Detailed Lecture-wise Break-up for the Microcredit Subject: Computational Intelligence in Cyber Security

Lecture 1 (23/10/2018)

- Cyber Security Fundamentals: Issues, challenges and solution approaches (2 Hours)

Lecture 2 (24/10/2018)

- Supervised and unsupervised learning: Basic concepts of clustering and classification. Applications in spam detection, intrusion detection and credit card fraud detection (2 Hours)

Lecture 3 (26/10/2018)

- Connectionist framework: Neural Networks (NN) and their security applications. Challenges in using classical connectionist framework for new generation threats like Ransomware and need for using deep neural networks (2 Hours)

Lecture 4 (29/10/2018)

- Evolutionary Computation (EC): Basic concepts, Risk-based models for building cyber defense infrastructure, Cost-based models (2 Hours)

Lecture 5 (31/10/2018)

- Immunological Computation (IC): Immunity based computational models, Mitigation of distributed denial of service attacks (2 Hours)

Lecture 6 (02/11/2018)

- Recent Topics in Cyber Security: Attacker-defender game, Adaptive Multi-Factor Authentication (A-MFA), Demonstration of tools for cyber security (2 Hours)