Date: 19-Aug-2020  
Mode of Conduction: Google Meet  
Time: 11.30 AM to 1 PM

### Members Present:

<table>
<thead>
<tr>
<th>SL No.</th>
<th>Name</th>
<th>Organization</th>
<th>Designation</th>
<th>Signature</th>
</tr>
</thead>
</table>
| 1      | Dr. P Devaki  
         Prof. & HOD | The National Institute of Engineering, Mysuru | Chairman | Dr. P Devaki |
| 2      | Dr. K Raghuvveer  
         Prof. & IQAC Head | The National Institute of Engineering, Mysuru | Internal Member | Dr. K Raghuvveer |
| 3      | Dr. S Kuzhalvaizmozhi  
         Professor | The National Institute of Engineering, Mysuru | Internal Member | Dr. S Kuzhalvaizmozhi |
| 4      | Sri. Rampur Srinath  
         Associate Prof. | The National Institute of Engineering, Mysuru | Member | Sri. Rampur Srinath |
| 5      | Sri. CN Chinnaswamy  
         Associate Prof. | The National Institute of Engineering, Mysuru | Internal Member | Sri. CN Chinnaswamy |
| 6      | Smt. BM Nandini  
         Assistant Prof. | The National Institute of Engineering, Mysuru | Internal Member | Smt. BM Nandini |
| 7      | Sri. N Rajesh  
         Assistant Prof. | The National Institute of Engineering, Mysuru | Internal Member | Sri. N Rajesh |
| 8      | Dr. P Santhi Thilagam  
         Prof., Dept. of CS & E | NITK, Surathkal | External Member | Dr. P Santhi Thilagam |
| 9      | Dr. Uma B  
         Prof. & HoD, Dept. of IS & E | MCE, Hassan. | External Member | Dr. Uma B |
| 10     | Dr. Y C Kiran Chandrappa  
         Prof., Dept of CS & E. | GAT, Bangalore. | VTU Nominee | Dr. Y C Kiran Chandrappa |
| 12     | Sri. Phanindra Mankale  
| 13     | Mr. Nachiketu  
         CEO | Entelika Consultancy & IT Services | Alumnus | Mr. Nachiketu |

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A Grant-in-Aid Institution under Govt. of Karnataka,  
Permanently affiliated to Visvesvaraya Technological University, Belgaum. Recognized by A.I.C.T.E., New Delhi,  
and Accredited by National Board of Accreditation, New Delhi.
At the beginning, the Chairman of Board of Studies, Dr. P Devaki, Prof. & HoD, Dept. of IS & E, welcomed and introduced all the members. The Chairman appreciated the members for attending the online meeting of the Board of Studies for the academic year 2020-2021.

**Agenda and Resolution:**

1. Read and record the minutes of previous BoS meeting held on May 4, 2019 and about the action taken.

**Resolution:** Read and Recorded. The Board noted and also expressed its satisfaction on the action taken.

**To Consider or Approval of the following:**

2. a. Discussion on DIAB, DAAB, outgoing student feedback
   **Resolution:** Recorded and Approved

   b. Blown up syllabus of 3rd year of 2018-19 Admission Batch, and
      - Introducing new elective subject in 3rd year for the UG programme under Dept. Elective -1 from the Academic year 2020-2021
      - Dept. Elective -1 → IS6E105 – UX & UI
   **Resolution:** Approved and Recommended to Academic Council for further action

   c. Change of Syllabus
      - UG – 3 Semester - Discrete Mathematics & Graph Theory (IS3C01) – Core
        4 Semester - Object Oriented Programming with Java (IS4C04) – Core
        7 Semester - Wireless Communication and Networks (IS0315) – Elective
   **Resolution:** Approved and Recommended to Academic Council for further action

   d. List of Value added courses to be approved – UG
   **Resolution:** Approved and Recommended to Academic Council for further action
f. Introducing new elective subjects for the PG programme from the Academic year 2020-2021
   - Dept. Elective - 3 \rightarrow MCN2E306 - Social Networks
   - Industry Driven Elective \rightarrow MCN2I02 - Introduction to Machine Learning
   - Open Elective \rightarrow MCN3O03 - Mobile Application Development
   Resolution: Approved and Recommended to Academic Council for further action

g. Change of Syllabus
   - PG - 1 Semester - Research Methodology (MCN1CRM) - Core
   Resolution: Approved and Recommended to Academic Council for further action

h. List of Value added courses to be approved - PG
   Resolution: Approved and Recommended to Academic Council for further action

Discussions and Suggestions from Members:

- **Sri. Phanindra Mankale** queried where Agile software development topic is being taught.
  Resolution: Clarified that Agile software development topic is taught in 4th semester, Software Engineering course.

- **Sri. Phanindra Mankale** queried where working of web topic is being taught.
  Resolution: Clarified, this topic is covered in Web technology course with laboratory component in 6th semester.

- **Sri. Manjit S Sodhi** queried whether Internet of Things topic is part of the Microprocessor Course
  Resolution: Clarified, Internet of Things is offered as an industry driven elective course by Nokia Pvt. Ltd Company for the 7th semester students.
• Sri. Phanindra Mankale suggested to have Blockchain technology as a course in the curriculum
Resolution: Clarified, Blockchain technology course is offered as a value added course, once content of the syllabus and textbook will be finalized, the course will be offered as a core or elective

• Sri. Phanindra Mankale queried whether the Machine Learning course is being taught considering the industry requirement.
  Resolution: Clarified by Nachiketu, Alumnus and member of BoS, who had taught the Machine Learning course for PG students under Industry driven elective.

• Sri. Phanindra Mankale suggested to have Natural Language Processing, Linear Algebra, Computer Vision topics under Machine learning course which is essential and required in industry.
  Resolution: Noted and steps will be taken for including the said topics / courses.

• Sri. Manjit S Sodhi suggested to Design python programming course related to machine learning, Data science and analytics, Functional Programming, MongoDB.
  Resolution: Clarified that Python programming course is offered as MOOC elective from NPTEL, and further steps will be taken for including the said topics when offered as value added course or as department elective.

• BoS Members suggested to have stream oriented electives having continuity in subsequent semester, considering the recent trends and technologies.
  Resolution: Noted and steps will be taken for introducing the stream oriented electives

• Dr. P Santhi Thilagam suggested to have Software defined networks as a new course
  Resolution: Clarified, it is listed in MOOC elective, further steps will be taken to include this course as a core or elective.

• Dr. P Devaki, Chairman, BoS, proposed vote of thanks at the end of the meeting.
Approval required for the following:

a. Programme outcome Assessment
   Resolution:

b. Revised scheme for Curriculum of M.Tech from 2020-2021 Academic Year (2020-21 Admission Batch)

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credit Distribution</th>
<th>Total Credits</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Same as Previous year</td>
<td>27</td>
<td>No Change</td>
</tr>
<tr>
<td>II</td>
<td>Same as Previous year</td>
<td>27</td>
<td>No Change</td>
</tr>
<tr>
<td>III</td>
<td>MOOC Elective (12 Weeks) Management Department</td>
<td>3</td>
<td>No Class room intervention in III semester. Students have to satisfy the necessary criteria for the award of internship credits.</td>
</tr>
<tr>
<td></td>
<td>Open Elective (MOOC) (8 Weeks) from Other Department</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seminar</td>
<td>1</td>
<td></td>
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<tr>
<td></td>
<td>Internship</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Project Phase - I</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>Project Phase - II</td>
<td>15</td>
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</tr>
<tr>
<td></td>
<td>Total Credits</td>
<td>88</td>
<td></td>
</tr>
</tbody>
</table>

Resolution:

c. Restrict the paper setting for MOOC elective by internal faculty assigned only, than the external paper setter.
   Resolution:
SOCIAL NETWORKS (3:0:0) (Elective)

Subcode: MCN2E306
Hrs/week: 03
SEEHrs: 03

Course outcomes:
On Successful completion of the course, the students will be able to:
1. Interpret the network structure by applying the concepts of graph theory.
2. Formulate the behavioral models in various environments of social networks. (Module 2 & 3)
3. Illustrate link analysis and cascading behavior in social networks.

Module 1
Overview: Aspects of Networks,
Central Themes and Topics, Central Themes and Topics. Graph Theory and Social Networks Graphs Basic Definitions, Paths and Connectivity, Datasets: An Overview

Self Learning Exercise: Distance and Breadth-First Search Network

Module 2
Strong and Weak Ties:
Triadic Closure, The Strength of Weak Ties Tie Strength and Network, Structure in Large-Scale Data Tie Strength, Social Media, and Passive Engagement, Closure, Structural Holes, and Social Capital

Self Learning Exercise: Advanced Material: Betweenness Measures and Graph Partitioning

Module 3
Networks in Their Surrounding Contexts
Homophily Mechanisms Underlying Homophily: Selection and Social Influence Affiliation, Tracking Link Formation in On-Line Data

Positive and Negative Relationships
Structural Balance, Characterizing the Structure of Balanced Networks, Applications of Structural Balance, A Weaker Form of Structural Balance.

Self Learning Exercise: A Spatial Model of Segregation, Advanced Material: Generalizing the Definition of Structural Balance

Module 4
Link Analysis and Web Search,
Searching the Web: The Problem of Ranking Link Analysis using Hubs and Authorities, PageRank, Applying Link Analysis in Modern Web Search, Applications beyond the Web, Advanced Material: Spectral Analysis, Random Walks, and Web Search

Cascading Behavior in Networks
Diffusion in Networks, Modeling Diffusion through a Network, Cascades and Clusters, Diffusion, Thresholds, and the Role of Weak Ties

Self Learning Exercise: Extensions of the Basic Cascade Model, Knowledge, Thresholds, and Collective Action

Dept. of Information Science and Engineering
Module 5

Information Cascades: Following the Crowd Simple Herding Experiment Bayes' Rule: A Model of Decision-Making under Uncertainty Bayes' Rule in the Herding Experiment Simple, General Cascade, Sequential Decision-Making


Text Books:
1. Networks, Crowds and Markets by David Easley and Jon Kleinberg, Cambridge University Press, 2010

Reference Books:
INDUSTRY DRIVEN ELECTIVES
INTRODUCTION TO MACHINE LEARNING (2:0:0)

Sub Code : MCN2102
Hrs/Week : 03
SEE Hrs : 02 Hours

CIE : 25 Marks
SEE : 50% Marks
Max. Marks : 50

Course outcomes:
On Successful completion of the course, the students will be able to:
1. Illustrate basic concepts of machine learning
2. Explain Machine Learning Process
3. Demonstrate experiments in Azure ML studio with basic Python code

Module 1:
8 Hours
Introduction to Machine Learning, Understand classification Vs Regression with examples of various algorithms, Designing a Learning system, Perspective and Issues in Machine Learning, Hand on model creation in Azure ML using basic Python Programming

Self Learning Exercise: Basic Python Programming

Module 2:
9 Hours
Decision Tree Learning: Decision tree representation, Appropriate problems for decision tree learning, Basic decision tree learning algorithm, hypothesis space search in decision tree learning, Hands on Azure ML experiments with selective bias

Self Learning Exercise: Anomaly detection using ML

Module 3:
9 Hours
Guidance on which algorithm to use for which kind of problems, Illustrating the Machine Learning Process, Hands on model creation for regression problems using Python, Hands on model creation for classification problems using Python

Self Learning Exercise: Recommender system

Text Books:

All the Microsoft e-books can be downloaded from this URL:

Reference Links:
Azure Portal: https://portal.azure.com
Azure Machine Learning Studio: https://studio.azureml.net
Client SDKs and Samples: https://www.microsoft.com/cognitive-services/en-us/sdk-sample
Azure Services running status: https://azure.microsoft.com/en-in/status/