



**MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL**  
(FORMERLY KNOWN AS WEST BENGAL UNIVERSITY OF TECHNOLOGY)  
**Main Campus : HARINGHATA, NADIA, PIN-741 249**  
Kolkata Campus : BF-142, SECTOR-I, SALT LAKE CITY, KOLKATA-700 064, (INDIA)  
Website : [www.makautwb.ac.in](http://www.makautwb.ac.in)

12

Ref. No. :

Date :

Ref No. 16.02/Regis/PhD/RPE/2022

Date: 16.09.2022

To:

Prof. (Dr) Pranam Dhar.

HoD. Department of Commerce and Management.

West Bengal State University.

Barasat, Kolkata- 7000126.

Dear Prof. Dhar,

Greetings from MAKAUT, WB.

I am delighted to inform you that you have been nominated by the Hon'ble Vice Chancellor to conduct the Research and Publication Ethics (RPE) course for the PhD Scholars of MAKAUT, WB.

The details of the Course are-

1. Date: 19<sup>th</sup> September to 23<sup>rd</sup> September 2022.
2. Time: 10:00 AM to 1:00 PM (Theory Class) and 2:00 PM to 5:00 PM (Practical Class).
3. Exam Date: 24<sup>th</sup> September 2022.

You are requested to provide the study materials and MCQs for online exam.

Kindly drop a line to confirm your acceptance.

Thanking you and Regards,

*Partha Pratim Lahiri* 16/9/22

(Dr. Partha Pratim Lahiri.)

Registrar.

Phone : (033) 2321-0731, 2321-1327 Fax : (033) 2321-7578, 2334 / 1034

### Course Scheme for M.Tech. in Information Technology

#### M.Tech Sem-I.

Code	Course Title	Hours per week			Credits
		L	T	P	
PGIT-101	Program Core I- Mathematical foundations of Computer Science	3	0	0	3
PGIT-102	Program Core II- Advanced Data Structures	3	0	0	3
PGIT - 103A/103B/1 03C	Program Elective I- Advanced Web Technology/ Data Science/Mobile Communication	3	0	0	3
PGIT - 104A/104B/1 04C/104D	Program Elective II- Internet of Things/ Machine Learning/Social Network Analysis/Information Security	3	0	0	3
PGIT-105	Research Methodology and IPR	2	0	0	2
PGIT - 106A/106B/1 06C/106D	Audit Course	2	0	0	0
PGIT-192	Laboratory 1 (Advanced Data Structures)	0	0	4	2
PGIT - 193A/193B/1 93C	Laboratory 2 (Based on Elective I)	0	0	4	2
PGIT - 194A/194B/1 94C	Laboratory 3 (Based on Elective II)	0	0	4	2
<b>Total Credits: 20</b>					

#### M.Tech Sem- II

Code	Course Title	Hours per week			Credits
		L	T	P	
PGIT-201	Program Core III – Advanced Computer Architecture	3	0	0	3

PGIT-202	Program Core IV – Advanced Operating System	3	0	0	3
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PGIT- 203A/203B/20 3C/203D/203E	Program Elective III – Cloud Computing/ Image Processing/ Soft Computing/Data Warehousing and Data Mining/Wireless and Sensor Networks	3	0	0	3
PGIT- 204A/204B/20 4C	Program Elective IV– Distributed Systems / Big Data Analytics / Information Theory and Coding/ Pattern Recognition	3	0	0	3
PGIT- 205A/B/C/D	Audit Course-2	2	0	0	0
PGIT-291	Laboratory 1 (Advanced Computer Architecture)	0	0	4	2
PGIT-292	Laboratory 2 (Advanced Operating System)	0	0	4	2
PGIT-293A/B/C/D	Laboratory 3 (Based on Elective III)	0	0	4	2
PGIT-293	Term Paper with Seminar	0	0	4	2
<b>Total Credits: 20</b>					

\*Students be encouraged to go to Industrial Training/Internship for at least 2-3 months during semester break.

**M.Tech III Sem\***

Code	Course Title	Hours per week			Credits
		L	T	P	
PGIT- 301A/301B/3 01C/301D	Program Elective V – Bio-informatics/ Remote Sensing and GIS / Distributed Databases/	3	0	0	03
PGIT-302	<b>Open Elective</b> A. Business Analytics B. Project Management & Entrepreneurship C. Industrial Safety D. Operations Research E. Cost Management of Engineering Projects F. Composite Materials G. Waste to Energy	3	0	0	03
PGIT-393	Dissertation-1 /Industrial Project	0	0	20	10
<b>Total Credits: 16</b>					

\*Students going for Industrial Project/Thesis will complete these courses through MOOCs.

**M.Tech Sem-IV**

	Course Title	Hours per week	Credits
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		L	T	P	
PGIT-491	Dissertation II	0	0	32	16
Total Credits: 16					

<b>COURSE OUTCOMES</b>
<b>After completion of course, students would be:</b>
<ul style="list-style-type: none"> <li>• Become familiar with core research communities, publications, focused on web and social media analytics and research questions engaged in</li> </ul>

#### References:

1. Hansen, Derek, Ben Shneiderman, Marc Smith. 2011. Analyzing Social Media Networks with NodeXL: Insights from a Connected World. Morgan Kaufmann, 304.
2. Avinash Kaushik, 2009. Web Analytics 2.0: The Art of Online Accountability.
- 3.asley, D. & Kleinberg, J. (2010). Networks, Crowds, and Markets: Reasoning About a Highly Connected World. New York: Cambridge University Press.  
<http://www.cs.cornell.edu/home/kleinber/networks-book/>
4. Wasserman, S. & Faust, K. (1994). Social network analysis: Methods and applications. New York: Cambridge University Press. Monge, P. R. & Contractor, N. S. (2003). Theories of communication networks. New York: Oxford University Press.

<b>Research Methodology and IPR</b>	
<b>Teaching Scheme</b> Lectures: 1hrs/week	
<b>Course Outcomes:</b> At the end of this course, students will be able to <ul style="list-style-type: none"> <li>• Understand research problem formulation.</li> <li>• Analyze research related information</li> <li>• Follow research ethics</li> <li>• Understand that today's world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity.</li> <li>• Understanding that when IPR would take such important place in growth of individuals &amp; nation, it is needless to emphasis the need of information about Intellectual Property Right to be promoted among students in general &amp; engineering in particular.</li> <li>• Understand that IPR protection provides an incentive to inventors for further research work and investment in R &amp; D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.</li> </ul>	

### Syllabus Contents:

**Unit 1:** Meaning of research problem, Sources of research problem, Criteria Characteristics of a good research problem, Errors in selecting a research problem, Scope and objectives of research problem.

Approaches of investigation of solutions for research problem, data collection, analysis, interpretation, Necessary instrumentations

**Unit 2:** Effective literature studies approaches, analysis Plagiarism, Research ethics,

**Unit 3:** Effective technical writing, how to write report, Paper

Developing a Research Proposal, Format of research proposal, a presentation and assessment by a review committee

**Unit 4:** Nature of Intellectual Property: Patents, Designs, Trade and Copyright. Process of Patenting and Development: technological research, innovation, patenting, development. International Scenario: International cooperation on Intellectual Property. Procedure for grants of patents, Patenting under PCT.

**Unit 5:** Patent Rights: Scope of Patent Rights. Licensing and transfer of technology. Patent information and databases. Geographical Indications.

**Unit 6:** New Developments in IPR; Administration of Patent System. New developments in IPR; IPR of Biological Systems, Computer Software etc. Traditional knowledge Case Studies, IPR and IITs.

### References:

1. Stuart Melville and Wayne Goddard, "Research methodology: an introduction for science & engineering students"
2. Wayne Goddard and Stuart Melville, "Research Methodology: An Introduction"
3. Ranjit Kumar, 2 nd Edition , "Research Methodology: A Step by Step Guide for beginners"
4. Halbert, "Resisting Intellectual Property", Taylor & Francis Ltd ,2007.
5. Mayall , "Industrial Design", McGraw Hill, 1992.
6. Niebel , "Product Design", McGraw Hill, 1974.
7. Asimov , "Introduction to Design", Prentice Hall, 1962.
8. Robert P. Merges, Peter S. Menell, Mark A. Lemley, " Intellectual Property in New Technological Age", 2016.
9. T. Ramappa, "Intellectual Property Rights Under WTO", S. Chand, 2008

### Audit course 1 (PGIT-106)

- A. English for Research Paper Writing
- B. Disaster Management
- C. Sanskrit for Technical Knowledge
- D. Value Education

### Audit Course 2 (PGIT-205)

- B. Constitution of India
- C. Pedagogy Studies
- D. Stress Management by Yoga
- E. Personality Development through Life Enlightenment Skill

## AUDIT COURSE (PGIT-106A/B/C/D) ENGLISH FOR RESEARCH PAPER WRITING

6	useful phrases, how to ensure paper is as good as it could possibly be the first- time submission	4
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### Suggested Studies:

1. Goldbort R (2006) Writing for Science, Yale University Press (available on Google Books)
2. Day R (2006) How to Write and Publish a Scientific Paper, Cambridge University Press
3. Highman N (1998), Handbook of Writing for the Mathematical Sciences, SIAM. Highman's book .
4. Adrian Wallwork , English for Writing Research Papers, Springer New York Dordrecht Heidelberg London, 2011

## AUDIT COURSE: DISASTER MANAGEMENT

<b>Course Objectives:</b> -Students will be able to:		
<ol style="list-style-type: none"> <li>1. learn to demonstrate a critical understanding of key concepts in disaster risk reduction and humanitarian response.</li> <li>2. critically evaluate disaster risk reduction and humanitarian response policy and practice from multiple perspectives.</li> <li>3. develop an understanding of standards of humanitarian response and practical relevance in specific types of disasters and conflict situations.</li> <li>4. critically understand the strengths and weaknesses of disaster management approaches, planning and programming in different countries, particularly their home country or the countries they work in</li> </ol>		
<b>Syllabus</b>		
Units	CONTENTS	Hours
1	<b>Introduction</b> Disaster: Definition, Factors And Significance; Difference Between Hazard And Disaster; Natural And Manmade Disasters: Difference, Nature, Types And Magnitude.	4
2	<b>Repercussions Of Disasters And Hazards:</b> Economic Damage, Loss Of Human And Animal Life, Destruction Of Ecosystem. Natural Disasters: Earthquakes, Volcanisms, Cyclones, Tsunamis, Floods, Droughts And Famines, Landslides And Avalanches, Man-made disaster: Nuclear Reactor Meltdown, Industrial Accidents, Oil Slicks And Spills, Outbreaks Of Disease And Epidemics, War And Conflicts.	4
3	<b>Disaster Prone Areas In India</b> Study Of Seismic Zones; Areas Prone To Floods And Droughts, Landslides And Avalanches; Areas Prone To Cyclonic And Coastal Hazards With Special Reference To Tsunami; Post-Disaster Diseases And Epidemics	4
4	<b>Disaster Preparedness And Management</b> Preparedness: Monitoring Of Phenomena Triggering A Disaster Or Hazard; Evaluation Of Risk: Application Of Remote Sensing, Data From Meteorological And Other Agencies, Media Reports: Governmental And Community Preparedness.	4

# MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

(Formerly Known as West Bengal University of Technology)

SECTION / DEPARTMENT

Page No. 03

## Institutional Academic Integrity panel (IAIP)

Dated: 29.03.2019

The composition of Institutional Academic Integrity Panel (IAIP) may be the following:

1. Honourable Vice Chancellor---Chairman
2. Vice Chairperson of every Ph. D Committee---Member
3. Convenor (Ph. D Cell) -----Member
4. Research Officer -----Member

The proposal is placed for your kind consideration.

Honourable  
Vice Chancellor

Placed before  
You for your  
kind approval.

Sanjay Kumar  
8/4/19  
Convenor, PhD Cell

Asst. Prof.  
8/4/19



UGC on 31<sup>st</sup> July'2018 issued an official gazette [D.O.No.F.1-18/2010 (CPP-II)] to combat Plagiarism in Higher Educational Institutions. The notable points in the notification are:

1. University shall develop a policy on plagiarism and get it approved by its relevant statutory bodies/authorities.
  2. University should declare and implement the technology based mechanism using appropriate software to ensure documents such as thesis, dissertation, publications or any other such documents are free of any plagiarism at the time of their submission.
  3. The approved policy shall be placed on the homepage of the University website.
  4. University should take a certificate from the supervisor stating that the work done by the researcher under him/her is plagiarism free.
  5. University should take an undertaking from the student stating that
    - a) thesis, dissertation or any other such documents is his/her original work and free of plagiarism.
    - b) the document has been duly checked through a Plagiarism detection tool.
  6. University shall create Institutional Repository or institute website which shall include dissertation/thesis/paper/publication and other in-house publications.
  7. University shall submit soft copies of all Masters, Research program's dissertations and thesis to INFLIBNET (Information and Library Network Centre, Gandhinagar) within one month after the award of degrees for hosting in the digital repository under the 'Shri Ganga e-repository'.
  8. To detect/report/handle of plagiarism, University should form
    - a) Departmental Academic Integrity Panel (DAIP) consisting of 3 members [(i) HOD as Chairman, (ii) a senior academician outside the department, (iii) a person well versed with anti-plagiarism tools].
    - ii) Institutional Academic Integrity Panel (IAIP) consisting of 4 members [(i) Pro-VC/ De-VC as Senior Academician as Chairman, (ii) a senior academician of the University other than the Chairman, (iii) one member outside the university and (iv) a person well versed with anti-plagiarism tools].
- The Chairman of DAIP and IAIP shall not be the same. The tenure of the Committee members including Chairman shall be three years. The quorum for the meetings shall be a majority of 4 members (including Chairman).

Hon'ble  
Registrar  
Sir

Placed before you for necessary action.

Jagannath Roy  
14.09.2018

The matter may please be placed before the Apex  
Ph.D committee.

Dr Jagannath Roy

4  
in

19/09/18



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City Campus: BF-142, Sector -I, Salt Lake, Kolkata -700 064

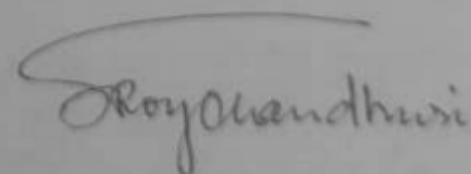
**MEMO**

No. MAKAUT/VCO-H/2022/ 150

Date: 01/11/2022

From Vice-Chancellor's Office	To : 1. Registrar 2. OSD, VCO.
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1. In accordance with the direction of Hon'ble Vice - Chancellor, a Research Ethic Committee is to be formed.
2. The committee will comprise of :
  - a. Prof. Raja Banerjee
  - b. Prof. R. Bhar - Convenor
  - c. Dr. Nabarun Bhattacharyya
3. The committee will sit periodically to plan and assess all research activities, in terms of all ethical considerations in all forms of researches, undertaken by the faculties, research scholars and students of the University.
4. Registrar, MAKAUT, WB. is requested to issue an official notification in this regard.

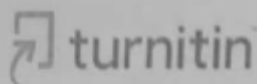


OSD, VCO, MAKAUT. WB.



**Sudiptanshu Roy Chaudhuri**  
Officer on Special Duty  
Vice Chancellor Secretariat  
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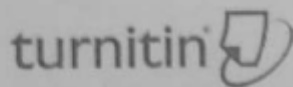
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*Att. Fed*  
*[Signature]*



Dr. Atri Bhowmik  
Finance Officer  
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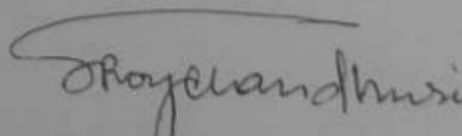
### MEMO

No. MAKAUT/VCO-H/2022/ 151

Date: 01/11/2022

From Vice-Chancellor's Office	To : <ol style="list-style-type: none"><li>1. Registrar</li><li>2. All Directors, All School, MAKAUT, WB.</li><li>3. All HOD's, MAKAUT, WB.</li><li>4. OSD, VCO.</li></ol>
----------------------------------	--

In accordance with the direction of Hon'ble Vice - Chancellor, all faculties are advised to avail plagiarism checking facility available at the University, **iThenticate** software available with Plagiarism Checking Cell for all of their manuscripts for publication and other research documents, for uploading at public domain.

  
OSD, VCO, MAKAUT. WB.



**Sudiptanshu Roy Chaudhuri**

Officer on Special Duty  
Vice Chancellor Secretariat

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