**Lesson Plan of the 7th semester for session 2021-22**

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| **Name of the faculty:** | Ms. Anshita |
| **Designation:** | Assistant Professor |
| **Discipline:** | Computer Science and Engg. |
| **Semester:** | 7th |
| **Subject:** | **Neural network (**PCC**-**CSE-401G) |
| **Lesson Plan duration:** | 15 weeks  |
| **Work Load per week in hours:** | Lectures- 03 |

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| **Week** | **Lecture****day** | **Topic** |
| 1 | 1 | Overview of biological neurons: Structure of biological neurons relevant to ANNs |
| 2 | Models of ANNs; Feedforward & feedback networks |
| 3 | learning rules; Hebbian learning rule |
| 2 | 4 | perception learning rule |
| 5 | delta learning rule |
| 6 | Widrow-Hoff learning rule |
| 3 | 7 | correction learning rule |
| 8 | Winner –lake all learning rule |
| 9 | Single layer Perception Classifier: Classification model |
| 4 | 10 | Features & Decision regions; training & classification using discrete perceptron algo |
| 11 | single layer continuous perceptron networks for linearly seperable classifications. |
| 12 | Multi-layer Feed forward Networks: linearly non-seperable pattern classification |
| 5 | 13 | Delta learning rule for multi-perceptron layer |
| 14 | Generalized delta learning rule |
| 15 | Error back-propagation training |
| 6 | 16 | learning factors, examples |
| 17 | Single layer feed back Networks: Basic Concepts |
| 18 | Hopfield networks |
| 7 | 19 | Training & Examples |
| 20 | Associative memories: Linear Association |
| 21 | Basic Concepts of recurrent Auto associative memory |
| 8 | 22 | Retrieval algorithm |
| 23 | storage algorithm |
| 24 | By directional associative memory |
| 9 | 25 | Architecture |
| 26 | Association encoding & decoding |
| 27 | Stability |
| 10 | 28 | Self organizing networks |
| 29 | UN supervised learning of clusters |
| 30 | Winner-take-all learning |
| 11 | 31 | Recall mode |
| 32 | Initialisation of weights |
| 33 | Separability limitations |
| 12 | 34 | Assignment |
| 35 | Revision of unit 1. |
| 36 | Test of unit 1 |
| 13 | 37 | Assignment |
| 38 | Revision of unit 2. |
| 39 | Test of unit 2. |
| 14 | 40 | Revision of unit 3. |
| 41 | Test of unit 3. |
| 42 | Revision of unit 4. |
| 15 | 43 | Test of unit 4. |
| 44 | Revision of whole syllabus |
| 45 | Problem solving. |