

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

Name of the Department				
Sl. No.	Item	Grade <b>A</b> - Excellent, <b>B</b> - Good <b>C</b> - Average <b>D</b> - Poor	Comments	Suggestions for improvement
<b>I</b>	Programmes Offered		M.Phil can be scrapped. In mathematics, it adds no value. The NEP advises scrapping of M.Phil, if I understand correctly.	M. Phil be scrapped.
<b>1</b>	Relevance, adequacy, innovativeness etc. (3-8)	C	Certificate courses offered by NPTEL should be considered in lieu of courses offered by the Department because they are likely to be of a much higher standard.	
<b>2</b>	Demand ratio of courses (33,35,36)	A	Why is the number of men taking up M.Sc. so small? This is a symptom of some serious problem with the programme.	
<b>3</b>	Syllabus & curriculum (10,11, 46 )	C	Faculty having freedom is good. But how effectively this can be used is the question. Most M.Sc. Level courses in India (in maths especially) are of poor quality. Is the UofC an exception? It should strive to be.	Is there emphasis on problem solving? Most students---even those who do well in University Masters programmes---have no understanding of Mathematics because the courses are of poor quality. Students should be encouraged to take online courses offered elsewhere.
<b>4</b>	Examination & Results (9, 34, 37)	B	The data in 9, 34, 37 are irrelevant for the quality of the programmes.	Programme should be judged by how many students pass national tests CSIR / NBHM etc. And the placement profile.
<b>II</b>	Faculty			

<b>1</b>	Strength (12, 14, 15 )	B	Why suddenly 40% of the course are being taught by temporary faculty in 2019–20?	
<b>2</b>	Student teacher ratio (16)	C	8:1 is good for M.Sc. 23:5 for Ph.D. is likely to mean that the quality of the research being done is low.	
<b>3</b>	Qualification, experience diversity, performance etc. (13, 41, 48)	B	The new hires are a good sign. 50% faculty from own university is not a good sign.	
<b>4</b>	Participation of faculty in Professional development programmes, Seminars, Workshops etc. (26-27)	B	Good. However, one can just bodily attend several programmes without it having one bit of effect on one's teaching or research.	
<b>5</b>	Recognitions received by faculty from notable institutions (state, national or international) (28-30)	B		
<b>III</b>	Research			
<b>1</b>	Thrust area (18)	B	Ok. Now Geometry and Lie Groups can be added.	
<b>2</b>	Facilities (21, 22)	A	The library which I have personally visited is maintained in an excellent condition. One of the best in the country. What about programming courses and computing facilities? No mention is made.	Could UofC students take courses offered at KsoM on online course arranged by KSoM for their students?
<b>3</b>	Publications (23)	B	There is too much emphasis on writing papers. The result is that papers are published that have absolutely no content.	One should rely on feedback from experts rather than merely on statistics (especially, count of papers). Only a very small percentage of the papers published in mathematics are of reasonable quality. Most are junk.
<b>4</b>	Patents (24)	B	These are difficult in mathematics.	

<b>5</b>	Consultancy (25)	B	This again is difficult in mathematics.	
<b>6</b>	Projects (19)	B	These are difficult in mathematics	
<b>7</b>	External Funding (all funds secured by faculty other than normal grants received by the University) (20)	C	I know for a fact that the dept received from NBHM 9 lakhs for the library in jan 2017 and again 4.9 lakhs in March 2019. Why are these not even mentioned? [Correction: This is mentioned in item 52.] Doesn't the dept get a FIST grant?	Many places get FIST grant. UofC should be able to get such grants.
<b>IV</b>	Students			
<b>1</b>	Student achievements (state, national, international) ( 31)	C	The success of an M.Sc. Program is reflected in what the students go on to do (whether it is a job or for a PhD). CUSAT students regularly feature in CSIR-UGC and NBHM Doctoral Scholarship selections. Is not UofC aspiring for something similar?	
<b>2</b>	Diversity (male female ratio, from within the state, outside the state and international) (33, 38)	C	As noted elsewhere, the question arises of why males are so few in the M.Sc. programme? There being very few students from outside the state is a reflection on the poor quality of the programme.	
<b>3</b>	Student Progression (39, 40, 49)	C	Please mention the years in which the distinguished alumni graduated. The list is impressive all right.	
<b>4</b>	Financial support to Students (45)	A	Good percentage seem to be getting support.	
<b>V</b>	Support Staff (Strength, Adequacy etc.)		No data is provided.	
<b>VI</b>	Teaching- learning & Evaluation (47)	B		
<b>VII</b>	Feedback Mechnism (48)	B		
<b>VIII</b>	Activities of the Department	B	There seem to be several opportunities for students	

	(conduct of seminar, workshops, student enrichment programmes, extension activities and other beyond scholarly activities) (32, 50, 55)		to be exposed to ideas. The question however is this: how many students actively participate and take advantage of these? Just physically attending is not done.	
<b>IX</b>	Infrastructural facilities of the Department (52)	B	No mention is made of computing facilities. Are students exposed to programming at all? Programming is an essential part of mathematical training.	
<b>X</b>	Uniqueness of the Department & Innovative practices (53-55)	B	Indeed the dept seems to have many seminars and talks. However, just having the students physically attending these is not good enough. They must actively participate. Otherwise what is the point?	
<b>XI</b>	SWOC (56)			
<b>1</b>	Strength	B	Good. About research output, one should worry about the content and quality of the papers, not just the number.	
<b>2</b>	Weakness			
<b>3</b>	Opportunity			
<b>4</b>	Challenges		Teach with an emphasis on problem solving and real understanding.	
<b>XII</b>	Future plans ( 57)	B	Before starting a integrated B.Sc.--M.Sc. Program, do the necessary market survey. CUSAT already has such a program and does the state have the capacity for such another program?	

**Overall remarks of the Auditor :** The facilities and opportunities available are good but the overall quality of mathematics being taught at the PG level in Universities in India is very poor and UofC is unfortunately no exception. It can however make a serious attempt to change this by seeking expert advice (rather than rely on metrics such as number of papers published) and taking advantage of the presence of KsoM (which is regularly visited by eminent scholars and researchers from around the world and now offers a high quality integrated Masters—PhD programme).

Place : <i>Chennai</i>		Signature : <i>K N Raghavan</i>	CIT Campus, Taramani
Date : <i>06 JAN 2022</i>		Name : K N Raghavan	Chennai 600 113
	Mobile: 9445631505	Designation : Senior Professor	
		Office : The Institute of Mathematical Sciences (IMSc)	