

Cochin University of Science and Technology



Kochi, Kerala-682022

Annual Quality Assurance Report (AQAR) 2012-13

of

**Internal Quality Assurance Cell
(IQAC)**

Submitted to

**The National Assessment and
Accreditation Council**

Bangalore

1. Kindly provide the details of the institution

Name of Institution:	Cochin University of Science and Technology
Year of Establishment of the Institution:	1971
Address Line 1:	Cochin University P.O
Address Line 2:	Kochi
City/Town:	Ernakulam
State:	Kerala
Postal Code:	682022
Email Address:	registrar@cusat.ac.in

2. NAAC Accreditation/ Reaccreditation Details

Year of Accreditation/ Reaccreditation:	2001
Current Grade:	Three Star
CGPA:	-

3. Institutional Status: State University

4. Contact Person Details

Name of Head of Institution:	Dr. Ramachandran Thekkedath
Contact Phone:	04842577619
Email:	rector@cusat.ac.in
Website URL:	www.cusat.ac.in
Name of IQAC Coordinator:	Dr. A. N. Balchand
Email:	balchand57@gmail.com

SECTION I

This section is related to institutional goals, vision and mission, academic programmes and activities, strategies and action plans for institution building.

5. Number of academic programmes existing (Enter a number; 0 for nil)

Under graduate (BA/B.Sc./B.Com etc.)	:	2
Post Graduate (MA/M.Sc./M.Com etc.)	:	25
Research Programmes (M.Phil/P.hD)	:	9/25
Certificate Programmes	:	4
Professional Programmes (B.Tech/M.Tech/ B.Ed/M.Ed/Medicine/Pharmacy/Paramedical /Nursing etc)	:	35
Other value added programmes		

Any other programme offered (Specify) :Diploma- 9; PG Diploma-3

6. Details on Programme Development (Enter a number; 0 for nil)

New programmes added during the year	:	4
New programmes designed	:	9
Programmes under revision	:	18
Interdepartmental collaborative programmes	:	11
Inter institutional collaborative programmes	:	12
Number of review committee recommendations implemented (Total)	:	4
Number of NAAC peer team recommendations implemented	:	0
Number of UGC/any other expert committee recommendations implemented:		0
Number of review committee recommendation under implementation:		0
Number of NAAC peer team recommendations under implementation:		0
Number of UGC/ any other expert committee recommendations under implementation:		0

7. Faculty Details (Enter a number; 0 for nil)

Total faculty strength required as per norms for all programmes	:	543
Total faculty on rolls	:	249
Faculty added during the year	:	0
Faculty positions vacant	:	292
Faculty left during the year	:	0
Total number of visiting faculty	:	4

Total number of guest faculty : 243

8. Qualification of Faculty

PhD and Above : 193
 MPhil : 1
 Masters : 56
 Any other (Specify) : 0

9. Faculty qualification improvement

PhD awarded to existing faculty : 6
 M.Phil awarded to existing faculty : 0
 Any other degree awarded to existing faculty : 1

10. Administrative Staff Details (Enter a number; 0 for nil)

Administrative staff (total sanctioned) : 750
 Administrative staff (Actual strength) : 634
 Added during the year of reporting : 7
 Left during the year : 2
 Number of posts vacant : 116

11. Technical Support Staff Details (Enter a number; 0 for nil)

Technical Support Staff (Total sanctioned strength) : 205
 Technical Support Staff (Actual strength) : 156
 Added during the year : 1
 Left during the year : 2
 Number of posts vacant : 49

SECTION II

This section surveys the quality sustenance and development activities during the year taken up by IQAC.

It reflects quality management structure, strategies, and processes which would enhance academic quality of the institution as perceived by faculty, students, alumni, and other stakeholders (social perception of the institution) inline with the vision, mission and goals of the institution.

12. Establishment details

Year of establishment of IQAC : 10/04/2007

13. Composition of IQAC (Enter a number; 0 for nil)

Number of IQAC members	:	17
Number of Alumni in IQAC	:	0
Number of Students in IQAC	:	0
Number of Faculty in IQAC	:	9
Number of Administrative Staff in IQAC (VC, PVC, Registrar, Finance Officer)	:	4
Number of Technical Staff in IQAC	:	0
Number of Management Representatives	:	2
Number of External experts in IQAC	:	1
Number of any other stakeholder and community representatives	:	1

14. IQAC Meetings

Number of IQAC meetings held during the year	:	2
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15. Whether Calendar of activities of IQAC formulated for the academic year : Yes

16. IQAC Plans for Development (Enter a number; 0 for nil)

Number of academic programmes proposed	:	4
Number of value added programmes proposed	:	2
Number of skill oriented programmes proposed	:	3
Number of faculty competency and development programmes proposed	:	2
Number of other staff development programmes proposed	:	nil
Number of student mentoring programmes proposed	:	2
Number of cocurricular activities proposed	:	4
Number of inter departmental cooperative schemes proposed	:	nil
Number of community extension programmes proposed	:	4

17. IQAC Plans for development & Implementation (Enter a number; 0 for nil)

Number of academic programmes implemented	:	4
Number of value added programmes implemented	:	2
Number of skill oriented programmes implemented	:	3
Number of faculty competency and development programmes implemented	:	2
Number of other staff development programmes implemented	:	0

Number of student mentoring programmes implemented : 2

Number of cocurricular activities implemented : 4

Number of inter departmental cooperative programs implemented : nil

Number of community extension programmes implemented : 4

18. IQAC Seminars and Conferences (Enter a number; 0 for nil)

Number of seminars/ conferences/ workshops organized by IQAC within the institution:0

Number of participants from the institution : 0

Number of participants from outside : 0

Number of external experts invited : 0

Number of external conferences/seminars/ workshops on institutional quality attended :0

Number of events conducted with IQACs of other institutions as collaborative programs:
0

19. Did IQAC receive any funding from UGC during the year ? No

20. If the response to Qn. 18 is Yes, please provide the amount received from UGC

(Input 0 if NA/NIL) Any other source including internal financial support from the management (Specify amount)

Amount Received from UGC : 0

Amount Received from any other source
including the college management : Rs. 1,00,000

21. Any significant contribution made by IQAC on quality enhancement during current year (Please provide details in bullet format)

1. Action plan, prioritized, to address internal weakness and steps contemplated to mitigate such situations to promote academic quality.
2. University – research Institution liaison promoted to identify scholarly roles of enrolled scholars attached to this University.
3. Comprehensive plans drawn up to channelize academic and research activities to seek re-accreditation.
4. Review of current status on academics / research / development held within each criteria.
5. Department / Schools addressed on individual issues, infrastructural needs and options worked out.
6. IQAC members actively involved in drawing up XII plan proposals to UGC.
7. Review of curriculum and outreach practiced within University.

SECTION III

In this section the events, activities, and outputs in the field of research and academic areas are being surveyed.

22. Academic Programmes

Number of new academic programmes developed or designed by faculty	: 10
Number of faculty members involved in curriculum restructuring /revision/syllabus development	: 124
Number of programs in which evaluation process reformation taken up and implemented	: 7
Number of active teaching days during the current academic year	: 159
Average percentage of attendance of students	: 91%
Percentage of classes engaged by guest faculty and temporary teachers	: 38%
Number of self financed programmes offered	: 9
Number of aided programmes offered	: Aided-88/Cost Sharing-11
Number of programmes discontinued during the year	: 0

23. Whether any systematic student feedback mechanism is in place ? Yes

24. Feedback Details (If answer to Question 20 is Yes)

Percentage of courses where student feedback is taken : 88%

25. Is feedback for improvement provided to the faculty? Yes

26. Faculty Research, Projects, and Publication details for the year

Number of major research projects undertaken during the year	: 34
Number of minor research projects undertaken during the year	: --
Number of major ongoing projects	: 116
Number of minor ongoing projects	: --
Number of major projects completed	: 34
Number of minor projects completed	: --
Number of major project proposals submitted for external funding	: 28
Number of minor project proposals submitted for external funding	: 8
Number of research publications in peer reviewed journals:	442
Number of research publications in international peer reviewed journals	: 346
Number of research publications in national peer reviewed journals	: 87

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Number of research papers accepted for publication in international peer reviewed journals	: 92
Number of research papers accepted for publication in national peer reviewed journals	: 40
Average of impact factor of publications reported	: 1.90
Number of books published	: 27
Number of edited books published	: 9
Number of books (single authored) published	: 8
Number of books (coauthored) published	: 11
Numbers of conferences attended by faculty	: 270
Number of international conferences attended	: 96
Number of national conferences attended	: 174
Number of papers presented in conferences	: 350
Number of papers presented in international conferences	: 129
Number of papers presented in national conferences	: 219
Number of conferences organized by the institution	: 37
Number of faculty acted as experts resource persons	: 120
Number of faculty acted as experts resource persons international	: 68
Number of faculty acted as experts resource persons national	: 89
Number of collaborations with international institutions	: 25
Number of collaborations with national institutions	: 46
Number of linkages created during the year	:
Total budget for research for current year as a percentage of total institution budget	: 13.32
Amount of external research funding received in the year	: Rs. 13,03,15,967/-
Number of patents received in the year	: 0
Number of patents applied for in the year	: 4
Number of research awards/ recognitions received by faculty and research fellows of the institute in the year	: 32
Number of PhDs awarded during the year	: 85
Percentage of faculty members invited as external experts/resource persons/reviewers/referees or any other significant research activities	: 37%

SECTION IV

This section deals with Student Mentoring and Support System existing in the institution. This includes student activities, mentoring, and opportunities for development and inclusive practices.

27. Student Details and Support Mechanisms

The total intake of students for various courses (Sanctioned)	:	2228
Actual enrollment during the year	:	2152
Student dropout percentage during the year	:	4%
Success percentage in the final examination across the courses	:	83.59%
Number of academic distinctions in the final examination and percentage	:	448, 36.23%
Number of students who got admitted to institutions of national importance:		100
Number of students admitted to institutions abroad	:	36
Number of students qualified in UGC NET/ SET	:	32
Number of students qualified GATE/ CAT/ other examination (Specify)	:	124

28. Does student support mechanism exist for coaching for competitive examinations? Yes

29. Student participation, if response is yes to Qn. 28

Number of students participated : 57

30. Does student counseling and guidance service exist ? Yes

31. Student participation, if answer to Qn. 29 is yes

Number of students participated : 375

32. Career Guidance

Number of career guidance programmes organized : 89

Percentage of students participated in career guidance programmes : 40%

33. Is there provision for campus placement? Yes

34. If yes to Qn. 32

Number of students participated in campus selection programmes : 718

Number of students selected for placement during the year : 325

35. Does gender sensitization program exist ? Yes

36. If Answer is Yes to Qn 34

Number of programmes organized : 2

37. Student activities

Number of students participated in external cultural events	: 126
Number of prizes won by students in external cultural events	: 29
Number of cultural events conducted by the institute for the students	: 4
Number of students participated in international sports and games events:	3
Number of students participated in national level sports and games events:	12
Number of students participated in state level sports and games events	: 6
Number of students participated in university level sports and games events:	99
Number of prizes won by students in international sports and games events:	1
Number of prizes won by students in national level sports and games events:	2
Number of prizes won by students in state level sports and games events:	0
Number of prizes won by students in university level sports and games events:	13
Number of sports and games events conducted by the institute for the students	: 2

38. Composition of students

Percentage of Scheduled Caste	:	8.33%
Percentage of Scheduled Tribe	:	0.68%
Percentage of other backward communities	:	25.16%
Percentage of women students	:	27.30%
Percentage of physically challenged	:	0.48%
Percentage of rural students	:	68%
Percentage of urban students	:	32%

39. Scholarships and Financial Support

Number of students availing financial support from the institution	: 107
Amount disbursed as financial support from the institution	:Rs. 50,62,442/-
Number of students awarded scholarship from the institution	: 115
Number of students received notable national/international achievements/recognition	: 10

40. Student initiatives

Number of community upliftment programmes initiated by students	: 3
Number of literary programmes initiated by students	: 2
Number of social action initiatives based on science / environment initiated by students	: 5
Number of student research initiatives	:14

SECTION V

This section surveys the Governance and Innovation at the institution related to quality management. The educational management strategies adopted and in practice for achieving the objectives are focused.

41. Whether perspective plan for overall developmental activities is created ?

Yes

42. If the answer for Qn. 40 is Yes, is the plan implemented and monitored ?

Yes

43. Whether benchmarking is created for institutional quality management efforts ? No

44. If the answer to Question 42 is Yes, please list the benchmarking in various areas of development in bullet format

45. Is a Management Information System (MIS) in place ? Yes

46. If answer to question 44 is Yes, please provide details of MIS applied to

1. Administrative procedures including finance
2. Student admission
3. Student records

4. Evaluation and examination procedures
5. Research administration
6. Others

(enter the respective details corresponding to the serial numbers)

1. All financial Procedures including Pay Roll are computerized and continued from previous year
2. Student Admissions- Online Application, all processes thereafter, such as issue of hall ticket – downloading and printing, result declaration and rank inquiry, registration of options and allotment are online - as in the previous year
4. Some of the examination processes are online
The Computerization in examination wing has progressed facilitating speedy publication of results and issue of mark lists and certificates
6. the University is implementing a scheme towards paperless office which will involve MIS in a large manner

47. Existence of learning resource management

- | | |
|--|-------|
| edatabase in library | : Yes |
| ICT and smart class room | : Yes |
| elearning resources (e Books, eJournals) | : Yes |
| Production of teaching modules | : Yes |
| Interactive learning facilities | : Yes |

Well-wishers

: Rs. 6,60,100/-

48. Internal Resource mobilization : Kindly provide the amount contributed

- | | |
|--------------------------|--------------------|
| Research | : Rs. 33,78,173 /- |
| Consultancy and training | : Rs. 23,32,102/- |
| Student contribution | : Rs. 2,34,450 /- |
| Alumni contribution | : Rs 1,25,334/- |

49. Infrastructure and welfare spending: Please specify the amount

Amount spent for infrastructure development :Rs. 13,08,51,363/-
Amount spent for student welfare : Rs. 60,10,409/-
Amount spent for staff welfare : Rs. 20,86,1,430/-

50. Is delegation of authority practiced? Yes

51. Does grievance redressal cell exist?

	Yes	No
Faculty		√
Students		√
Staff		√

Remark: As practiced in the previous year, grievances are redressed at a decentralized level; the department council takes up issues if any and resolves them at their level. Common issues are tackled at the Registrars level. Policy issues if any, are dealt by the Syndicate.

52. Grievances received from faculty and resolved (Enter a number; 0 for nil)

Number of grievances received: **0**

Number of grievances resolved: **0**

53. Number of grievances received from students and resolved (Enter a number; 0 for nil)

Number of grievances received: **0**

Number of grievances resolved: **0**

54. Number of grievances received from other staff members and resolved (Enter a number; 0 for nil)

Number of grievances received: **0**

Number of grievances resolved: **0**

55. Has the institution conducted any SWOT analysis during the year : Yes

56. The SWOT analysis was done by internal or by external agency : Internal

57. Kindly provide three identified strengths from SWOT Analysis (in bullet format)

1. Unitary in character, lone state university
2. Privileged National Presence
3. Specialized research subjects are now addressed in this University

58. Kindly provide three identified weaknesses from the SWOT analysis (in bullet format)

1. Faculty strength in terms of permanent vs. vacant positions
2. Inadequacies faced on network connectivity
3. Lack of enhanced financial inputs

59. Kindly provide two opportunities identified from the SWOT analysis (in bullet format)

1. Institution poised to play a role at national level, due recognition awaited
2. Accepts and advances in newer, broad topics of challenges in science and technology

60. Kindly provide two identified challenges/threats from SWOT analysis (in bullet format)

1. rate of growth vis-a-vis financial inputs
2. meeting the challenges on accepting ICT in administration

61. Identify any significant progress made by the institution towards achieving the goals and objectives during the year (list below in bullet format)

- ⌚ KM Mani Centre for Budget Studies, funded by the government of Kerala to undertake various studies and research pertaining to Budgeting, was started
- ⌚ CUSAT was invited to take part in the Indo-Canadian Science and Technology Initiative, which stands for innovative research in Science and Technology.
- ⌚ CUSAT has been given the approval to carry out the Indo-Finnish joint project on non-linear properties of nano-material.
- ⌚ Going to start the Split- Site PhD programme in Electronics, in co-operation with the Kent University in England.
- ⌚ The Kunjali Marakkar School of Marine Engineering(KMSME) of CUSAT had been chosen as the centre of excellence, by the Ministry of Shipping, Government of India.
- ⌚ CUSAT started the Masters degree programme in Fisheries Science (Sea Food Safety and Trade),at the School of Industrial Fisheries, the first of its kind in the country.
- ⌚ Dr. K. Mohan Kumar, Professor at the Dept. Of Atmospheric Science, CUSAT has earned the appreciation of the Russian Scientific community. His book "Stratosphere-Troposphere Interactions-An introduction", was translated to Russian.
- ⌚ CUSAT witnessed record placement of B.Tech pass outs this year. 85% of B.Tech students passed out from both School of Engineering and CUCEK got placement in reputed companies.
- ⌚ The School of Legal Studies, CUSAT, has become champions in the International Technology Law Moot court Championship, held in Symbiosis law school Pune.

62. How do you perceive the role of NAAC in the quality development of your institution?

(Suggestions in bullet format to be given below)

- ⌚ NAAC guidelines have helped in improving the quality of academics and research
- ⌚ All programs have a bearing on social commitment and links to transfer the benefits to community
- ⌚ A sense of purpose to face challenges is now reflected in University community and
- ⌚ Recognizes the National and Global presence as a priority given the coverage on accreditation through NAAC

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Director, IQAC

DR.K.POULOSE JACOB
Chairperson, IQAC
&
Pro-Vice-Chancellor
(i/c of V.C)