

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

Name of the Department				
Sl. No.	Item	Grade A - Excellent, B - Good C - Average D - Poor	Comments	Suggestions for improvement
I	Programmes Offered	B	Currently, the Department is offering only one academic program which is M. Tech in Nanoscience & Technology.	
1	Relevance, adequacy, innovativeness etc. (3-8)	A	The topic is relevant, adequate and very innovative.	Industrial partnership and topics relevant for industry could be included.
2	Demand ratio of courses (33,35,36)	B	Though the total number of seats is 10 up to year 2019 and 12 in year 2020, the total seats have not been filled fully.	Wide publicity through national newspapers should be given so as to attract more students to the program.
3	Syllabus & curriculum (10,11, 46)	B	The syllabi is revised from time to time and currently following the OBE pattern. The course is having thrust on energy and bio-applications.	Few more electives in the context of water, environment securities could also be considered in future.
4	Examination & Results (9, 34, 37)	A	Very good scheme is being followed. 100% pass of students is commendable.	NIL
II	Faculty			
1	Strength (12, 14, 15)	C	The faculty strength is very poor. The posts are not filled yet which is a major drawback towards the progress of such an	Appointment of the sanctioned positions should be done and the faculty strength should also be increased in the subsequent years.

			innovative course. Most of the faculty are guest/ad-hoc and the courses could be taught. In the context of sustainability of such an innovative academic program, more faculty members should be appointed.	
2	Student teacher ratio (16)	B	With the present in take of students, the ratio is acceptable.	If the total number of seats is full, the ratio should be addressed for which appointment of faculty members towards the sanctioned positions should be met immediately.
3	Qualification, experience diversity, performance etc. (13, 41, 48)	B	The permanent faculty members are having excellent academic and research background.	The guest faculty members could contribute significantly to the teaching of the courses but their contributions to overall research have limitations.
4	Participation of faculty in Professional development programmes, Seminars, Workshops etc. (26-27)	A	The permanent faculty members are very vibrant.	More national and international programs need to be organized by the faculty on a regular basis. This will help them for international networking and thereby joint research proposals and mobility of students particularly with international research community.
5	Recognitions received by faculty from notable institutions (state, national or international) (28-30)	A	The faculty members have received both national and international recognitions.	The faculty members are very young and they will have more recognitions in the coming years.
III	Research			
1	Thrust area (18)	A	The areas of research of the faculty members are relevant.	More interdisciplinary collaborative research topics should be taken up by the faculty members.
2	Facilities (21, 22)	B	The basic facilities have been established. It is very difficult for the faculty members to establish high end facilities suddenly. More national and international projects should be submitted to tap funds to establish facilities.	The faculty members should be encouraged to use national facilities and collaborative research with institutions within the country and abroad.
3	Publications (23)	B	With the limited resources, the faculty members are publishing research papers in peer reviewed	NIL

			journals of international repute.	
4	Patents (24)	B	The attempts made by the faculty members to procure patents is appreciable.	The University should establish a Patent facilitating office to promote patent filing by the faculty
5	Consultancy (25)	C	Though there are limitations for this, faculty can take up this as a challenge.	
6	Projects (19)	B	Taping funds through national international projects is highly competitive. The sincere efforts of the faculty is really appreciable.	The University should encourage the faculty to submit proposals and the procedure should be facilitated through a 'Green Channel' mechanism. Though the research is encouraged, most of the time the efforts of faculty members may not be recognized. A note of appreciation to the faculty members who bring funds to the University will be improve the morale and enthusiasm.
7	External Funding (all funds secured by faculty other than normal grants received by the University) (20)	B	The external funding is highly competitive, and the present number of projects received by the faculty members is highly commendable.	The hard work of faculty members is appreciable.
IV	Students			
1	Student achievements (state, national, international) (31)	D	No mention about the participation of students in extra-curricular activities.	
2	Diversity (male female ratio, from within the state, outside the state and international) (33, 38)	C	The male-female ratio with the present number of students is alright.	Nationwide advertisement of the program will help to attract students from other states. Few seats could be reserved exclusively for them. For example, if we mention the total number of seats as 10+2 (*1 students from outside the state, *1 international students).
3	Student Progression (39, 40, 49)	D	NIL	Students with GATE score should be attracted for the program. For this wide interaction with the University departments of the state, colleges should be carried out.

4	Financial support to Students (45)	C	NIL	
V	Support Staff (Strength, Adequacy etc.)	NA	The details of support staff such as administrative staff, technical staff of the department are not available.	NIL
VI	Teaching- learning & Evaluation (47)	B	Only the permanent faculty members are using ICT based teaching process. The details of guest faculty/ad-hoc faculty with regard to this are not available. Since the course is of interdisciplinary in nature, students with diversified academic background might be attending the courses (details are not available). In such cases, bridge courses are mandatory.	Apart from ICT, Flip classroom methods could also be tried out. In the present context of Covid 19 pandemic, institutions have moved to online teaching. Therefore, international faculty members could also be invited to deliver lectures in the online mode. If bridge courses are offered, it should be credited.
VII	Feedback Mechanism (48)	C	It is mentioned that feedback from the students for each course is being done. But the details of the feedback questions are not available and whether the feedback information is graded on an average scale to assess the quality of teaching and thereby to make suggestion to improve their teaching.	
VIII	Activities of the Department (conduct of seminar, workshops, student enrichment programmes, extension activities and other beyond scholarly activities) (32, 50, 55)	C	Few seminars at the national level have been conducted.	International conferences should be encouraged, and national funding will be available for the conduct of such programs. This will help to establish international networking for joint projects and student mobility. An 'Open Campus' program as an annual event, inviting school and college students to the department will help us to inculcate a scientific temperament among the youngsters.
IX	Infrastructural facilities of the Department (52)	C	Specific detail with regard to this item is not available. More support from the University through annual budget and state plan will help the department to procure reasonably good infrastructure.	Adequate space with water and electricity are very important to run an innovative program in Nanoscience and Technology. Adequate measures with regard to safety, disposal of laboratory waste etc are very important and the University should make guidelines for the same.

X	Uniqueness of the Department & Innovative practices (53-55)	C	The students are of interdisciplinary in nature as the course is also interdisciplinary. No specific mention about the innovative practices with regard to curricula or conduct of the programs.	Participation of international faculty members should be encouraged through online platforms.
XI	SWOC (56)			
1	Strength	B	Facts have been given	Appreciable
2	Weakness	NA	Facts have been given	The University should address the points particularly the faculty strength.
3	Opportunity	B	Highlighted the opportunities	Industrial exposure to the students should be emphasized. The project works of the students should be promoted to carry out in industries and laboratories which have industrial partners.
4	Challenges	NA	The major challenge of any new academic program will be the placement of students for job or higher education such as Ph. D. Other factors such as spacing, funds etc are common which need to be addressed in different ways over a period of time. The faculty members have clear vision and hopefully the department will evolve as one of the best in the state/country.	The faculty members should submit more proposals jointly to tap funding.
XII	Future plans (57)	A	The department has clear vision about the future activities.	NIL

Overall remarks of the Auditor :

The Department of Nanoscience and Technology is running an academic program which is very innovative and relevant in the context of present academic pursuits. The faculty members are well qualified with great vision and the department will definitely evolve as one of the best in the state/country with adequate support from the University. The comments given cannot be addressed immediately but it is just to give a flavour how the drawbacks could be solved over a period. With limited resources, particularly the faculty strength, the department is trying to perform well. I wish all the very in the future endeavours of the Department of Nanoscience and Technology.



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