UNIVERSITY OF MUMBAI

No. UG/112 of 2016-17

CIRCULAR:-

A reference is invited to the Syllabi relating to the B.Sc. degree course , **vide** this office Circular No. UG/04 of 2011, dated 12th January, 2011 and the Principals of affiliated Colleges in Science are hereby informed that the recommendation made by Board of Studies in Forensic Science at its meeting held on 30th May, 2016 has been accepted by the Academic Council meeting held on 24th June, 2016 **vide** item No. 4.84 and that in accordance therewith, the revised syllabus as per the Choice Based Credit System for S.Y. B.Sc. Forensic Science (Sem.III & IV), which are available on the University's web site (www.mu.ac.in) and that the same has been brought into force with effect from the academic year 2016-17.

21/10/16

MUMBAI – 400 032
October, 2016

(Dr.M.A.Khan)
REGISTRAR

To,

The Principals of the affiliated Colleges in Science.

A.C/4.84/24.06.2016

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No. UG/112-A of 2016 MUMBAI-400 032 25 October, 2016

Copy forwarded with Compliments for information to:-

1) The Deans, faculties of Science,
2) The chairman, Ad-hoc Board of Studies in Forensic Science,
3) The Professor-cum-Director, Institute of Distance & Open Learning (IDOL)
4) The Director, Board of College and University Development,
5) The Co-Ordinator, University Computerization Centre,
6) The Controller of Examinations.

21/10/16

(Dr.M.A.Khan)
REGISTRAR

PTO..

Academic Council :
Item No. :

UNIVERSITY OF MUMBAI

Syllabus for S.Y.B.Sc.

Program : B.Sc.

Course : Forensic Science

(Credit Based Semester and Grading System with effect from the Academic Year 2016-2017)

S.Y.B.Sc. (Forensic Science) (Semester III) Credits
To be implemented from Academic Year 2016-2017

Class	Title	Class Room Instruction Face to Face						50 Hours = 1 Credit				
S.Y. Sem. I		Per Week		15 Weeks (Per Sem)		Per Sem (Hours)		Notional (Hours)		Credits		Total Credits
		L (50 Min)	P (50 Min)	L	P	L	P	L	P	L	P	
USFS 301	Forensic Science – III	3		45		36		100		2		2
USFS 302	Chemical Science - III	3		45		36		100		2		2
USFS 303	Physical Science – III	3		45		36		100		2		2
USFS 304	Biological Science – III	3		45		36		100		2		2
USFS 305	Psychology – III	3		45		36		100		2		2
USFS 306	Computer Science – III	3		45		36		100		2		2
USFS 307	Law - III	3		45		36		100		2		2
USFS 3P1	Forensic Science and Chemical Science Practical		6		90		72		100		2	2
USFS 3P2	Physical Science and Biological Science Practical		6		90		72		100		2	2
USFS 3P3	Psychology and Computer Science Practical		6		90		72		100		2	2
Total	**--**	**21**	**18**	**315**	**270**	**252**	**216**	**700**	**300**	**14**	**6**	**20**

S.Y.B.Sc. (Forensic Science) (Semester IV) Credits
To be implemented from Academic Year 2016-2017

Class	Title	Class Room Instruction Face to Face						50 Hours = 1 Credit				
S.Y. Sem. IV		Per Week		15 Weeks (Per Sem)		Per Sem (Hours)		Notional (Hours)		Credits		Total Credits
		L (50 Min)	P (50 Min)	L	P	L	P	L	P	L	P	
USFS 401	Forensic Science – IV	3		45		36		100		2		2
USFS 402	Chemical Science - IV	3		45		36		100		2		2
USFS 403	Physical Science – IV	3		45		36		100		2		2
USFS 404	Biological Science – IV	3		45		36		100		2		2
USFS 405	Psychology – IV	3		45		36		100		2		2
USFS 406	Computer Science – IV	3		45		36		100		2		2
USFS 407	Environmental Studies	3		45		36		100		2		2
USFS 4P1	Forensic Science and Chemical Science Practical		6		90		72		100		2	2
USFS 4P2	Physical Science and Biological Science Practical		6		90		72		100		2	2
USFS 4P3	Psychology and Computer Science Practical		6		90		72		100		2	2
Total	**--**	**21**	**18**	**315**	**270**	**252**	**216**	**700**	**300**	**14**	**6**	**20**

Course Code	Title	Credits
USFS 407	**Environmental Studies**	**2**

Unit No.	**Contents of Unit**	**No. of Lectures**
Unit I	**Multidisciplinary Nature of Environmental Studies** 1.1 Definition 1.2 Scope and importance 1.3 Need for public awareness	2
Unit II	**Natural Resources** 2.1 Renewable and non-renewable resources **:** Natural resources and associated problems 2.1.1 Forest resources : Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people 2.1.2 Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. 2.1.3 Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies. 2.1.4 Food resources : World food problems, changes caused by agriculture and over-grazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. 2.1.5 Energy resources : Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies. 2.1.6 Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification. 2.2 Role of an individual in conservation of natural resources. 2.3 Equitable use of resources for sustainable lifestyles.	8
Unit III	**Ecosystems** 3.1 Concept of an ecosystem. 3.2 Structure and function of an ecosystem. 3.3 Producers, consumers and decomposers. 3.4 Energy flow in the ecosystem. 3.5 Ecological succession. 3.6 Food chains, food webs and ecological pyramids. 3.7 Introduction, types, characteristic features, structure and function of the following ecosystems : 3.7.1 Forest ecosystem	6

	3.7.2 Grassland ecosystem 3.7.3 Desert ecosystem 3.7.4 Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)	
Unit IV	**Biodiversity and its conservation** 4.1 Introduction - Definition : genetic, species and ecosystem diversity. 4.2 Biogeographical classification of India 4.3 Value of biodiversity : consumptive use, productive use, social, ethical, aesthetic and option values 4.4 Biodiversity at global, National and local levels. 4.5 Inida as a mega-diversity nation 4.6 Hot-sports of biodiversity. 4.7 Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts. 4.8 Endangered and endemic species of India 4.9 Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.	8
Unit V	**Environmental Pollution** 5.1 Definition 5.2 Cause, effects and control measures of : 5.2.1 Air pollution 5.2.2 Water pollution 5.2.3 Soil pollution 5.2.4 Marine pollution 5.2.5 Noise pollution 5.2.6 Thermal pollution 5.2.7 Nuclear hazards 5.3 Solid waste Management : Causes, effects and control measures of urban and industrial wastes. 5.4 Role of an individual in prevention of pollution. 5.5 Pollution case studies. 5.6 Disaster Management : floods, earthquake, cyclone and landslides.	8
Unit VI	**Social Issues and the Environment** 6.1 From Unsustainable to Sustainable development 6.2 Urban problems related to energy 6.3 Water conservation, rain water harvesting, watershed management 6.4 Resettlement and rahabilitation of people; its problems and concerns. Case Studies 6.5 Environmental ethics : Issues and possible solutions. 6.6 Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies. 6.7 Wasteland reclamation. 6.8 Consumerism and waste products. 6.9 Environment Protection Act.	7

	6.10 Air (Prevention and Control of Pollution) Act. 6.11 Water (Prevention and control of Pollution) Act 6.12 Wildlife Protection Act 6.13 Forest Conservation Act 6.14 Issues involved in enforcement of environmental legislation. 6.15 Public awareness.	
Unit VII	**Human Population and the Environment** 7.1 Population growth, variation among nations. 7.2 Population explosion - Family Welfare Programme. 7.3 Environment and human health. 7.4 Human Rights. 7.5 Value Education. 7.6 HIV/AIDS. 7.7 Women and Child Welfare. 7.8 Role of Information Technology in Environment and human health. 7.9 Case Studies.	6
Unit VIII	**Field work** 8.1 Visit to a local area to document environmental assets river/forest/grassland/hill/mountain 8.2 Visit to a local polluted site Urban/Rural/Industrial/Agricultural 8.3 Study of common plants, insects, birds. 8.4 Study of simple ecosystems-pond, river, hill slopes, etc. (Field work Equal to 5 lecture hours)	**5**