UNIVERSITY OF CALICUT
Academic & Administrative Audit of Teching Departments
(2016 -2021)

Report

Name of the Department		Department of Environmetal Science		
Sl. No.	Item	Grade A - Excellent, B - Good C - Average D - Poor	Comments	Suggestions for improvement
I	Programmes Offered			
1	Relevance, adequacy, innovativeness etc. (3-8)	**B**	Since programme is interdisciplinary in nature, it is very relevant, address env. issues facing local, regional and global level.	The curriculum should have green skill technologies to improve the skills of the students and bridging the gap between academia and employabilities.
2	Demand ratio of courses (33,35,36)	**C**	Demand ratio ranges from 6:1 to 62:1. Only two academic years (2017-19 and 2020-22) received high demand ratio.	Attractive brochures of the programmes should be prepared highlighting the content and job opportunities and circulate among colleges and social media.
3	Syllabus & curriculum (10,11, 46)	**B**	Globally significant topics included. It seems to be good. Not seen the detailed content.	Generally syllabus should be OBS based with programme specific outcome (PSO), course outcome (CO), and module outcome (MO).
4	Examination & Results (9, 34, 37)	**A**	CBCS system is followed here and is good. All students passed and it indicates achievements in outcome in PSO.	Examinations should be on time and results should be declared without delay. Dual mode of teaching may be preferred.
II	Faculty			
1	Strength (12, 14, 15)	**C**	All six faculties (Asst. Professor) are on contract basis and funded by University only. We need government sanctioned posts.	Govt. sanctioned posts (at least Professor-1; Assoc. Professor-1, Asst. Professor-3) are very much needed to establish this dept. into a teaching-cum-research.

2	Student teacher ratio (16)	**C**	Student : teacher ratio = 14:1. It should be improved to 7:1	Permanent faculties, followed by Visiting Professors, Adhoc faculties, Emeritus Professors can improve this ratio.
3	Qualification, experience	**B**	4 faculties are Ph.D holders, 1 M.Phil and 1 Msc	It is better to select faculties with PhD holders in diverse areas of env. sciences

	diversity, performance etc. (13, 41, 48)	**B**	Faculties from Env. sciences, Env. Biotechnology etc.	One faculty from geoscience with experience in remote sensing, GIS, disaster management is also needed to address these global and national issues.
4	Participation of faculty in Professional development programmes, Seminars, Workshops etc. (26-27)	**D**	Since all faculties are Contract Lectures, participation in seminar, workshops are only at minimum level.	Try to get permanent faculties as early as possible for sustainable development of dept.
5	Recogitions received by faculty from notable institutions (state, national or international) (28-30)	**C**	Recognitions are only at the university level. Need more from outside the university.	Permanent faculties can take part in various government funded programmes.
III	Research			
1	Thrust area (18)	**C**	Thrust areas identified like EIA, Remote sensing, GIS, Disaster management etc are good.	Need to address cutting-edge areas like climate change and its impacts, waste management, microplastics etc.
2	Facilities (21, 22)	**D**	Basic research facilities are not sufficient in the dept. Need more labs, monitoring equipments etc.	Try to get infrastructural and lab development fund outside the university ((State and Central funding source).
3	Publications (23)	**C**	Only 3 book chapters and 5 publications (average 1/year) in peer reviewed journals. Highest IF = 4.0.	Need to improve publications. Student projects are encouraged to publish in journals.
4	Patents (24)	**D**	NIL.	Encourage to have patents.
5	Consultancy (25)	**D**	NIL. Dept is encouraged to take up PCB accredited water testing Lab, Env. auditing etc.	Consultancy at department level and/or faculty level should be encouraged.
6	Projects (19)	**D**	With the help of permanent faculties in the allied departments as PI, the present faculties can initiate projects.	National/international funding is encouraged. MOU should be encouraged which covers faculty and student exchange programmes.

7	External Funding (all funds secured by faculty other then normal grants received by the University) (20)	**D**	Possible only with a minimum number of permanent faculties. It can be tried later stages of development of the dept.	fund from outside the university (State and Central funding source)
IV	Students			

1	Student achievements (state, national, international) (31)	**C**	Students are encouraged to participate seminar/workshops and present their project work.	Encourage students to publish papers in peer reviewed/indexed journals.
2	Diversity (male female ratio, from within the state, outside the state and international) (33, 38)	**C**	Female dominating all the five years. It is a general trend in State universities.	Encourage male also to study basic and applied sciences.
3	Student Progression (39, 40, 49)	**B**	PG to M.Phil/Ph.D ratio is 20-40%. Placement 15-30%.	Students should be motivated to go for research programmes in cutting edge areas of research.
4	Financial support to Students (45)	**B**	42 students got financial support. It is good.	
V	Support Staff (Strength, Adequacy etc.)	**C**	One office clerk is available. Not sufficient.	At minimum level One Section Officer, one Assistant, one peon is needed.
VI	Teaching- learning & Evaluation (47)	**B**		
VII	Feedback Mechnism (48)	**A**	Online portal method of teaching assessment is innovative and highly appreciated. Considering students suggestions to improve the overall status of dept. is a welcome approach.	Teacher performance should be improved based on students feedback. Teachers should update content of teaching in tandem with current env issues.
VIII	Activities of the Department (conduct of seminar, workshops, student enrichment programmes, extension activities and other beyond scholarly activities) (32, 50, 55)	**C**	Only five one day programmes identified. Not sufficient.	Need more programmes (seminar, conference, workshops ect) in interdisciplinary areas in collaboration with other departments/research institutions.
IX	Infrastructural facilities of the Department (52)	**B**	Water quality testing lab and soil analyzing facility.	Need class rooms with basic facilities like internet, projector etc. Also look for smart class rooms, theatre class rooms etc.
X	Uniqueness of the Department & Innovative practices (53-55)	**B**	Interdisciplinary MSc programme, EIA studies, awareness programme, extension activities etc. seem to be good.	
XI	SWOC (56)			

1	Stength	**B**	Qualified faculties from multidisciplinary areas, provision to interdisciplinary academic activities are good.	Need to be improved. For students, the gap should be bridged between academia and employability by providing green skill technologies.
2	Weakness	**C**	Major weakness identified are self-finance mode of course, lack of regular faculties, lack of recognized Research centre, high fee structure.	The course should be converted to regular mode with regular and sufficient number of faculties etc
3	Opportunity	**B**	To function as an aided department with PhD programmes and undertake research projects is good.	Research should be focused on cutting edge areas in interdisciplinary sciences
4	Challenges	**B**	To undertake research and development in high priority areas and establish international collaborations	Initially identify priority areas in research, do some pilot projects with the help of students and look for collaborative publications.
XII	Future plans (57)	**A**	Short term plan of converting the department into a regular department and long term plan into a Centre of Excellence is good.	Chalk out sustainable strategies to achieve the goals.

Overall remarks of the Auditor :

With the limited available faculties and facilities of the department, overall remark of the department is satisfactory to good. However, the department has to do a lot of things to convert it into a "**teaching-cum research**" department. It has to change from self-financing mode to regular mode, appoint required number of qualified faculties from multidisciplinary areas, encourage them to undertake research in cutting edge areas of env. sciences by understanding the regional and global environmental challenges like climate change, disaster management etc. They should undertake collaborative research projects with collaborative publications, MOU with international agencies and promote faculty and student exchange programmes in future.

In the curriculum, innovative items like internship programmes (at least 2 weeks), experiential learning programmes (with LSGs etc), practical and hands on training in green skill technologies in various aspects like solid waste management, waste water treatment using nature based solutions, carbon foot print analysis, EIA, env. auditing etc should be given.

Extension activities like village adoption programme (adopting schools/panchayaths) is highly recommended.

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