# Department of Political Science Faculty of Behavioral and Social Sciences University of the Punjab, Lahore Course Outline



| Programme   | BS Diplomacy and<br>Strategic Studies | <b>Course Code</b> | SDSS-211 | Credit<br>Hours | 02 |  |  |
|---|---------------------------------------|--------------------|----------|-----------------|----|--|--|
| Course Title Cyber Warfare & International Security |                                       |                    |          |                 |    |  |  |
|   |                                       |                    |          |                 |    |  |  |

#### **Course Introduction**

Cyber space is considered as the fourth war front after land, air and sea. It is predicted that next major war is not likely to be fought on the battle ground but in cyber space. Era of cyber warfare has already begun. This course will keep the students informed about the cyber technology in these changing times. Therefore the need for recognizing the importance of cyber warfare cannot be ignored in modern warfare.

## **Learning Outcomes**

On the completion of the course, the students will:

- 1. Know the conceptual aspects related to cyber space
- 2. Explore the evolution of the cyber space & cyber warfare
- 3. Explore the methods to combat the cyber attacks
- 4. Find the link between international security and cyber warfare
- 5. Understand the new techniques role in warfare

|         | Course Content                                |  |  |  |  |
|---------|---|--|--|--|--|
|         | Unit-I  |  |  |  |  |
|         | Concept of Cyber Space                        |  |  |  |  |
| Week 1  | Unit-II                                       |  |  |  |  |
|         | International Security                        |  |  |  |  |
| Week 2  | Introduction to Cyber Space                   |  |  |  |  |
| Week 3  | Introduction to International Security        |  |  |  |  |
| Week 4  | Evolution of the Concept Cyber Space          |  |  |  |  |
| Week 5  | Concept of Cyber Warfare                      |  |  |  |  |
| Week 6  | Purpose of Cyber warfare in security paradigm |  |  |  |  |
| Week 7  | Learning of Cyber Weapons                     |  |  |  |  |
| Week 8  | Goals of Cyber Attacks                        |  |  |  |  |
| Week 9  | Mid Term Exam                                 |  |  |  |  |
| Week 10 | Types of Cyber Warfare Attacks                |  |  |  |  |
| Week 11 | Discussion on a Case Study of a Cyber Attack  |  |  |  |  |

| Week 12 | Concept of Hacking                                |  |  |  |
|---------|---|--|--|--|
| Week 13 | Cyber security link with Ethical Hacking          |  |  |  |
| Week 14 | Hacking Techniques and methodology                |  |  |  |
| Week 15 | Study of major Cyber Attacks                      |  |  |  |
|         | Cyber warfare Operations and Methods to Combat it |  |  |  |
| Week 16 | Discussion on a Case Study of a Cyber warfare     |  |  |  |
|         | operation   |  |  |  |

# **Textbooks and Reading Material**

- Stiennon, Richard. (2010), Surviving Cyber War, Rowman and Little Field, UK
- Stiennon, Richard. (2010) There will be Cyber War, Rowman and Little Field, UK
- Bidwell, Christopher. And Macdonald, Bruce. (2018), "Emerging Disruptive Technologies and their Potential Threats to Strategic Stability and National Security" Federation of American Scientists.
- Zetter, Kim, "An unprecedented look at Stuxnet, The World;s First Digital Weapon", November 3, 2014, Retrieved from <a href="http://www.wired.com/2014/11/countdown-to-zero--day-stuxnet">http://www.wired.com/2014/11/countdown-to-zero--day-stuxnet</a>.
- Mishra, Abhinandan,"(2020), Concerns deeper about cyber attacks on SU 30, IAF starts inquiry", Sunday Guardian Live, http://www.sundayguardianlive.com
- Shad, Muhammad."(2020) Cyber Threat Land Scape and Readiness Challenge of Pakistan" Strategic Studies

## **Teaching Learning Strategies**

- 1. Class Lectures
- 2. Distribution of the reading material to the students
- 3. Learning trough Case Studies
- **4.** Guest Speaker lecture related to the subject matter

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|---|---|---------------|----------|--|--|--|
|   | Assignments: Types and Number with Calendar |               |          |  |  |  |
| Ī | 1.  | Class Quiz    | 5 marks  |  |  |  |
|   | 2.  | Short Test    | 5 marks  |  |  |  |
|   | 3.  | Presentations | 5 marks  |  |  |  |
|   | 4.  | Assignment    | 10 marks |  |  |  |
| ı |   |               |          |  |  |  |

### **Assessment**

| Sr. No. | Elements Weightage |     | Details  |            |    |     |           |    |     |
|---------|--------------------|-----|----------|------------|----|-----|-----------|----|-----|
| 1.      | Midterm            | 35% | Written  | Assessment | at | the | mid-point | of | the |
|         | Assessment         |     | semester | •          |    |     |           |    |     |

| 2. | Formative<br>Assessment | 25% | Continuous assessment includes: Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.                                      |
|----|-------------------------|-----|--|
| 3. | Final<br>Assessment     | 40% | Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc. |