Centurion UNIVERSITY
Shaping Lives...
Empowering Communities...

The Annual Quality Assurance Report (AQAR) of the IQAC
Year: 2015-16

Part – A

1. Details of the Institution

1.1 Name of the Institution	Centurion University of Technology & Management (CUTM)
1.2 Address Line 1	At - Village Alluri Nagar, P.O. - R Sitapur, Via- Uppalada
Address Line 2	Paralakhemundi
City/Town	Paralakhemundi
State	Odisha
Pin Code	761211
Institution e-mail address	registrar@cutm.ac.in
Contact Nos.	06815-222150
Name of Head of the Institution:	Prof. D. Nageswara Rao (2010-July 2016) Prof. Haribandu Panda (Continuing since 01.08.2016)
Tel. No. with STD Code:	06815-222020
Mobile:	+91 93373 88801

Name of the IQAC Co-ordinator:	Paralakhemundi Campus: Prof. P. S. V. Ramana Rao Bhubaneswar Campus: Prof. Subrata Sarangi

Mobile:	Prof. Rao: 9394614546 Prof. Sarangi: 7735782033

IQAC e-mail address:	drpsvrrao@cutm.ac.in subrata.sarangi@cutm.ac.in

1.3 **NAAC Track ID** *(For ex. MHCOGN 1887)*

ORUNGN 11310

1.4 **NAAC Executive Committee No. & Date:**

F.19.26/EC (SC-10)/DO/2015/17.1

1.5 Website address:

www.cutm.ac.in

Web-link of the AQAR:

http://cutm.ac.in/index.php?option=com_content&view=article&id=746&Itemid=1164

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1st Cycle	A	3.10	2015	5 years up to 15-11-2020
2	2nd Cycle	-	-	-	-
3	3rd Cycle	-	-		
4	4th Cycle	-	-	-	-

1.7 Date of Establishment of IQAC:

01.07.2012

1.8 AQAR for the year:

2015-16

1.9 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC

   i.   AQAR 2014- 2015 submitted to NAAC, Bengaluru on   -   Not Applicable

1.10 Institutional Status

University   State ☐   Central ☐   Deemed ☐   Private ✓

Affiliated College   Yes ☐   No ✓

Constituent College   ☐ Yes   ✓   No

Autonomous college of UGC   Yes ☐   No ✓

Regulatory Agency approved Institution   Yes ✓   No ☐

(e.g. AICTE, BCI, MCI, PCI, NCI)

Type of Institution   Co-education ✓   Men   Women ☐

       Urban ☐   Rural ✓   Tribal ✓

Financial Status   Grant-in-aid ☐   UGC 2(f) Y   UGC 12B Y

       Grant-in-aid + Self Financing ☐   Totally Self-financing Y

1.11 Type of Faculty/Programme

Arts ☐   Science Y   Commerce Y   Law ☐   PEI (Phys Edu) ☐

TEI (Edu) ☐   Engineering Y   Health Science Y   Management Y

Others (Specify)   B.Sc. Agriculture, Diploma in Engineering

1.12 Name of the Affiliating University *(for the Colleges)*   NA

1.13 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc.

Autonomy by State/Central Govt./University   -

University with Potential for Excellence	-	UGC-CPE	-
DST Star Scheme	-	UGC-CE	-
UGC-Special Assistance Programme	-	DST-FIST	-
UGC-Innovative PG programmes	-	Any other (*Specify*)	-
UGC-COP Programmes	-		

2. IQAC Composition and Activities: (Paralakhemundi Campus – C1, Bhubaneswar Campus – C2)

2.1 No. of Teachers $\quad$ 9 (C1), 11 (C2)

2.2 No. of Administrative/Technical staff $\quad$ 2 (C1), 3 (C2)

2.3 No. of students $\quad$ 1 (C1), 1 (C2)

2.4 No. of Management representatives $\quad$ 1 (C1), 1 (C2)

2.5 No. of Alumni $\quad$ 1 (C1), 1 (C2)

2. 6 No. of any other stakeholder and

Community representatives $\quad$ 1 (C1), 1 (C2)

2.7 No. of Employers/Industrialists $\quad$ 1 (C1), 1 (C2)

2.8 No. of other External Experts $\quad$ 1 (C1), 1 (C2)

2.9 Total No. of members $\quad$ 17 (C1), 20 (C2)

2.10 No. of IQAC meetings held $\quad$ 18 (C1), 19 (C2)

2.11 No. of meetings with various stakeholders: Faculty $\quad$ 6 (C1), 6 (C2)

Non-Teaching Staff/Students $\quad$ 6 (C1), 7 (C2) $\quad$ Alumni $\quad$ 3 (C1), 3 (C2) $\quad$ Others $\quad$ 3 (C1), 3 (C2)

2.12 Has IQAC received any funding from UGC during the year?   Yes   No

If yes, mention the amount | NA | ☐   ☑

2.13 Seminars and Conferences (only quality related)

(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

Total | 3 |

Level   International | 0 | National | 0 | State | 0 | Institution | 3 |

(ii) Themes | Choice Based Credit System |

2.14 Significant Activities and contributions made by IQAC

- NAAC accreditation with 'A' Grade
- India Rankings NIRF
- Data submission for AISHE, MHRD
- Curriculum and Syllabus compilation for Science, Engineering and other Programs

The IQAC Cell of one campus undertakes academic audit of other campus. In every semester, it collects students' feedback and self-appraisal reports for faculty. It also conducts meetings with all its stake holders for improvement of curriculum and enhancement of quality in teaching. The ERP of the University is used for feedback collection and analysis.

2.15 Plan of Action by IQAC and Outcome

The plan of action chalked out by the IQAC at the beginning of the year towards quality

Enhancement and the outcome achieved by the end of the year

Plan of Action	Achievements
1.To conduct Academic Audit 2. Engaging with Stakeholders for quality enhancement 3. Engagement with faculty for design of curriculum for CBCS and industry specific domains	1.Conducted the Academic Audit for 2015-16 and submitted the report to the Registrar of the University 2.Coordinated the meetings with parents, training and placement cell, alumni and industry personnel 3. Meetings were organised with faculty, alumni and industry for offering CBCS and developing domain based syllabus.

Academic Calendar of the year attached as Annexure II

2.15 Whether the AQAR was placed in statutory body   Yes Y   No ☐

Management ☑   Syndicate ☐   Any other body ☐

Provide the details of the action taken

> The AQAR report was placed in the Board of Management meeting along with the University Annual report for approval. The Board of Management appreciated the efforts of IQAC and approved the report.

Part – B

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added/Career Oriented programmes
PhD	13	3	16	16
PG	11	4	15	15
UG	13	6	19	19
PG Diploma	0	0	0	0
Advanced Diploma	0	0	0	0
Diploma	5	0	5	5
Certificate	0	0	0	0
Others	21	0	21	21
Total	63	13	76	76
Interdisciplinary	2	0	0	0
Innovative	1	0	0	0

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options CBCS and Core
   (ii) Pattern of programmes:

Pattern	Number of programmes
Semester	39
Trimester	0
Annual	37

1.3 Feedback from stakeholders*   Alumni [y]   Parents [y]   Employers [y]   Students [y]
   (On all aspects)

   Mode of feedback   :   Online [y]   Manual [y]   Co-operating schools (for PEI) [N.A.]

*Analysis of the feedback in the Annex III.

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

> Yes. The university has revised the curriculum and has introduced CBCS system from the academic year 2015-16. The Syllabus is thoroughly revised in most of the courses. It includes advances in various fields.

1.5 Any new Department/Centre introduced during the year. If yes, give details.

Bhubaneswar Campus
1. Advanced Testing and Characterization Lab (Mechanical Engineering Department)
2. Solar Energy Lab (Electronics and Communication Engineering Department) in collaboration with Schneider Electric and SELCO Foundation

Paralakhemundi Campus
1. Advanced CATIA lab and Smart City Lab (Mechanical Engineering Department)
2. Smart City Lab (Mechanical Engineering Department)
3. Data Analytics and Open Source Language Lab (Computer Science and Engineering Department)

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty

Total	Asst. Professor	Associate Professor	Professor	Others
226	155	32	26	13

2.2 No. of permanent faculty with Ph.D.　　53

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
28	2	0	0	0	0	1	0	28	2

2.4 No. of Guest and Visiting faculty and Temporary faculty

Guest Faculty	Visiting Faculty	Temporary Faculty
31	14	0

2.5 Faculty participation in conferences and symposia

No. of Faculty	International level	National level	State level
Attended Seminars/Workshops	62	64	17
Presented papers	11	20	2
Resource Persons	3	5	1

2.6 Innovative processes adopted by the institution in Teaching and Learning

- Extensive use of ICTs for teaching-learning process. Centurion Tablet, loaded with course material, assessment modules, etc. are helpful for learning at students' convenient place, pace and time. A number of simulation software and other technologies have been used in different departments for improving learning.

- New Age Teaching and innovative teaching and learning methods such as peer learning, outside class room learning, project and practice based learning, etc.

- Real world software and other projects from for-profit and not-for-profit enterprises, as a means to learn software development and software engineering.

2.7   Total No. of actual teaching days during this academic year   238

2.8   Examination/Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, On-line Multiple Choice Questions)

- Introduction of external examinations for labs and projects

- Introduction of theoretical questions relating to practice in the written examinations

- Introduction of Examinations on Demand (EOD) throughout the year for backlog/improvement examinations

- Introduction of automated examination scheduling and grading using Examination Management Systems

2.9   No. of faculty members involved in curriculum restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop

Membership in Board of Studies	Participation in Faculty Development Workshop for Revised Curriculum	Participation in Curriculum Development Workshops
136	175	81

2.10 Average percentage of attendance of students   84%

2.11 Course/Programme wise distribution of pass percentage

Parlakhemundi Campus (B. Tech.)						
Branch	Total Appeared	Total Pass	1st Division	2nd Division	3rd Division	Total Pass %
CE	50	26	26	NIL	NIL	52
CSE	48	38	38	NIL	NIL	79.17
ECE	117	101	101	NIL	NIL	86.32
EEE	98	64	64	NIL	NIL	65.31
EIE	7	5	5	NIL	NIL	71.43
IT	9	6	6	NIL	NIL	66.67
ME	119	85	85	NIL	NIL	71.43
CH	11	7	7	NIL	NIL	63.64
TOTAL	**459**	**332**	**332**	**NIL**	**NIL**	**72.33**

Bhubaneswar Campus (B. Tech.)						
Branch	Total Appeared	Total Pass	1st Division	2nd Division	3rd Division	Total Pass %
CE	134	73	73	NIL	NIL	54.48
CSE	90	64	64	NIL	NIL	71.11
ECE	96	74	74	NIL	NIL	77.08
EEE	172	135	135	NIL	NIL	78.49
ME	184	138	138	NIL	NIL	75.00
TOTAL	**676**	**484**	**484**	**NIL**	**NIL**	**71.60**

Parlakhemundi Campus (MBA)						
Branch	**Total Appeared**	**Total Pass**	**1st Division**	**2nd Division**	**3rd Division**	**Total Pass %**
MBA	27	16	16	NIL	NIL	59.26

Bhubaneswar Campus (MBA)						
Branch	**Total Appeared**	**Total Pass**	**1st Division**	**2nd Division**	**3rd Division**	**Total Pass %**
MBA	90	58	57	1	NIL	64.44

Parlakhemundi Campus (M. Tech.)						
Branch	**Total Appeared**	**Total Pass**	**1st Division**	**2nd Division**	**3rd Division**	**Total Pass %**
Computer Science Engineering	3	2	2	NIL	NIL	66.67
Design and Manufacturing Engineering	3	3	3	NIL	NIL	100.00
Power System & Control Engineering	5	2	2	NIL	NIL	40.00
VLSI Design Engineering	7	7	7	NIL	NIL	100.00
TOTAL	18	14	14	NIL	NIL	77.78

Bhubaneswar Campus (M. Tech.)						
Branch	**Total Appeared**	**Total Pass**	**1st Division**	**2nd Division**	**3rd Division**	**Total Pass %**
Computer Science Engineering	15	8	8	NIL	NIL	53.33
Communication Systems Engineering	14	4	4	NIL	NIL	28.57
Design and Manufacturing Engineering	14	8	8	NIL	NIL	57.14
Power System & Control Engineering	19	14	14	NIL	NIL	73.68
Thermal Engineering	6	2	2	NIL	NIL	33.33
VLSI Design Engineering	8	7	7	NIL	NIL	87.50
TOTAL	76	43	43	NIL	NIL	56.58

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes

IQAC follows the approach of student centric learning through Deming Cycle of Plan, Do, Check and Act (PDCA). It also follows the adult learning approach of Action-Reflection-Action. Outside class room, project centric and peer based learning are extensively practiced. IQAC picks up the best practices through a series of faculty development workshops, observation in class rooms and formal feedback sessions. Students, alumni, industry experts and faculty from other institutions are coopted in teaching-

learning development process. The class room teaching is being given less importance based on the feedback received from students, faculty and result analysis.

2.13 Initiatives undertaken towards faculty development

Faculty/Staff Development Programmes	Number of faculty benefitted
Refresher courses	14
UGC – Faculty Improvement Programme	2
HRD programme	226
Orientation programme	13
Faculty exchange programme	4
Staff training conducted by the university	317
Staff training conducted by other institutions	17
Summer/Winter schools, Workshops, etc.	61
Others	0

2.14 Details of Administrative and Technical staff

Category	Number of permanent employees	Number of vacant positions	Number of permanent positions filled during the year	Number of positions filled temporarily
Administrative Staff	97	3	5	0
Technical Staff	74	0	2	0
Attendant	44	2	0	2

Criterion – III
3. Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

1. Periodical brain storming sessions are conducted by the experts from academia, research organization and industry to identify the direction and topic of research.

2. Faculty Development Programmes are regularly arranged to motivate them for improving their capacity in research proposal writing, research article writing and presentation.

3. Students are encouraged to participate in the workshops organised at various institutions. The university conducts student technical festival in both the campuses.

4. As a part of the research and development, regular seminar and workshops are organised. It provides a platform to share the research findings to a wider community.

3.2 Details regarding major projects

	Completed	On going	Sanctioned	Submitted
Number	4	1	5	4
Outlay in Rs lakhs	148.48	100	248.48	

3.3 Details regarding minor projects

	Completed	On going	Sanctioned	Submitted
Number	1	1	2	1
Outlay in Rs lakhs	2	1	3	2

3.4 Details on research publications

	International	National	Others
Peer Review Journals	124	58	15
Non-Peer Review Journals	15	1	0
e-Journals	18	0	0
Conference proceedings	10	10	1

3.5 Details on Impact factor of publications

Range	h-index	Average	Nos. in SCOPUS
1-15	-	-	-

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations

Nature of the Project	Duration Academic Year	Name of the funding agency	Total amount Sanctioned (in Lakh)	Received (in Lakh)
Major projects	2015-16	Australian High Commission, Director General of Employment & Training, Odisha Mining Corporation, Oil & Natural Gas Co, Union	248.48	248.48

		Bank of India and NSDC		
Minor Projects	2015-16	SMH, Odisha Society of America	2	2
Interdisciplinary Projects				
Industry sponsored	2015-16	Odisha Mining Corporation, Oil & Natural Gas Corporation	71.10	71.10
Projects sponsored by the University/College		CUTM	100	100
Students research projects *(other than compulsory by the University)*	2015-16	CUTM	9.25	
Any other(Specify)				
Total			251.48	251.48

3.7 No. of books published

With ISBN No	Chapters in Edited Books	Without ISBN No.
0	4	0

3.8 No. of University Departments receiving funds from

UGC-SAP	CAS	DST- FIST	DPE	DBT SCHEME/FUNDS
0	0	0	0	0

3.9 For colleges

Autonomy	CPE	DBT Star Scheme	INSPIRE	CE	Any Other(specify)
0	0	0	0	0	0

3.10 Revenue generated through consultancy   Rs. 8.62 Crore

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	0	6	6	7	7
Sponsoring agencies		CUTM, DST, NPTEL IITM	CUTM	CUTM	CUTM

3.12 No. of faculty served as experts, chairpersons or resource persons   19

3.13 No. of collaborations

International	National	Any other
1	5	0

3.14 No. of linkages created during this year   6

3.15 Total budget for research for current year in lakhs

From Funding agency	From Management of University/College	Total
NA	41	41

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	17
	Granted	3
International	Applied	0
	Granted	0
Commercialised	Applied	0
	Granted	0

3.17 No. of research awards/recognitions received by faculty and research fellows of the institute in the year

Total	International	National	State	University	District	College
15	2	6	3	1	3	0

3.18 No. of faculty from the Institution: who are Ph.D. Guides

33

and students registered under them

37

3.19 No. of Ph.D. awarded by faculty from the Institution

7

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF	SRF	Project Fellows	Any other
3	0	0	2

3.21 No. of students Participated in NSS events

University level	State level	National level	International level
230	0	0	0

3.22 No. of students participated in NCC events

University level	State level	National level	International level
30	3	0	0

3.23 No. of Awards won in NSS

University level	State level	National level	International level
0	0	0	0

3.24 No. of Awards won in NCC

University level	State level	National level	International level
1	0	0	0

3.25 No. of Extension activities organized

University forum	College forum	NCC	NSS	Any other
0	0	3	25	0

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

- The NSS wing of CUTM University, in collaboration with Red cross Society conducted a Mega Blood Donation camp.
- The NSS CUTM University organized several events like plantation, village cleaning, etc.
- The mega green run-was organized during 2015 to promote healthy and greener lifestyles for a sustainable future.
- Aligned to prime minister's Swatch Bharat Abhiyan, NSS unit of CUTM Parlakhemundi Campus took an initiative of cleanliness drive at Paatikota and Rasur villages. About 100 students actively collected the garbage and waste from the surrounding villages and cleaned the market junction of Parlakhemundi. This event was supported by local town panchayat and municipality officials, and was organized by CUTM students of Parlakhemundi campus.
- Conducted training programmes in First Aid/Home Nursing for students.
- Organized health games, health exhibitions, lectures on health education to promote the cause of good health among the youth.
- Organized various health camps such as eye camps, drives for inoculation, vaccination, mass immunization, health awareness etc.
- Organized demonstration of fire fighting in consultation with the fire station near the campus.
- Conducted training programme in Braille to learn and produce literature in Braille.
- Rendered help and assistance to the needy and meritorious handicapped students (such as the blind) of the colleges.
- Organized tree plantation and afforestation drives.
- Maintaining sanitary condition and cleanliness in the college.
- Observance of World Health Day, Blood Donation Day, Anti-Smoking Day, World Disabled Day etc.
- Visit Anganwadi, orphanage, schools for the blind, institutions for the physically handicapped with gifts on special occasions like Independence Day, Republic Day, etc.

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area (in Acres)	113.8	0	CUTM	113.8
Class rooms	96	14	CUTM	110
Laboratories	109	2	CUTM	111
Seminar Halls	11	0	CUTM	11
No. of important equipment purchased (≥ 1-0 lakh) during the current year.	112	2	CUTM	114
Value of the equipment purchased during the year (Rs. in Lakhs)	1398	8.78	CUTM	1406
Others				

4.2 Computerization of administration and library:

The ERP portal (MIS), a portal for recording the every information pertaining to campus which caters the needs of Office, stores, Exam cell, Library

4.3 Library services

	Existing		Newly added		Total	
	No.	Value (Rs lakhs)	No.	Value (Rs lakhs)	No.	Value (Rs lakhs)
Text Books	64941	241.2	4074	17.5	69015	258.7
Reference Books	14411	-	527	-	14938	-
e-Books (Available in Subscribed resources (NLIST, DELNET)	6000		6000		6000	
Journals	104	1.5	104 (renewed)	1.6	104	3.1
e-Journals (IEEE ASPP, Elsevier, ASME, JSTOR, Jgate)		14.3		14.3		28.6
Digital Database	DELNET, NDL	0.2	DELNET, NDL	0.2	DELNET, NDL	0.4
CD & Video	2760		75		2835	

4.4 Technology upgradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Depart-ments	Others
Existing	1637	25	1gbps, BSNL 155 mbps	2	1	27	10	0
Added	65	2	-	1	0	1	1	0
Total	1702	27	1gbps, BSNL 155 mbps	3	1	28	11	0

4.5 Computer, Internet access, training to teachers and students and any other programme for technology up-gradation (Networking, e-Governance etc.)

1. Orientation programs were organized on ERP, MIS, WEB portal and mail server for all lab in-charges and technical staff along with the teaching staff.

2. Orientation program were organized for employees on use of UBUNTU.

3. At the beginning of each semester orientation programs were organized for the benefit of the 1st year student on the use of ERP portal and also on curriculum related aspects.

4.6 Amount spent on maintenance (Rs lakh)

ICT	Campus Infrastructure and facilities	Equipment	Others	Total
6.2	101.9	19.6	14	141.7

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

> 1. IQAC informs students proactively and continuously about the need, process, output and outcome of the Curriculum development, Curriculum delivery and Assessment process.
>
> 2. Involvement of students in Curriculum development, Curriculum delivery and Assessment process through feedback mechanism and workshops
>
> 3. Information dissemination during induction program, workshops, handbook, and posting in the University website
>
> 4. Involvement of students in life-skill development, community engagement, training and placement process through student specific competency gap analysis, feedback, mentoring and counselling.

5.2 Efforts made by the institution for tracking the progression

> 1. The University monitors the progress of students in four dimensions, such as Professionalism, Communication Skill, World View and Domain Knowledge.
>
> 2. Extensive use of IT system through its ERP, the University records, processes and disseminates the progress of students to students, parents, teachers and administrators.
>
> 3. For alumni, individual records are kept and upgraded by a dedicated Cell in the University for monitoring their progress and involvement in admission, curriculum development and delivery, training, internship and placement, and University governance.
>
> 4. Continuous engagement of students in curricular and extra-curricular activities

5.3 (a) Total Number of students

UG	PG	PhD	Others
4432	543	28	0

(b) No. of students outside the state   589

(c) No. of international students   3

MEN		WOMEN	
Number	%	Number	%
4057	81.5	918	18.5

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
3097	259	157	1452	10	4975	3346	280	170	1569	11	5375

Demand ratio: 1.4   Dropout (%): 1.2

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

> 1. Regular coaching of students for GATE examination
>
> 2. Facilitation centres in the campus for offering coaching for GRE/TOFEL/CAT
>
> 3. Coaching for Banking and Civil Service Examinations

No. of students beneficiaries   626

5.5 No. of students qualified in these examinations

NET 1   SET/SLET 2   GATE 25   CAT 2

IAS/IPS 0   State PSC 5   UPSC 1   Others 4

5.6 Details of student counselling and career guidance

> 1) The University regularly conducts activities on the career counselling by inviting eminent personalities from various industries and academic circles. Experts from reputed organization like Mind Tree, Odisha Diesel, IVRCL, Triveni Turbines, Dassault, Indian Navy, etc. were invited.
>
> 2) The training and placement cells of the university actively undertake career counselling, grooming and competence building for placement.
>
> 3) External agencies undertake training and continuous assessment of students.
>
> 4) For personal counselling, the university adopts a mentor and mentee system, where for every 15 to 20 students a teacher acts as a mentor to counsel and guide the students in his/her chosen career.

No. of students benefitted   4490

5.7 Details of campus placement

On campus			Off Campus
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
174	882	537	150

5.8 Details of gender sensitization programmes

1) The University regularly organizes sensitization lectures on issues related to gender equality and workspace etiquettes.

2) The University conducts competitions on International Women's Day.

The University is committed to creating and maintaining a community in which students, teachers and nonteaching staff can work together in an environment free of violence, harassment, exploitation, and intimidation. This includes all forms of gender related violence, sexual harassment, and discrimination on the basis of sex/gender. While CUTM is committed to the right to freedom of expression and association, it also strongly supports gender equality and opposes any form of gender discrimination and violence.

So far two workshops have been organized by the University. The objectives of the workshops were to sensitize the participants on gender issues and the policy on sexual harassment of women at workplace through visuals and talks.

All faculty and staff of the School of Applied Sciences, School of Engineering, School of Management, School of Agriculture Science, School of Pharmacy and Life Sciences, School of Media and Communication, School of Vocational Education and Training participated in the workshop. The discussion largely centred around what can be categorized as sexual harassment and on the procedures to be followed to address sexual harassment of women at the University.

The policy against *Sexual Harassment of Women in Workplace (Prevention Prohibition and Redressal)* has been put up in the website of the University. The names of the Internal Complaints Committee Members are displayed in all the key buildings of the University.

5.9 Students Activities

    5.9.1   No. of students participated in Sports, Games and other events

State/ University level	National level	International level
642	5	1

No. of students participated in cultural events

State/ University level	National level	International level
676	8	0

5.9.2   No. of medals /awards won by students in Sports, Games and other events

	State/ University level	National level	International level
Sports	22	3	0
Cultural	20	0	0

5.10 Scholarships and Financial Support

	Number of students	Amount (in lakh)
Financial support from institution	240	34.4
Financial support from government	5	3.2
Financial support from other sources	50	44.5
Number of students who received International/ National recognitions	-	-

5.11 Student organised / initiatives

	State/ University level	National level	International level
Fairs	17	1	1
Exhibition	8	3	1

5.12 No. of social initiatives undertaken by the students | 112 |

5.13 Major grievances of students (if any) redressed:

     i.   Enhanced the speed of internet from 4 MBPS to 155 MBPS.

    ii.   The access points for enabling WIFI facility was installed in all hostels

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

VISION
- Provision of quality, globally accredited academic programmes in Technology and Management.
- Provision of globally accredited employability training for less endowed segments of the population.
- Promotion of entrepreneurial culture and enterprise in the target areas.
- Facilitating improved market access to goods and financial services to the target population.
- Promotion of lighthouse project interventions in the target area.

MISSION
A globally accredited human resource centre of excellence catalysing sustainable livelihoods in the less developed markets across the globe

Orientation of the University
- Learning: Hands on, Experience based and Practice oriented
- Ideas: Make a difference through appropriate and relevant innovation and actionable research.
- Value: Shaping Lives, Empowering Communities and creating Nano, Mini and Micro enterprises.
- Experience: Quantifiable, Sustainable, Scalable and Replicable while striving to create a sense of ultimate delight among all stakeholders.

6.2 Does the Institution has a Management Information System

The University has a MIS that caters to all its needs. The key components of the MIS software include
- Faculty information
- Student information
- Supporting departmental Information (accounts, audit, utility, residential, sports, general administration, operation and maintenance)
- Assets' information
- Academic Delivery and assessment information

IQAC has representation from all constituent units of the University who are responsible for data acquisition, analysis, sharing and feedback.

6.3 Quality improvement strategies adopted by the institution for each of the following

6.3.1 Curriculum Development

To ensure required quality, as a first step, requirement of the industry is identified through meetings with alumni, industry experts, sector skill councils, academicians and researchers in the area. Draft curriculum, delivery and assessment process are discussed in the Faculty Council, Board of Studies and Academic Council before finalisation. Modular design, continuous assessment and feedback to students and faculty, optimal mix of class room and experiential learning through projects are ensured for desired quality.

6.3.2 Teaching and Learning

Process based approach is followed for ensuring quality teaching and learning. Every course has specific objective, session plan, delivery mechanism, continuous assessment and feedback system (to and from students), expected outcome and result analysis.

Student centric learning is practiced though use of ICT. Opportunity is given to students to learn at their pace, time and place of convenience. Specific methods being practiced include outside class room learning, project based learning, context specific learning, team learning and peer learning.

6.3.3 Examination and Evaluation

1) Continuous assessment
2) Questions are designed to assess conceptual understanding, comprehension, application and analytical ability
3) Continuous feedback to students and faculty
4) Peer assessment
5) Transparency in assessment
6) Application of ICT in assessment and reporting
7) Adequate opportunities and timely redressal of students' grievances
8) Participatory assessment process review and implementation

6.3.4 Research and Development

Areas and themes of research are identified based on discussion in faculty groups with participation from industry and R&D organisations. Subsequently specific project proposals are developed and submitted to relevant funding agencies, including that for internal funding. A peer group reviews every proposal before it is submitted.

Once the project is approved, the research team makes periodic presentation of progress made and receives feedback for improvement.

Student research, including that of doctoral program, is an important part of CUTM's overall R&D program. All these research activities follow a systematic process, wherein every student defends a research proposal and works according to the steps articulated and approved in the proposal.

6.3.5 Library, ICT and physical infrastructure/instrumentation

1) Ease of access to library and other infrastructural facilities are ensured through intensive use of ICT.
2) Library has adequate e-content, e-journals, e-books and digital database
3) High speed campus-wide internet and intranet helps in data access.

6.3.6 Human Resource Management

i)	University follows open and all India search for faculty and key administrative resources.
ii)	Specific attention is given to ensure diversity of human resources (gender, religion, language, caste, etc.)
iii)	For ease of access by potential faculty, e-application is encouraged
iv)	Wide publicity for recruitment and promotion is given through website, electronic and print media
v)	The university has allocated budget for skill development. It deputes faculty to national or international institution of repute.
vi)	Performance based incentive system is in place for encouraging faculty

6.3.7 Faculty and Staff recruitment

Faculty and staff are recruited through a systematic need assessment process. Adequate mix of people from academia and industry is the norm. The HR Department generates application through peer solicitation, advertisement and invitation. However, all the faculty go through a standard recruitment process including presentation in front of the faculty and students, and interview by a panel of experts.

6.3.8 Industry Interaction / Collaboration

The University creates platform for effective industry interaction in developing course curriculum, offering value added courses, imparting skill based training, participation through seminar, workshop, faculty development program, management development program, students visit to industry, faculty visit to industry through summer immersion programme, consulting, working together for social project. The University has created a University- Industry Partnership Cell to have more industry- institute interaction for shared Objectives. The University has collaborated with Norwegian University of Science and Technology (NTNU), Trondheim (Norway) in management and social sciences.

6.3.9 Admission of Students

The Courses offered by Centurion University are widely publicised through bill boards, electronic and print media, social media and internet. The transparency in the admission process is ensured by clearly indicating number of seats available, eligibility criteria and the process of admission. The University does not charge capitation fee. Affirmative principle is followed for inclusive admission.

Candidates seeking admission to CUTM courses come through different entrance examinations, including Centurion University Entrance Examination (CUEE), conducted by the University. Students can apply online or offline to the University. Seat allocation is done purely on merit basis i.e. based on the performance in the Entrance Examination. Counselling Schedule is published in the Centurion University Website on the day of declaration of result itself. Candidates have to attend the counselling as per the schedule. Counselling is stopped as soon as all the seats reserved for the Centurion University are filled up. Reports about the results of Counselling and Admissions are then sent to respective constituent campuses as per the allotment.

6.4 Welfare schemes for

Teaching	(1) Provision of the medical insurance (2) Free medical facility
Non-Teaching	(1) Provision of the medical insurance (2) Free medical facility
Students	(1) Provision of the medical insurance (2) Free medical facility

6.5 Total corpus fund generated (Rs. Lakhs)

334.5 as on Financial year 2015-16

6.6 Whether annual financial audit has been done   Yes [Y] No [ ]

6.7 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Y	Faculty Team from Other Campus	Y	IQAC
Administrative	Y	Registrar	Y	Registrar

6.8 Does the University/ Autonomous College declares results within 30 days?

For UG Programmes   Yes [Y] No [ ]

For PG Programmes   Yes [Y] No [ ]

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

> The Senior Management Team, which meets once in every two months is the key driver of examination reform process. Aligning assessment systems with the NSQF and skills development has been undertaken seriously.
> The following are the ideas generated by this assessment:
> (i)   Experimenting with open book exams for semester exams.
> (ii)   Introducing external examinations for labs and projects.
> (iii)   Introducing theoretical questions relating to practice in the written examinations.
> (iv)   Examinations on demand through the year for backlog/improvement exams.
> (v)   Relative grading over absolute grading after examining the pattern for a few years.
> (vi)   Automating exam scheduling and grading using Examination Management Systems.

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

Not Applicable

6.11 Activities and support from the Alumni Association

The alumni association of CUTM, namely, AAJ (Alumni Association of Jagannath Institute for Technology & Management or JITM) was formed in the year of 2008 with a very small of group of Alumni of the University's constituent unit JITM. It was officially registered in 2008.

(i)   AAJ collects all relevant information from alumni on challenges and technology trends in industry for curriculum development.
(ii)   It facilitates smooth transition of students from academic environment to industry setting through their involvement in teaching, grooming, internship and placement support.
(iii)   Regular Alumni meets are held in major cities.

6.12 Activities and support from the Parent – Teacher Association

i.   CUTM solicits support from parents for making their wards active in learning, accepting advices for professional and personal development which may not be easy to accept.

ii.   Both on-campus and off-campus Parent-Teacher meets are organized, twice an academic year, for maximizing participation of parents.

iii.   Access to the University's ERP is provided to parents for monitoring progress of their wards and contacting concerned faculty mentor for required deliberation.

6.13 Development programmes for support staff

i.   CUTM provides need-based skill training of its supporting staff members and encourages them in their career progression. There are several examples of individuals starting their career at lower level and rising up in the hierarchy.

ii.   The University honours the Best Supporting Staff with awards and cash prizes every year.

6.14 Initiatives taken by the institution to make the campus eco-friendly

Examples of eco-friendly initiatives at CUTM:
   a.   The Green Policy of the University is implemented by the Adminsitartion
   b.   Green club develops environmental awareness among the members through regular activities
   c.   Rain water harvesting is practiced through a number of open and underground recharge points
   d.   Waste water recycling is practiced and used in gardening
   e.   Best practices for water use in kitchen is adopted
   f.   Waste is separated at source and biodegradable waste is converted into compost for use in gardens
   g.   Good energy management practices are adopted in the form of LED lights, use of 5 star equipment and regular energy audit
   h.   Campus is in the process of installing 500kW of solar energy system. It has plan to become energy surplus in few years' time.
   i.   Annual census of floral and faunal resources in the campus is undertaken
   j.   Soil conservation is practiced through intensive plantation
   k.   The campus discourages use of plastic bags

Criterion – VII

7. <u>Innovations and Best Practices</u>

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

Innovation in curriculum
- (i)   Choice Based Credit System
- (ii)   Practice component was introduced in all the subjects
- (iii)   Interaction with Alumni and Industry in developing the curriculum
- (iv)   Seminars, conferences and workshops were conducted for diversified learning
- (v)   Started B. Sc. and M. Sc. Courses in applied basic sciences

Innovations in Training & Placement
- (vi)   Industry Immersion to the faculty
- (vii)   Industry oriented training programme for faculty and students
- (viii)   Industry Internship for 2 months for final year students (including few with stipends)
- (ix)   Integrating domain based teaching, internship and placement in collaboration with industry partners
- (x)   Experts were invited for Life Skill Development programmes

Innovations in Research and Development and extension:
- (xi)   Successful launch of e-rickshaw entrepreneurship project under Gram Tarang Incubation Centre
- (xii)   Product development, application in the field and patenting in renewable energy area
- (xiii)   Introduced more number of e-books, e-journal and digital database

Innovations in Institution Development
- (xiv)   Pan-India service diversification: Incorporation of Skill Assessment Cell of the University

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

The Academic Audit Report is attached in Annex IV.

7.3 Give two Best Practices of the institution

(i) Use of ICT in Teaching Pedagogy & Skill development as a part of curriculum

(ii) CUTM Qualification Frame Work

The details are in Annex V.

7.4 Contribution to environmental awareness / protection

- Afforestation and development of a forest ecosystem, including biodiversity through plantation of different shrubs, herbs and plants
- Water harvesting, contour bunds, soak pits, check dams, recycling of effluents
- Drip Irrigation and sprinkler watering are used wherever feasible.
- Minimizing water consumption and wastage
- Deployment of solar lighting and LED lamps
- Minimising use of paper and plastic bags
- Minimizing food wastage in the hostels
- Production of biofertiliser and biopesticide and use in the gardens
- Imbibing waste reduction consciousness by training programs

7.5 Whether environmental audit was conducted?   Yes | Y | No | |

7.6 Any other relevant information the institution wishes to add

Please refer to SWOC Analysis of the University in Annex VI

8. **Plans of institution for next year**
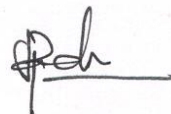
I.	The University will offer new programs such as Bachelor in Botany and Zoology; Master in IT; Bachelor and Master programs in Paramedics; Bachelor program in Pharmacy, Diploma Engineering programs in Mechanical, Mining, Civil, Electrical, Automobile; B. Com in Banking and Accounts; MBA in Data Analytics.
II.	The University will adopt CBCS in B. Sc programs of the School of Applied Sciences.
III.	Intensive training on world view, communication and life skill will be provided to students.
IV.	Student and faculty research will be in the areas relevant to the needs of community and industry
V.	Consulting assignments in the area of community institution building will be taken up.
VI.	The University will strive to obtain UGC 12B Accreditation
VII.	Domain based teaching for all engineering programs will be implemented.
VIII.	University will develop Centre for Renewable Energy and Environment in partnership with SELCO and other companies.
IX.	CUTM will continue to create and support management of institutions who implement the product, process and institutional innovation that come out of the university.
X.	The University will have process innovation in new-age teaching-learning methods for teachers and students.
XI.	The University will be a repository of context specific knowledge of its natural, socio-cultural, economic and ecological environment.
XII.	Each School of the University (engineering, management, natural science, social science, vocational education, architecture and planning) will work with national and global collaboration.
XIII.	It will have a student strength of 5,000/year for graduate and higher education and 12,000/year for skill development of school dropouts.
XIV.	The University will create an enabling environment for co-learning and cohabitation of students from all levels and all economic strata.

Name: Subrata Sarangi   *Name: Haribandhu Panda*

Signature of the Coordinator, IQAC   *Signature of the Chairperson, IQAC*

_____***_____

Abbreviations

AAJ	-	Alumni Association of JITM
CAS	-	Career Advanced Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CE	-	Centre for Excellence
CGPA	-	Cumulative Grade Point Average
COP	-	Career Oriented Programme
CPE	-	College with Potential for Excellence
CUTM	-	Centurion University of Technology and Management
DPE	-	Department with Potential for Excellence
EOD	-	Examination on Demand
ERP	-	Enterprise Resource Planning
GATE	-	Graduate Aptitude Test
ICT	-	Information and Communication Technology
JITM	-	Jagannath Institute of Technology and Management
NET	-	National Eligibility Test
PEI	-	Physical Education Institution
SAP	-	Special Assistance Programme
SF	-	Self Financing
SLET	-	State Level Eligibility Test
TEI	-	Teacher Education Institution
UGC	-	University Grants Commission
UPE	-	University with Potential Excellence
UPSC	-	Union Public Service Commission

Academic Calendar for the Academic Year 2015-16

Semester	Internal Examination			End Semester Examination
	1	2	3	
Odd (1st July – 31st December 2015)	23-25 July 2015	15-17 September 2015	1-3 November 2015	5th December – 15th December 2015
Even (1st January – 30th June 2016)	21-23 January 2016	15-17 March 2016	28-30 April 2016	25th May – 4th June 2016

Sample Feedback Analysis

Student Feedback Report

Generated On : 03-NOV-2015 **At :** 04:12:02 PM

Course : BTech	**Discipline** : ME
Batch : 2014	**Semester** : 3rd Semester
Section : Sec-A	**Group** : All Groups
Faculty : RAMESH CHANDRA MOHANTY : P00058	**Subject** : Advanced Mechanics of Solids

Total no. of students who have given feedback : 43

Category Name	Criteria Name	Numbers in the columns below show the number of students who have provided a particular feedback					Criteria Score	Category Score
		Excellent (Point : 5)	Very Good (Point : 4)	Good (Point : 3)	Fair (Point : 2)	Poor (Point : 1)		
CLASS MANAGEMENT AND EVALUATION PROCESS	Teacher covers the syllabus completely in time.	37	5	1	0	0	4.84	4.86
	Teacher engages classes regularly and maintains the discipline.	39	4	0	0	0	4.91	
	Teacher offers assistance and counselling as and when needed by you.	37	5	1	0	0	4.84	
PLANNING AND ORGANIZING	Aims and Objectives made clear.	39	3	1	0	0	4.88	4.91
	Subject matter organized in a logical sequence.	37	5	1	0	0	4.84	
	Teacher comes to the class on time.	42	1	0	0	0	4.98	
	Teacher comes well prepared to the class.	41	2	0	0	0	4.95	
	Teaching is well planned	39	3	1	0	0	4.88	
STUDENTS PARTICIPATION	Did you feel encouraged to ask questions ?	36	5	2	0	0	4.79	4.83
	Did you feel motivated to raise doubts / queries ?	36	6	1	0	0	4.81	
	Does the teacher answer the questions raised by your expectation ?	38	4	1	0	0	4.86	
	Teacher encourages, compliments and praises originality and creativity displayed	36	6	1	0	0	4.81	
	Teacher is courteous and impartial in dealing ?	38	5	0	0	0	4.88	
TEACHING-LEARNING PROCESS	Notes and dictation are clear and effective.	40	2	1	0	0	4.91	4.92
	Teacher provides examples of the concept / principle.	41	2	0	0	0	4.95	
	Teacher speaks clearly and audibly.	41	2	0	0	0	4.95	
	Teacher writes / draws legibly.	39	3	0	1	0	4.86	

Aggregate Feedback Score : 4.88

Feedback Remarks by different Students

- REALLY INTERESTING TO LISTEN TO HIS LECTTURE. MOTIVATING AND INSPIRING FOR US
- he is a very good teacher
- He is dedicated tom towards his subject.
- he is very good teacher .teaching style is good
- gooood
- one of the most experienced teacher I have ever seen ... a very good teacher....
- very excellent teaching....

- HE IS VERY GOOD.HE OBJECTIVES ARE CLEAR. HE IS VERY GOOD TEACHER

Alumni Feedback

University had organised Alumni meet on 14th January at Paralakhemundi campus to take their views for Institute Development. Students from all disciplines were present in this meeting in presence of senior management team and faculty and shared their views as below.

- Alumni appreciated the CBCS curriculum introduced in all programmes of University.
- They expressed their happiness for the University for getting NAAC "A" Grade.
- Since the University has already established industry sponsored workshop and activities in Automobile, Tool Room, modern Biotechnology labs, Renewable Energy and Knowledge Societies they suggested to develop these as Centers of Excellence to produce product and provide services in a market linked manner.
- They were happy to see our Incubation centre which has got license to manufacture E-Rickshaw and sale. They insisted to set up more such incubation centres in the campus which will help students to innovate, design and develop product and access market.
- Alumni requested to create infrastructure (Office, conference room and few guest rooms) for visitors to have periodic meeting and interactive activities. They promised to bring industry colleagues to interact with students.
- They suggested to open regional chapters, organise regular meetings and undertake continuous education and training for them as post-placement support.

Centurion University of Technology and Management

Report on Academic Audit (2015-16)

A. Department of Civil Engineering

<u>**Observations**</u>

1. Status of effectiveness of CBCS for 2015-16 Batch of B. Tech. students.
   a. Information about CBCS is OK.
      i. Choice independence is maintained
      ii. Students not clear about why the subject was chosen
      iii. Students are frank but not clear in reason of choosing the subject.
2. Theory Classes
   a. Students are happy with the faculty and the attention and the support given by the faculty to the students
   b. Faculty are helpful and try their best to solve the problems of the students
   c. Students don't have any specific comments about the department or faculty.
3. Practical Classes
   a. Lab manual were verified and found to be in place
   b. Same day evaluation process is followed by faculty
   c. Students are happy with the faculty for the support given in the lab.
   d. Upon verification of the internship report it was found that the students have submitted the undertaking and have left for the internship
   e. In few cases counter signing not done.
4. Interaction with The HOD
   a. The course plan, assignments and evaluation process was verified and observed that the department is following the rules laid down by the University.
   b. Only one skill course "Site Supervisor" is conducted. HOD, Civil Engineering suggested that it should be renamed as "Site Visit for Learning".
   c. During our interaction with the students, we observed that although the students are happy with the knowledge level of the faculty, but not very much satisfied with the style of teaching and explanation.
   d. For the 2nd year students the mentor: mentee ratio is 1:20 but for higher semesters it is 1:30.
5. NAAC Files were randomly checked and found that it is up to date.
6. The 6th semester students have reported that Projector is regularly used in class rooms for teaching purpose. TABs given to the students are functioning properly.

B. Department of Electronics and Communication Engineering

Observations

1. Status of effectiveness of CBCS for 2015-16 Batch of B. Tech. students.
   a. Information about CBCS is OK,
      i. Choice independence is maintained
      ii. Students not clear about why the subject was chosen
      iii. Students are frank but not clear in reason of choosing the subject.
2. Theory Classes
   a. Students are happy with the faculty and the attention and the support given by the faculty to the students
   b. Faculty are helpful and try their best to solve the problems of the students they even take the help of animations where ever necessary.
   c. Students don't have any specific comments about the department or faculty.
3. Practical Classes
   a. Lab manual were verified and found to be in place
   b. Same day evaluation process is followed by faculty
   c. Students are happy with the faculty for the support given in the lab.
   d. The good point is that live projects are displayed and implemented in the labs in working condition.
4. Interaction with The HOD:
   a. The course plan, assignments and evaluation process was verified and it was observed that the department follows the rules of the University.
   b. The students demanded special classes on "JAVA" and "C" in view of Campus selections
   c. Students also demanded 3 hours of theory class along with the 3 hours of LAB class for JAVA to be provided in the Curriculum.
5. NAAC Files were randomly checked and found that the files are maintained well.
6. E-content and e-classrooms
   a. All students on interaction made it clear that e-Classes are properly utilized.
   b. Tabs are regularly used in class but

C. Department of Agriculture Engineering

<u>**Observations**</u>

1. Status of effectiveness of CBCS for 2015-16 Batch of B. Tech. (Ag) students.
   Theory Classes:
   a. Students are happy with the faculty and the attention and the support given by the faculty to the students
   b. Faculty are helpful and try their best to solve the problems of the students
   c. Students don't have any specific comments about the department or faculty.
   Practical Classes
   a. Lab manual were verified and found to be in place
   b. Same day evaluation process is not followed by faculty
   c. Students are happy with the faculty for the support given in the lab.
   d. Internship of students is conducted at Soil and Water Conservation.
   e. All the documents were found in place and duly counter signed (Scan copy available).
2. Interaction with The HOD
   a. The course plan, assignments and evaluation process was verified.
   b. It was observed that the department of Agricultural Engineering is following the rules laid by the University in the above three mentioned.
   c. Proctor system is going fine and 30 : 1 ration is maintained
3. NAAC Files were randomly checked and found that it is up to date.
4. e-classes and e-contents
   a. e-classes are regularly used

D. Department of Computer Science &Engineering

Observations

1. Status of effectiveness of CBCS for 2015-16 Batch of B.Tech students.
   Information about CBCS
   i. Choice independence is maintained
   ii. Students were not sure about the reasons for choosing a subject.
2. Theory Classes
   a) Students are happy with the faculty and the attention and the support given by the faculty to the students
   b) Faculty are helpful and try their best to solve the problems of the students
   c) Students don't have any specific comments about the department or faculty.
   d) The 6th semester students have requested for keeping the laboratory open in the evening hours so that they can practice more.
   e) The 4th semester students have requested for special classes on aptitude and reasoning to start along with the regular classes of 5th semester.
3. Practical Classes
   a) Lab manual were verified and found to be in place
   b) Same day evaluation process is followed by faculty in the laboratory.
   c) Students are happy with the faculty for the support given in the lab.
   d) 02 students have gone for internship. The weekly report is with the Head of the Department.
4. Interaction with The HOD
   a) The course plan, assignments and evaluation process was verified and the department is following the rules set up by the University.
   b) Mentoring system is going fine and 20 : 1 ration is maintained
5. NAAC Files were randomly checked and found that it is up to date in soft copy
6. e-classes and e-contents
   a) e-classes are regularly used

E. Department of Mechanical Engineering

1. Status of effectiveness of CBCS for 2015-16 Batch of B.Tech students.
   a) Students were given free option to choose the subjects.
   b) Information about CBCS
      i) Faculty provided information to the students about the subjects.

2. Theory Class
   c) Effective delivery of course content was observed in interaction with the students
   b) Students were happy and had no special complain or comments regarding any subject or any faculty
   c) Feedback an evaluations were as per the university norms

3. Practical Class
   a. Lab Manuals were found upon verification.
   b. Experiments were evaluated at the same time.

4. Interaction with HoD
   a. E mail was used more for sending assignment rather than ERP.
   b. Hard copy and hand written assignments were collected from the students.
   c. Upon discussion, it was observed that 2 internals were written and the other internal was either online or presentation mode and it was teacher specific.
   d. Mentor system is being carried out as per University norms, but no separate register was maintained.
   e. Number of students opted for internship is very low.

5. NAAC Files were randomly checked and found to be up to date.

6. e-classes and e-contents
   a. e-classes are regularly used for LSD and core paper subjects

F. Department of EEE

1. Status of effectiveness of CBCS for 2015-16 Batch of B. Tech. students.
    a) Students were given free option to choose the subjects.
    b) Information about CBCS
        ii)   Faculty interacted with students prior to the implementation of CBCS
        iii) Few students still did not have sound knowledge of choosing the subject
2. Theory Class
    c) Students did not have any special issues in theory classes
    d) Separate tutorial classes were kept in the time table to take care of students
    e) Evaluation of the course was as per the norms of University
3. Practical Class
    a. Upon visit to the two labs of the department, it was found that all the 12 experiments were conducted but best 10 was taken for evaluation.
    b. No maintenance/utility register was found in case of Lab.
    c. Free elective lab was inspected and found that records were proper and up to date.
4. Interaction with HoD
    a. Feedback from the students was by on line and with Central system.
    b. Hard copy and hand written assignments were collected from the students.
    c. Upon discussion, it was observed that 2 internals were written and the other internal was either online or presentation mode.
    d. In Case of Proctor system, they were followed weekly calling the students for counseling and in last 3 months, they had conducted 1 parent meeting.
    e. In time Table, tutorials classes were kept for doubt clearing.
5. NAAC files were up to date.
6. e-classes and e-contents
    a. E-classes were taken by both core papers and LSD areas.

G. Department of Basic Science

1. Status of effectiveness of CBCS for 2015-16 Batch of B.Tech students.
    o Students from Civil Engineering branches had taken courses.
    o Information about CBCS: Students did not have any problem in choosing the subject
2. Theory Class
    a) Students did not have any special issues in theory classes
    b) Separate tutorial/Extra classes were very difficult to get in CBCS system.
    c) Evaluation of the course was as per University regulation.
3. Practical Class
    a) Regular practical classes were held by the Department
    b) Lab records were not maintained properly
4. Interaction with HoD
    a. Most of the theory classes were in chalk-duster mode,
    b. PPTs or slides were used in less in class room context.
    c. Course materials were sent to the students by group mail id and not by ERP.
    d. Hard copy and hand written assignments were accepted from the students
5. NAAC files were up to date.
6. e-classes and e-contents
    a. E- Contents were used in all the subjects of basic Science.

Best Practices of the Institution

Best Practice A

1. **Title of the Practice**
   Use of ICT in Teaching Pedagogy & Skill development as a part of curriculum

2. **Objectives of the Practice**
   Teaching Learning process through E-material and Tab:
   - To achieve standardization in content delivery
   - To present a tablet driven curriculum designed in an easy to learn format with solved question banks, lecture notes, presentations, and interactive assessments relevant to new age learning.
   - To address the needs, increase access to higher educational opportunities through e-learning, and support the teachers to face the challenges of learning delivery.
   - To re-define the role of teacher as central to create the learning Environment to facilitate higher order thinking and e-learning.
   - To introduce tablet learning as a new pedagogy where there is a shift from Teaching to engagement.
   - To provide a complete m-learning solution for learning on the go.

3. **The Context**

   - *Context-aligned Curriculum*
     There was the need to develop context specific digital material in order to be meaningful and relevant. Tablet-based learning developed a scalable, digital media based, education model, one which is led by context and puts the learner at the centre. For example, a fitter in an Industrial Training Institute needs to learn to set a turning job on a CNC machine. Generic CNC videos are widely available. But he will grasp the process much better if technical description, illustration and examples are suited closely to his cultural background and educational level, not merely his language.

   - *Learner-Centered Learning*
     Individual as well as group learning styles differ. The endeavour was to optimize the delivery based on the learner's lived context. The learners will get an opportunity to follow a non-linear path at a pace that meets their individual needs at that time, i.e. just-in-time learning.

4. **The Practice**
   - Learner-centric approach:
     o A personalized mobile learning tool
     o Students are encouraged to learn beyond teaching and not to be confined within syllabus topics.
     o An interactive and engaging experience.
     o Students can take up N number of assessment tests and improve performance
     o Prepares the students for tomorrow
   - Learning on the Move:
     o There is the flexibility in the learning spaces.
     o Students learn anytime, anywhere they wish.
   - Communicate Effectively:

- o Students have a range of skills to express themselves not only through paper and pencil, but also audio, video, animation, design software as well as a host of new environments (e-mail, websites, blogs, e-learning, m-Learning etc.)
- Engage in Problem Solving:
  - o Students have an understanding of how to apply what they know and can do to new situations.
- Analyze and Interpret Data:
  - o Students have the ability to crunch, compare, and choose among the glut of data now available web-based and other electronic formats.
- Manage and Prioritize Tasks:
  - o Students are able to manage the multi-tasking, selection, and prioritizing across technology applications that allow them to move fluidly among teams, assignments and communities of practice
- Ensure Security and Safety:
  - o Students know and use strategies to acknowledge, identify, and negotiate security risks.

5. **Evidence of Success**
- Nurture learning: Students are excited about technology based education and show keen interest in this learning process.
- Exposure to Multiple Tests:
  - o Online examination (ERP, other internet sites) Students are assessed through tests conducted online, which in turn leads towards best practice for appearing at future tests to be conducted by various recruitments.
  - o Group presentations via blended learning (using internet and e-content material)
  - o Assessment tests
- Analyze and Interpret Data:
  - o Teachers are able to verify performance as well as weakness of student in understanding things such as subject topics and time management during test.
  - o Successful Implementation: Successful implementation of Tablet-based learning at the University as an environment in which the learner's interaction with learning materials, peers, and/or instructors at home, in class, or in a team setting to support learning activities.

6. **Problems Encountered and Resources Required**
- Problems:
  - o Resistance to adopt technology
  - o Faculty members need to be trained to use the tools and techniques, but they also have to be trained on the pedagogical potentials of these tools, by taking themselves online and blended courses.
  - o Slow Processing of Tablets
  - o Duration of battery-backup to be improved

Best Practice B

1. **Title of the Practice**
   CUTM Qualification Frame Work

2. **Objectives of the Practice**
   - The philosophy to evolve the qualification frame work is to enable a seamless pathway to all Indians to nurture their inherent capabilities to the best of their abilities. It is an integration of skill certification courses in to the Engineering curriculum aligning to National Skill Qualification Framework (NSQF).The School of Vocational Education and Training (SoVET) is an integral part of the University progressed to build a Career Path of the students from school drop out to Highest Degree.
     - The CUTM Qualification frame work is to enable all categories of students' access to ongoing skill development for attainment of qualifications.
     - A platform to improve their career expectations with enriched work place productivity.
     - They will be engaged in piloted projects of SoVET to avail Australian and European vocational qualifications.
     - New proposed choice based cafeteria-approach curriculum fitting into NSQF.
   - The university offers the new curriculum from 2015 onwards. The salient features of course curriculum are:
     - 25% CORE SUBJECTS - Compulsory
     - 15% Theory Subjects
     - 10% Practice Courses
     - 75% OPEN - to the choice of a student – both Theory and Practice courses (30% Basic courses + 45% Professional Choices).
   - Basic Courses (30%)
     - Basic Engineering 10%
     - Basic Sciences 10% Theory & Practice
     - Humanities & Management 10%
   - Professional Choices (45%) from a pool of 300+ theory subjects and 100+ Practice subjects (Inter Disciplinary and Trans Disciplinary).
     - To become a Practical Engineer - a student can opt as many as practice courses to a maximum of 85%.
     - To become a Design Engineer – a student can pursue as many theory subjects as he/she wishes upto 90%.
     - Most of the practice courses are CERTIFIED.

3. **The Context**

   - High dropout rates across the HRD system result in 16.6 million dropouts every year with 12.8 million youth need initial vocational training every year; existing Private & Public Institutional Capacity is 3.1 million.
   - India has under 10,000 ITI's and VET schools, China has 500,000 senior secondary vocational education and training schools.
   - Lack of integration of formal education, vocational education & job market resulting unemployment generation on one hand and ironically a skill shortage in the industry on the other.

- Problem Description

Cumulative Unemployed 200 mn (1996-97 estimate)
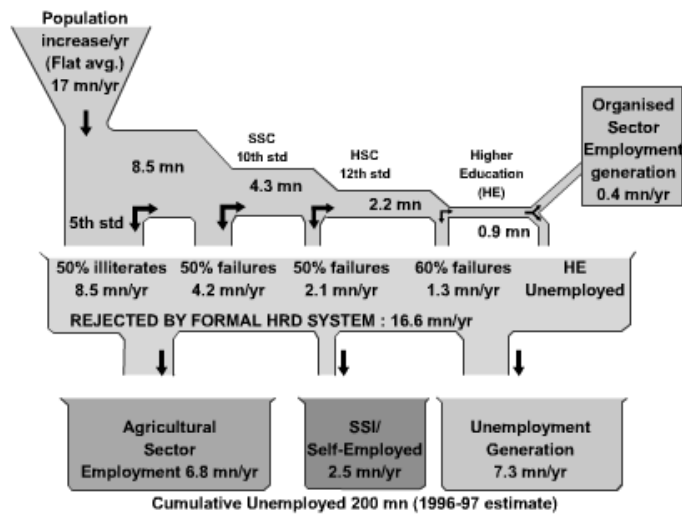
- Contextual features:
  Qualifications are divided into levels and students are provided multiple (direct or lateral) entry and exit points at every level provided to a certain level. It feeds into the under graduate engineering program of the university.
  - o It provides a student a calibrated and guided entry into formal education system of the University irrespective of Educational Background.
  - o It is a competency based model and each of the qualifications is based on the vocational competencies required at various levels
  - o The Framework weights practical skills initially. Theoretical inputs increase as the levels increase.

4. **The Practice (National Skill Qualification Framework)**

Level	Qualification	Certification
Level 1 Certification	Attended School and qualify in pre assessment test	NCVT approved one year program
Level 2 Certification	Level 1 certification of University & 10th pass from a recognized board Or 10th pass certification from any recognized board	NCVT approved two year programme
Levels 3 & 4 Certification	Level-2 certification of university Or I.T.I pass from NCVT approved institution. Or 12th pass certification from any board and has to qualify in pre assessment test.	Diploma second and third year equivalence
Level 5,6,7 Certification	Level 4 certification of University Or Diploma from any recognized council	B.Tech 2nd year to final year equivalence
Level 8 & 9	Level 7 or B.Tech	M.Tech level
Level 10	Level 9 or M.Tech	Doctorate

Centurion Vocational Education Qualification Frame aligned to National School Qualification Framework

Sl.No	Level	Entry Qualification	Exit Qualification Equivalence	Duration of Training	Credits
1	Level 1: Foundation Program	L0 to be defined	IX	1 Year	45
2	Level 2: Foundation Program	L1	X	1 Year	45

Sl.No	Level	Entry Qualification	Exit Qualification Equivalence	Duration of Training	Credits
3	Level 3: Certificate Program	L2	XI or 1 yr ITI	1 Year	45
4	Level 4: Advanced Certificate Course	L3	XII or 2 yr ITI	1 Year	45
5	Level 5: Diploma	L4	Diploma	1 Year	45
6	Level 6: Advanced Diploma	L5	Advanced Diploma	1 Year	45
7	Level 7: Bachelors Degree (BVoc)	L6	Bachelors Degree	1 Year	45
8	Level 8: Bachelors in Technology (B Tech)	L7	B Tech	1 Year	45
9	Level 9: Masters in Technology (M Tech)	L8	M Tech	1 Year	45
10	Level 10: Doctorate	L9	Doctorate	1 Year	45

5. **Evidence of Success**
   - The skilled development course with hands-on experience is being integrated with regular B.Tech. curriculum by offering these courses at 6th and 8th Semester level. Some of the courses offered are CNC programing and operation, Automotive Electrical system, Automobile operation and maintenance, PLCs, Embedded system, project based C programming, Web Designing, Finance Management, reverse engineering, refrigeration and air conditioning - installation & maintenance, STAADPRO and GIS, Android. The interested students can go for certification from the authorized assesses.

6. **Problems encountered and resources required**
   - The choice based curriculum has to provide 300+ theory and 400+ practice oriented courses.
   - More labs and more equipment are required
   - Faculty are to be trained to guide the students properly

SWOC Analysis

Strengths

1) State of the art curriculum and pedagogy
   a) Integrating Skills into higher Education Curriculum
   b) Skill development and employment creation for School dropouts, primarily ST, SC, Women and Differently abled
   c) Implementation of Choice Based Credit System
   d) Domain specific curriculum
   e) Experiential learning through unique curriculum of theory-practice-project-internship
   f) Focus on New Age Teaching methods while nurturing and developing its faculty
   g) Building a large number of electives, and providing multiple career paths to its students.
   h) Integration of life skill into regular curriculum (culture, sports, yoga, meditation and social outreach are given due credit)
   i) Continuous innovation in teaching-learning practices:
      i) The Centurion Tablet, with pre-loaded courseware, quizzes, useful links to internet, questions, etc.
      ii) Faculty as Foster Parents
      iii) Accelerated Learning through Immersion Programs
      iv) Outbound 24by7 learning through holistic schedules.
      v) Yoga and Meditation taught to students and faculty alike.
      vi) Project based Teaching methods in multiple disciplines (engineering, management, and English)
2) State-of-the-art physical infrastructure
   a) Industry sponsored labs and workshops with manufacturing and testing capability
   b) Enabling learning environment outside the class room through outside exhibits, WIFI
   c) Class Rooms, Seminar Halls, Hostels, Faculty and Staff quarters, Sports Facility, Canteens for students, faculty and staff, Bank, ATMs and Post Office, Multi Gymnasium, Medical facility, Auditorium, Transport facilities for students and faculty
   d) Well stocked library of books (12942 title and 53745 volumes), journals (84 National journals, 29 International journals, 56 magazines) and e journals (IEEE ASPP, ELSVIER, J-GATE, WILLY BLACKWELL, ASTM, ASME, DL, NLIST Programme)
3) Linkages with industry, government and civil society organizations
4) Senior faculty with good experience from industry and academia
5) Continuous faculty development program within centurion teacher certification system
6) Capability to develop students with low prior academic achievement and coming from socially disadvantaged section.
7) Ability to integrate university activities with the community and local context
8) Existing social entrepreneurial outreaches which provide a living socio-economic and cultural lab to faculty and students

Weaknesses

1) The university operates in a physical resource constrained environment (lacks adequate buildings for research labs in renewable energy, knowledge society, hostels and lifts in the hostel)
2) Lacks advance equipment, instruments and software in manufacturing, testing, design, welding, renewable energy, language lab, VR and AR lab and other labs.
3) Lacks adequate financial resource because of its student base from the bottom of the pyramid segment
4) Unable to attract many high quality faculty because of limited financial resources and locational disadvantages

Opportunities

1) The region where the university is located do not have many good quality higher education institutions
2) Large number of school drop outs and unskilled workforce in the state
3) Large demand for skilled manpower within and outside the state
4) Odisha has rich natural resources and high potential for forward and backward integration of extraction based industries. Unfortunately, such industrialization is difficult because of local people not seeing opportunity in its development, thus becoming hostile. Hence, University like Centurion can play the role of right type of human resource development.
5) Low higher education enrolment ratio in the state
6) Students coming out of the existing higher education institutions in the region have very low employability and entrepreneurial orientation
7) Most of the state, market and civil society organizations in the region are undermanaged and mismanaged
8) There is little context specific knowledge about the region and the needs of the people and organizations. Ensuring food security, enhancing nutritional status, eliminating distress migration, reducing malaria, morbidity, infant and maternal mortality, improving female literacy and women‟s access to land and microfinance, ensuring sustainable livelihood security, strengthening governance and management of local institutions and building capacity of human resource, arresting natural resource degradation, introducing appropriate technology are the challenges the region urgently faces.
9) Development interventions in the region require qualified manpower with right attitude. There is an urgent need and unprecedented opportunity to develop and promote action programs to transform the lives of underprivileged in the region through development of their livelihood capability (knowledge, skill and attitude) and providing access to sustainable income generating opportunities (technology-based market linked programs).
10) The area has high level of educational and entrepreneurial need considering the availability of rich natural resources such as land, water, forest, minerals and biodiversity; weak supply chain for agriculture, manufacturing and service sector; low level of socioeconomic development. There is need for multi-disciplinary studies in different areas.

Challenges

1) Environmental Challenges
   a) Social friction in the form of left-wing extremism
   b) Remoteness of the Paralakhemundi campus (industrial facility, lack of good quality secondary institutions, multispecialty hospitals, connectivity, etc.)
2) Lack of Students' Aspiration because of weak foundation and poor world view
   a) Most of the students do not have the habit of reading newspapers, lack the awareness, self-confidence and aspiration that an urban educated and upper-middle class student is blessed with. The challenge is transforming our students into self-confident and motivated citizens with humane values.
3) Placement
   a) In a market-led society, promoting individualism, following a principled view does impact our students' access to certain companies. Educating students to follow an ethical practice while sacrificing the immediate gain for the long-term benefit is a challenge that the University undertakes.
   b) Since, Centurion University, by design, admits students from under-privileged backgrounds, often with weak English language competency and poor career (below 60% marks in 10th or 12th classes), providing them gainful employment is a challenge. We accept the challenge with pride and prepare them for their rightful place in society through context specific extra training.