

**Curriculum Plan**  
**Dr. Tarkeshwar**

B.Sc. (H) Zoology III Year  
**Paper: Animal Behaviour & Chronobiology**  
**Month-wise plan for Theory**

Shared with: Dr. Varsha Singh

Period Assigned: Theory 02,

Units to be taught:

Month	Week-wise Dates	Unit	Topic to be covered
July	4 <sup>th</sup> – 5 <sup>th</sup> week	1. Introduction to Animal Behaviour	<ul style="list-style-type: none"> <li>• Introduction to the subject, Origin and history of Ethology, Pioneers of Modern Ethology: Karl von Frisch, Ivan Pavlov</li> <li>• Pioneers of Modern Ethology: Konrad Lorenz, Niko Tinbergen;</li> <li>• Proximate and ultimate causes of behaviour;</li> <li>• Tools, techniques and methods used in studying animal behaviour</li> </ul>
August	1 <sup>st</sup> - 2 <sup>nd</sup> week	1. Introduction to Animal Behaviour	<ul style="list-style-type: none"> <li>• Tools, techniques and methods used in studying animal behaviour</li> </ul>
	2 <sup>nd</sup> – 3 <sup>rd</sup> week	3: Social and Sexual Behaviour	<ul style="list-style-type: none"> <li>• Social Behaviour: Concept of Society</li> <li>• Insects' society (Example: Honey bee);</li> </ul>
	4 <sup>th</sup> -5 <sup>th</sup> Week		<ul style="list-style-type: none"> <li>• Life Cycle and social structure in honey</li> <li>• Honey bee caste differentiation and division of labour</li> </ul>
September	1 <sup>st</sup> – 2 <sup>nd</sup> week		<ul style="list-style-type: none"> <li>• Bee communication: round dance and waggle dance and foraging behaviour</li> <li>• Communication and the senses (Chemical, Tactile, Auditory, Visual);</li> </ul>
	3 <sup>rd</sup> week		<ul style="list-style-type: none"> <li>• Altruism, Inclusive fitness, Hamilton's rule</li> <li>• Sexual Behaviour: Asymmetry of sex, Sexual dimorphism, Mate choice</li> </ul>
	4 <sup>th</sup> - 5 <sup>th</sup> week		<ul style="list-style-type: none"> <li>• Intra-sexual selection (male rivalry), Inter-sexual selection (female choice), Courtship behaviour;</li> <li>• Parental care, sexual conflict in parental care.</li> </ul>
October	3 <sup>rd</sup> week	6: Biological Clocks	<ul style="list-style-type: none"> <li>• Relevance of biological clocks</li> <li>• Chronopharmacology, Chronomedicine, Chronotherapy</li> </ul>
	4 <sup>th</sup> – 5 <sup>th</sup> week		<ul style="list-style-type: none"> <li>• Chronopharmacology, Chronomedicine, Chronotherapy</li> </ul>
November	1 <sup>st</sup> -2 <sup>nd</sup> week		<ul style="list-style-type: none"> <li>• Assignments, Presentation, Test, Revision</li> </ul>

**Curriculum Plan**  
**Dr. Tarkeshwar**

B.Sc. (H) Zoology III Year  
**Paper: Animal Behaviour & Chronobiology**  
**Month-wise plan for Practical**

Shared with: Dr. Varsha Singh  
Assigned: Practical Group 1, 4 Period  
Units to be taught:

<b>Month</b>	<b>Weekly schedule</b>	<b>Practical Exercise to be covered</b>
July	5 <sup>th</sup> week	To study nests and nesting behaviour of the birds and social insects.
August	1 <sup>st</sup> - 2 <sup>nd</sup> week	To study the behavioural responses of wood lice to dry and humid conditions.
	3 <sup>rd</sup> -4 <sup>th</sup> week	To study geotaxis behaviour in earthworm
September	1 <sup>st</sup> week	Study and actogram construction of locomotor activity of suitable animal models
	2 <sup>nd</sup> week	To study circadian functions in humans (daily eating, sleep and temperature patterns).
	3 <sup>rd</sup> – 4 <sup>th</sup> week	Study of courtship behaviour in birds and insects from short videos/films.
October	3 <sup>rd</sup> week	Visit to Forest/Wild life Sanctuary/Biodiversity Park/Zoological Park to study and
	4 <sup>th</sup> -5 <sup>th</sup> Week	To record the behavioural activities of animals and prepare a short report.
November	1 <sup>st</sup> week	Revision
	2 <sup>nd</sup> week	Practical examination