

## RTI REQUEST DETAILS (आरटीआई अनुरोध विवरण)

Registration Number (पंजीकरण संख्या) :	IITGW/R/2019/50163	Date of Receipt (प्राप्ति की तारीख) :	08/11/2019
Type of Receipt (रसीद का प्रकार) :	Online Receipt	Language of Request (अनुरोध की भाषा) :	English
Name (नाम) :	Dr Rajesh K Srivastava	Gender (लिंग) :	Male
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Status (स्थिति)(Rural/Urban) :	Urban	Education Status :	
Is Requester Below Poverty Line ? (क्या आवेदक गरीबी रेखा से नीचे का है?) :	No	Citizenship Status (नागरिकता)	Indian
Amount Paid (राशि का भुगतान) :	10 ) (original recipient)	Mode of Payment (भुगतान का प्रकार)	Payment Gateway
Request Pertains to (अनुरोध निम्नलिखित संबंधित है) :	Dilip Boro		
Information Sought (जानकारी मांगी):	<p>Recently I proposed to introduce a tutorial component in the core course MA224 (Real Analysis) for B.Tech (M and Computing) with the mention that, it is challenging to teach a basic course like Real Analysis without a tutorial component since there is not much scope to discuss reasonable problems in three assigned lectures per week for the exiting course MA224. In addition, this course short of many fundamental concepts of basic real analysis, e.g. compactness connectedness, Fatous lemma, bounded convergence theorem, which needs to be included in the revised syllabus.</p> <p>However, the proposal to add one tutorial component and minor change in the syllabus of MA224 has been turned down by the DUPC without providing me the feedbacks those received from mathematics faculty members, so that I could respond to their feedback positively. In contrast, other faculty who proposed changes/introduce new courses of their like got the feedbacks before the DUPC meeting.</p> <p>I request the DUPC Mathematics to please provide me all the feedbacks received by him from mathematics faculty regarding the recently proposed revision of the course MA 224 (Real Analysis).</p> <p>Please find the filled in proposal form submitted to DUPC on 21.09.2019 at 2:44 PM attached.</p>		

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**Indian Institute of Technology Guwahati**  
**Proposal for a New Course / Revision of a Course**

Course Number & Title: MA224 Real Analysis	
L-T-P-C: 3-1-0-8	
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Usual as existing	
Kind of Proposal (New Course / Revision of Existing Course): Revision	
Offered as (Compulsory / Elective): Compulsory	
Offered to: BTech	
Offered in (Odd/ Even / Any): As earlier	
Offered by (Name of Department/ Center): Mathematics	
Pre-Requisite: N.A.	
Preamble / Objectives (Optional): It is challenging to teach a basic course like Real Analysis without a tutorial component since there is not much scope to discuss reasonable problems in three assigned lectures per week for the exiting course MA224. In addition, this course short of many fundamental concepts of basic real analysis, e.g. compactness connectedness, Fatou's lemma, bounded convergence theorem, which needs to be included in the revised syllabus.	
Course Content/ Syllabus: Metrics and norms - metric spaces, normed vector spaces, convergence in metric spaces, completeness, compactness, connectedness, Functions of several variables - differentiability, chain rule, Taylor's theorem, inverse function theorem, implicit function theorem; Lebesgue measure and integration - sigma-algebra of sets, measure space, Lebesgue measure, measurable functions, Lebesgue integral, monotone convergence theorem, Fatou's lemma, dominated convergence theorem, bounded convergence theorem, L-p spaces.	
Books (In case UG compulsory courses, please give it as "Text books" and "Reference books". Otherwise give it as "References".	
Texts: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)	
1.	N. L. Carothers, Real Analysis, Cambridge University Press, 2000.
2.	J. E. Marsden and M. J. Hoffman, Elementary Classical Analysis, 2nd Ed., W. H. Freeman, 1993.
3.	G. de Barra, Measure Theory and Integration, New Age International, 1981.
References: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)	
1.	S. Kumaresan, Topology of Metric spaces, 2nd Ed., Narosa Publishing House, 2011.
2.	R. C. Buck, Advanced Calculus, Waveland Press Incorporated, 2003.

Detailed Course Content (Optional)		
It will not be included in the Courses of Study Booklet		
Sl. No.	Broad Title / Topics	Number of Lectures
1		
2		
3		
4		
5		
Total Number of Lectures =		

In case of revision of existing course, Please provide below the details of existing course.

**EXISTING COURSE**

Course Number, Title, L-T-P-C: MA224 Real Analysis 3-0-0-6

Pre-Requisite (if any) N.A.

Contents: Metrics and norms - metric spaces, normed vector spaces, convergence in metric spaces, completeness; Functions of several variables - differentiability, chain rule, Taylor's theorem, inverse function theorem, implicit function theorem; Lebesgue measure and integral - sigma-algebra of sets, measure space, Lebesgue measure, measurable functions, Lebesgue integral, dominated convergence theorem, monotone convergence theorem,  $L^p$  spaces.

References:

1. J. E. Marsden and M. J. Hoffman, Elementary Classical Analysis, 2nd Ed., W. H. Freeman, 1993.
2. M. Capinski and E. Kopp, Measure, Integral and Probability, 2nd Ed., Springer, 2007.
3. N. L. Carothers, Real Analysis, Cambridge University Press, 2000.
4. G. de Barra, Measure Theory and Integration, New Age International, 1981.
5. R. C. Buck, Advanced Calculus, Waveland Press Incorporated, 2003.
6. S. Kumaresan, Topology of Metric spaces, 2nd Ed., Narosa Publishing House, 2011.