

Fergusson College (Autonomous), Pune

Compulsory Add-on courses for PG from 2019-20

Structure of Compulsory Add-on Credits for all PG courses					
Year	Semester	Human rights	Cyber security	Skill development	Total credits
First Year	I	2 credit	--	--	2 Credit
	II	--	2 Credit	2 Credit	4 Credit
Second Year	III	--	2 Credit	2 Credit	4 Credit
	IV	--	--	--	--
		2 credit	4 Credit	4 Credit	10 Credit

List of compulsory add on courses for PG

	Course codes	Title	Credits	Exam (Only Internal) Marks
1	XHR4100	Human Rights	2	50
2	XCS4200	Cyber Security -I	2	50
3	XSD4200	Skill Development -I	2	50
4	XCS5300	Cyber Security -II	2	50
5	XSD5300	Skill Development -II	2	50

Note: Only Course Grade will be printed for add-on courses and marks will not be counted for SGPA or CGPA calculations. Student must pass in all add-on courses to get the Master degree.

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Principal

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Guidelines regarding Human Rights course of 2 credits

1. Students of all the Post Graduate Departments have to undergo the Human Rights Education programme as per the decision of the authorities of the Savitribai Phule Pune University (SPPU).
2. The Courses under the programme will have no affect on the credit/grade of the students of their regular course of study. The grades earned in the papers of this programme will reflect separately in the mark statement of each student.
3. In the HRE Programme there will be three courses. In the three courses, students have to study only two courses during their **FIRST Semester** of Post Graduate Programme

Human Rights course	No. Of credits	Marks
Module -1 Introduction to Human Rights and Duties	1	25
Module -2 Human rights of vulnerable and disadvantaged groups OR Module -3 Human Rights and Duties in India: Law, Policy, Society and Enforcement Mechanism	1	25
Total	2	50

4. Among the three papers, (**Module 1. Human Rights and Duties**) is a compulsory course. In the other two modules (**Module 2. Human Rights of Vulnerable Groups and Module 3. Human Rights and Duties in India: Law, Policy, Society and Enforcement Mechanism**) the students are free to select any one module in consultation with the coordinators or HOD's of the Department.
5. This being only an awareness programme, it would be a self-study programme. The students will have to study the materials of each paper, based on the materials uploaded in the SPPU University Web Site. Apart from the materials available in the web site, students are free to refer to any book of their choice stated in the bibliography or any other book with in the frame work of the syllabi approved by the Authorities of the University and available in the Web site of the University. Apart from the reading materials, lectures delivered by some of the teachers will also be available in the University Web Site.

Semester	Course code	Module Name	Evaluation Pattern	Marks	Internal marks
I	XHR4100	Module -1 & (Module -2 or Module 3)	Flexible evaluation method (Assignment / Seminar / Open book test)	25	50
		(2 credits)	Online examination / Written examination	25	

6. Evaluation of the above mentioned modules will be conducted in the First semester of postgraduate course before End Semester Examination. Internal assessment will be conducted on the basis of following components:
7. There shall be combined passing for (Flexible evaluation method + Online examination/ Written examination) of 40%
8. Only Course Grade must be printed for this course and marks will not be counted for SGPA or CGPA calculations.
9. Student must pass in add on course –Human Rights to get the degree.

The syllabus

Module I: Introduction to Human Rights and Duties

[Credit: 1]

I) Basic Concept

- a) Human Values- Dignity , Liberty, Equality , Justice, Unity in Diversity, Ethics and Morals
- b) Meaning and significance of Human Rights Education

II) Perspectives of Rights and Duties

- a) Rights: Inherent-Inalienable-Universal- Individual and Groups
- b) Nature and concept of Duties
- c) Interrelationship of Rights and Duties

III) Introduction to Terminology of Various Legal Instruments

- a) Meaning of Legal Instrument- Binding Nature
- b) Types of Instruments: Covenant-Charter-Declaration-Treaty-Convention-Protocol Executive Orders and Statutes

IV) United Nations And Human Rights

- a) Brief History of Human Rights- International and National Perspectives
- b) Provision of the charters of United Nations
- c) Universal Declaration of Human Rights- Significance-Preamble
- d) Civil and Political Rights-(Art. 1-21)
- e) Economic, Social and Cultural Rights-(Art.22-28)
- f) Duties and Limitations-(Art. 29)
- g) Final Provision (Art. 30)

Module II: Human rights of vulnerable and disadvantaged groups

[Credit: 1]

I) General Introduction

- a) Meaning and Concept of Vulnerable and Disadvantaged
- b) Groups, Customary, Socio-Economic and Cultural Problems of c)Vulnerable and Disadvantaged Groups

II) Social status of women and children in International and national perspective

- a) Human Rights and Women's Rights –International and National Standards
- b) Human Rights of Children-International and National Standards

III) Status of Social and Economically Disadvantaged people

- a) Status of Indigenous People and the Role of the UN
- b) Status of SC/ST and Other Indigenous People in the Indian Scenario
- c) Human Rights of Aged and Disabled
- d) The Minorities and Human Rights

IV) Human rights of vulnerable groups

- a) Stateless Persons
- b) Sex Workers
- c) Migrant Workers
- d) HIV/AIDS Victims

OR

Module – III: Human Rights and Duties in India: Law, Policy, Society and Enforcement Mechanism

[Credit: 1]

I.Human Rights in Indian Context

- a) Indian Bill of Rights And Sarvodaya
- b) Preamble- Fundamental Rights- Directive Principles-Fundamental Duties

II.Human Rights- Enforcement Mechanism

- a) Human Rights Act, 1993
- b) Judicial Organs- Supreme Court (Art 32) And High Courts(Art 226)
- c) Human Rights Commission- National and State of Maharashtra
- d) Commission of Women, children, Minority, SC/ST
- e) Survey of International Mechanism

III. Human Rights Violations and Indian Polity

- a) Inequalities in society-population-illiteracy-poverty-caste-inaccessibility of legal redress
- b) Abuse of Executive Power-Corruption-Nepotism and favoritism
- c) Human Rights and Good Governance

IV.Role of Advocacy Groups

- a) Professional Bodies: Press, Media, Role of Lawyers-Legal Aid
 - b) Educational Institutions
 - c) Role of Corporate Sector
 - d) NGO's
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Fergusson College (Autonomous), Pune

Guidelines regarding Cyber Security course of 4 credits

1. As per decision taken by the Savitribai Phule Pune University, Cyber Security course of 4 credits has been incorporated in the syllabi of all Post graduate courses.

2. Cyber security course has been divided into four modules namely :

Name of the module	No. Of credits	Marks
Module -1 Pre-requisite in network and Information Security	1	25
Module -2 Security Management	1	25
Module -3 Network Security	1	25
Module-4 System and application security	1	25

3. This course is awareness type and considered as self-study course. Detailed Syllabus and Course material of each module is available on www.fergusson.edu .

4. Evaluation of the above mentioned modules will be conducted in the Second and third semester of postgraduate course before End Semester Examination. Internal assessment will be conducted on the basis of following components:

Semester	Course code	Module Name	Evaluation Pattern	Marks	Internal marks
II	XCS4200	Module -1 & Module -2 (2 credits)	Flexible evaluation method (Home assignment, hands on, practical)	25	50
			Online examination	25	
III	XCS5300	Module -3& Module -4 (2 credits)	Flexible evaluation method (Home assignment, hands on, practical)	25	50
			Online examination	25	

5. Evaluation of the same should be conducted before End Semester Examination.

6. There shall be combine passing for (Flexible evaluation method + Online examination) of 40%

7. Only Course Grade must be printed for this course and marks will not be counted for SGPA or CGPA calculations.

8. Student must pass in add on course, Cyber security to get the degree.

Introduction to Cyber Security / Information Security

Syllabus for 'Introduction to Cyber Security / Information Security' program* for students of University of Pune is given below.

The program will be of 4 credits and it will be delivered in 60 clock hours**.

*: Course material for this program will be developed by CINS

** : These clock hours also includes practical sessions and demonstrations wherever required.

SR. NO.	TOPIC	HOURS	MARKS
1	Module 1: Pre-requisites in Information and Network Security	14	25
	Chapter 1: Overview of Networking Concepts	3	
	Chapter 2: Information Security Concepts	3	
	Chapter 3: Security Threats and Vulnerabilities	5	
	Chapter 4: Cryptography / Encryption	3	
2	Module 2: Security Management	13	25
	Chapter 1: Security Management Practices	7	
	Chapter 2: Security Laws and Standards	6	
3	Module 3: Information and Network Security	13	25
	Chapter 1: Access Control and Intrusion Detection	3	
	Chapter 2: Server Management and Firewalls	4	
	Chapter 3: Security for VPN and Next Generation Technologies	6	
4	Module 4: System and Application Security	20	25
	Chapter 1: Security Architectures and Models	5	
	Chapter 2: System Security	5	
	Chapter 3: OS Security	5	
	Chapter 4: Wireless Network and Security	5	

Detail Syllabus for Credit Course for University of Pune

Module 1: Pre-requisites in Information and Network Security

Chapter 1: Overview of Networking Concepts

1. Basics of Communication Systems
2. Transmission Media
3. Topology and Types of Networks
4. TCP/IP Protocol Stacks
5. Wireless Networks
6. The Internet

Chapter 2: Information Security Concepts

1. Information Security Overview: Background and Current Scenario
2. Types of Attacks
3. Goals for Security
4. E-commerce Security
5. Computer Forensics
6. Steganography

Chapter 3: Security Threats and Vulnerabilities

1. Overview of Security threats
2. Weak / Strong Passwords and Password Cracking
3. Insecure Network connections
4. Malicious Code
5. Programming Bugs

6. Cyber crime and Cyber terrorism
7. Information Warfare and Surveillance

Chapter 4: Cryptography / Encryption

1. Introduction to Cryptography / Encryption
2. Digital Signatures
3. Public Key infrastructure
4. Applications of Cryptography
5. Tools and techniques of Cryptography

Module 2: Security Management

Chapter 1: Security Management Practices

1. Overview of Security Management
2. Information Classification Process
3. Security Policy
4. Risk Management
5. Security Procedures and Guidelines
6. Business Continuity and Disaster Recovery
7. Ethics and Best Practices

Chapter 2: Security Laws and Standards

1. Security Assurance
2. Security Laws
3. IPR

4. International Standards
5. Security Audit
6. SSE-CMM / COBIT etc

Module 3: Information and Network Security

Chapter 1: Access Control and Intrusion Detection

1. Overview of Identification and Authorization
2. Overview of IDS
3. Intrusion Detection Systems and Intrusion Prevention Systems

Chapter 2: Server Management and Firewalls

1. User Management
2. Overview of Firewalls
3. Types of Firewalls
4. DMZ and firewall features

Chapter 3: Security for VPN and Next Generation Technologies

1. VPN Security
2. Security in Multimedia Networks
3. Various Computing Platforms: HPC, Cluster and Computing Grids
4. Virtualization and Cloud Technology and Security

Module 4: System and Application Security

Chapter 1: Security Architectures and Models

1. Designing Secure Operating Systems
2. Controls to enforce security services
3. Information Security Models

Chapter 2: System Security

1. Desktop Security
2. email security: PGP and SMIME
3. Web Security: web authentication, SSL and SET
4. Database Security

Chapter 3: OS Security

1. OS Security Vulnerabilities, updates and patches
2. OS integrity checks
3. Anti-virus software
4. Configuring the OS for security
5. OS Security Vulnerabilities, updates and patches

Chapter 4: Wireless Networks and Security

1. Components of wireless networks
2. Security issues in wireless