Industrial Engg.
Dr. Mahender Singh	Assoc. Prof.	Ph.D.	Industrial Engg. & Operation Management
Dr. Vikas Modgil	Asstt. Prof.	Ph.D.	Manufacturing system Engg. Industrial Engg.
Dr. Rajneesh Kumar	Asstt. Prof.	Ph.D.	Rotodynamic Machines, Tribology
Dr. Ajay Kumar	Asstt.	Ph.D.	Rotodynamic Machines, Industrial Engg.
Dr. Amit Sharma	Asstt. Pro	Ph.D.	Thermal Engg., RAC, Heat Pipes, Green Tech. Energy conservation
Dr.Anil Narwal	Asstt. Pr	Ph.D.	Robotic Engg. , Dynamics Modeling of Physical System , Bond Graph Modeling Simulation
Sh. Pardeep Sharma	Asstt. Prof.	M.Tech, Ph.D. (persuing)	Manufacturing & Automation