ASSAM DON BOSCO UNIVERSITY

Modified Course Structure/Syllabus in SPRING 2019

SCHOOL OF TECHNOLOGY
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
MASTER OF TECHNOLOGY (MTECH) - ELECTRICAL AND ELECTRONICS ENGINEERING

Type	Course Code	Course Name	Credits	Category
Semester 2				
Theory	EEOT0007	Optimization theory and applications	3	DC
	EEES0008	Embedded systems and application	4	DC
	ECRM0042	**Research Methodology and Intellectual Property Rights**	**2**	**SC**
	Specialization 1: Power Electronics and Power Systems			
	EEED0009	Advanced Electric Drives	3	DE
	EEAP0010	Advanced Power System Analysis	3	DE
	EEIC0011	Power system interconnection and control	3	DE
	Specialization 2: Control and Instrumentation Engineering			
	EEAI0012	Advanced Instrumentation	3	DE
	EEOC0013	Optimal Control Systems	3	DE
	EEPI0014	Process Control instrumentation	3	DE
Lab	Specialization Lab II			
	EESE6015	Power System and Power Electronics Lab	2	DE
	EECI6016	Control and Instrumentation Engineering Lab		DE
Total Credits			20	

ECRM0042: RESEARCH METHODOLOGY AND INTELLECTUAL PROPERTY RIGHTS

(2 credits-30 hours)

Objective: *This course is designed to help students to identify research problems in various fields. It aims at giving potential researchers the knowledge of effectively analysing and interpreting results and presenting the findings to the scientific and technological community of the world. This course also aims at motivating students to bring about their creative ideas for innovation and establishing research impact in the global fora through intellectual ownership.*

Module I Research problem formulation and solution (12 Hours)

Meaning, sources, scope and objective of a research problem; Good research problem criteria and characteristics, errors in selecting a research problem; Research problem solutions– approaches for investigation; Approaches to effective literature studies; Data collection, analysis, interpretation and instrumentation; Plagiarism and ethical practices.

Module II Technical writing (10 Hours)

Effective writing; Research proposal development and its format; Different report types.

Module III Intellectual Property Rights (8 Hours)

a) Nature of intellectual property: Patent, design, trade and copyright; Patenting and development process; Patent grant under PCT and procedure; Geographical indications.
b) Patent rights: Administration of patent systems, scope, information and databases, technology licensing.
c) New developments and case studies.

COURSE / LEARNING OUTCOMES

At the end of this course students will be able to:

CO1: To be able to identify research problems in various fields
CO2: To be able to approach investigations scientifically in order to find solutions for research problems of interest
CO3: To know how to undertake literature review for knowing the state of the art in the areas of interest
CO4: To know how to put forward the research problems, findings, analyses and interpretations effectively
CO5: To know how to take ownership of new findings through intellectual property right laws

Suggested Readings

1. Goddard Wayne, Melville Stuart, Research Methodology: An Introduction For Science And Technology Students, Juta & Co. Ltd.
2. Kumar Ranjit, Research Methodology A Step By Step Guide For Beginners, SAGE publications Inc.
3. Halbert J. Debora, Resisting Intellectual Property, CRC press.
4. Menell S. Peter, Lemley A. Mark, Merges P. Robert, Intellectual Property In New Technological Age, Clause 8 Publishing.
5. C.R. Kothari, Research Methodology Methods and Techniques, New Age International