



## Applications of Ordinary Differential Equations to Biological system

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | In this book, the biological systems were analyzed with the help of non-linear ordinary differential equations in the form of mathematical modeling. Firstly, I studied how one single species population model varies with respect to other models. Comparing different single species models, I investigated that logistic growth model is more realistic in comparison to the exponential growth model. Secondly, I studied mathematical modeling of two species population namely; predator-prey model and interspecific competition model. The models were analyzed and investigated through their solutions, steady states and trajectories in the phase plane. The two species system was found to be exhibited in stable periodic behavior for all initial conditions where populations were never considered zero. Ordinary differential equations contain a large field of distinct research in mathematical biology but my work has touched a little part of it. I believe that extensive and continuous involvement in mathematical biology research may result in to answer many questions for the development of this topic. | Format: Paperback | Language/Sprache: english | 64 pp.

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