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Forest Management

NRM 2208



Autumn 2022

Course Teacher(s)

Dr. Akhlaq Amin Wani

Dr. Aasif Ali Gato

Dr. Shah Murtaza Mushtaq

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1. General Information

Course code	:	NRM 2208
Course Title	:	Forest Management
Number of credits	:	4
Course duration	:	18 weeks
Level	:	Undergraduate
Course Teacher	:	Dr. Akhlaq Amin Wani Dr. Aasif Ali Gattoo Dr. Shah Murtaza Mushtaq
Pre-requisite	:	Basic knowledge in Forestry in the previous semesters.

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2. Course description

The course prepares students for careers as leaders in understanding managing forest resources for protection, environment, recreation and social aspects. It enables student to innovate existing working and management plans.

3. Course objectives

The course prepares students for careers as leaders in understanding sustainable forest management, rotation, normality and forest models based on age, I exposes students to modern tools and applications in forest management. It further guides into planning green spaces, climate change and urban forest management plans.

4. Course outcome

On completion of this course, the students would:

- Gain a wider understanding of managing forests for protection, environment, recreation and social aspects.
- It will enable the students to innovate existing forest working and management plans.
- The students will enhance abilities and skills to plan green spaces in urban areas applying modern tools of management.

5. Course structure

	UNIT 1
Week1	Definition, scope, objective and principles of forest management,
Week2	organization of state forests-

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	Practical: Visit to different forest divisions to study the various stand management aspects including thinning, felling and sale of timber.
Week3	sustained yield-definition, principles and limitations.
	Practical: Study forest organizational set up and forest range administration including booking of offences.
Week4	Sustainable forest management-criteria and indicators-Increasing and progressive yields-
	UNIT 2
Week5	Rotation -definitions-various types of rotations-length of rotations
	choice of type and kind of rotation.
	UNIT 3
Week6	Normal forest-definitions basic factors of normality.
	Practical: Visit to forest plantation- Field Exercise for the estimation of actual growing stock volume.
Week7	Factors governing the yield and growth of forest stands-
Week8	Mid Term Exam
	UNIT 4
Week9	Working plan-preparations-
Week10	objectives and uses-forest maps and their uses.
Week11	Joint forest management-concept and principles-
	Practical: Study the different field exercises for data collection for working plan.
	UNIT 5
Week12	Modern tools in forest management.
Week13	Even-aged and un-even aged models.
Week14	Estimation of growing stock, density, quantity and increment.
	UNIT 6
Week15	Green space planning and design,
	Practical: Visit to urban parks, Green belts and Urban green spaces
Week16	Recreation and well-being,

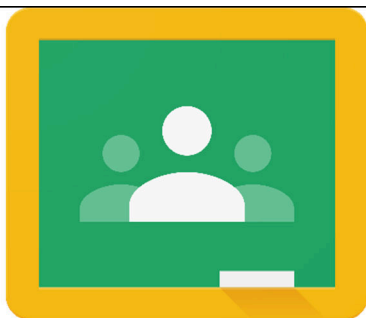
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	Practical: Urban tree cover assessment, Case studies.
Week17	Climate change and sustainability viz-a-viz Urban forest management, Urban forest management plan.
Week18	Practical Exam/Assignment submission/Presentation
	End Tem Exam

5. Course structure

	<p style="text-align: right;">In Class Lectures</p> <p>Students will be able to understand concept of</p> <ol style="list-style-type: none"> 1) Managing forest resources for protection, environment, recreation and social aspects. 2) Innovating existing working and management plans.
	<p style="text-align: right;">Lab/Field Exercises</p> <p>Students will be able to</p> <ol style="list-style-type: none"> 3) Study the various stand management aspects including thinning, felling and sale of timber. 4) Estimate actual growing stock volume. 5) Study the different field exercises for data collection for working plan and urban tree cover assessment.



Google Classroom



On line Tutorials

Google Class Code: 5ohy5va

Students will explore and learn more about

- 1) Basic concepts of forest management, assess forest resources and building forest/management plans through lectures notes and video lectures.

Assignments/Presentation

Students at individual level and in groups will explore and learn more about

- Report on silvicultural systems and management in natural/urban forests.
- SWOT analysis for Working plan effectiveness in managing natural/urban forests
- Growing stock estimation in natural/urban forest area/protected area.
- Preparing a demonstrative working plan.



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Online Tutorial

Forest Management NRM 2208 (2+1) Spring 2022

Stream Classwork People Marks

Forest Management
NRM 2208 (2+1) Spring 2022

Customise

Class code: 5ohy5va

Announce something to your class

Upcoming

Akhlaq Wani posted a new material: JFM Concept and Meaning
31 May

Forest Management NRM 2208 (2+1) Spring 2022

Stream Classwork People Marks

+ Create

Google Calendar Class Drive folder

All topics

Assignment 2 (Presentation)

Assignment 2 (Presentation) Draft

Assignment 1 (Write Up)

Assignment 1 (Write Up) Draft

Videos and Video Links

Introduction to Forest Management

https://www.youtube.com/watch?v=Le36FQn7yGY&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=1&t=175s

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Objectives of Forest Management

https://www.youtube.com/watch?v=WKjzo8MYiIs&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=2

Forest Organization Part-1

https://www.youtube.com/watch?v=ZzqzljSMulU&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=3

Forest Organization Part-2

https://www.youtube.com/watch?v=3Olzog8D2II&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=4&t=74s

Peculiar Features of Forests

https://www.youtube.com/watch?v=hXLqh85Rv8&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=5

Sustained Yield

https://www.youtube.com/watch?v=TEv8nRXaa58&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=6

Progressive Yield and Pre-requisites of sustained Yield

https://www.youtube.com/watch?v=LbIRZw8ac64&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=7

Rotation

https://www.youtube.com/watch?v=0Ac8PTRUorw&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=8

Soil/Land Expectation Value

https://www.youtube.com/watch?v=Uz_6UMreH_Q&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=9

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Choice and Length of Rotation

https://www.youtube.com/watch?v=hOSJb7d3CIY&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=10

Conversion

https://www.youtube.com/watch?v=6YNXDRigZKM&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=11

Normal and Abnormal Forests

https://www.youtube.com/watch?v=8wKf9CHKWxQ&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=12

Schneider's formula of increment

https://www.youtube.com/watch?v=5Uj7NTi6QGw&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=17&t=2s

Normality in Regular/Irregular Forests

https://www.youtube.com/watch?v=CgH-DhV7hVg&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=13

De Liocourt's Law of Diameter distribution

https://www.youtube.com/watch?v=DSiYQNq2ydQ&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=14

Current Annual Increment and Mean Annual Increment

https://www.youtube.com/watch?v=ipk10070-ig&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=15

Pressler's Formula of Increment

https://www.youtube.com/watch?v=cNLHKwXmF7w&list=PLgQLxnNI9f_CfAhgt1TIAvKxu2P5Zss_W&index=16

Growing Stock

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https://www.youtube.com/watch?v=opulxHotsrl&list=PLgQLxnNI9f_CfAhgt1TlAvKxu2P5Zss_W&index=18

Estimation of Growing Stock using MAI method

https://www.youtube.com/watch?v=psLZAT-ljao&list=PLgQLxnNI9f_CfAhgt1TlAvKxu2P5Zss_W&index=19

Estimation of Growing Stock using Yield Table Method

https://www.youtube.com/watch?v=opv7tfrg7YE&list=PLgQLxnNI9f_CfAhgt1TlAvKxu2P5Zss_W&index=20

Relationship between growing stock and yield

https://www.youtube.com/watch?v=o_8w7LZVUtM&list=PLgQLxnNI9f_CfAhgt1TlAvKxu2P5Zss_W&index=21

Reducing factors or Modified areas

https://www.youtube.com/watch?v=Hb_RXoGla2Y&list=PLgQLxnNI9f_CfAhgt1TlAvKxu2P5Zss_W&index=22

Even aged and uneven aged forest models

https://www.youtube.com/watch?v=em53n_v7V8g&list=PLgQLxnNI9f_CfAhgt1TlAvKxu2P5Zss_W&index=24&t=227s

Joint Forest Management (Concept and Meaning)

https://www.youtube.com/watch?v=xjhSi80TFW0&list=PLgQLxnNI9f_CfAhgt1TlAvKxu2P5Zss_W&index=25

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6. Course Assessment

Mode of assessment	% of marks
Mid Term (Objective and Written)	30
Practical/Assignments (Discussion)	20
End Term (Objective and Written)	50
Total	100

7. References

Compulsory

Balakathiresan, S (1986). Essentials of Forest Management, Nataraj Publishers, Dehradun.

Desai, V. (1991). Forest Management in India—Issues and Problems. Himalaya Pub. House, Bombay.

Edmunds, D and Wollenberg, E (2003).Essentials of Forest Management, Natraj Publishers, DehraDun.

-Innes, J. L., & Tikina Anna V. (2017). Sustainable forest management: from principles to practice. Abingdon, Oxon Routledge.

Recommended

Jerome L Clutter et al. (1983). Timber Management: A Quantitative Approach. John Wiley and Sons.

National Working Plan Code (2014). MoEF, New Delhi.

Ram Prakash, (1986). Forest Management, IBD, Dehradun.

Gupta, A. K., S S Singh, S A Wajih, N. Mani and A.K. Singh, 2017. Urban Resilience and Sustainability Through Peri-urban Ecosystems. GEAG, ACCRN & Rockefeller Foundation.

-Pravat Kumar Shit, Hamid Reza Pourghasemi, Partha Pratim Adhikary, Gouri Sankar Bhunia, & Vishwambhar Prasad Sati. (2021). Forest resources resilience and conflicts. Amsterdam: Elsevier

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