UNIVERSIDADE FEDERAL DE SANTA CATARINA
CENTRO DE CIÊNCIAS FÍSICAS E MATEMÁTICAS
PÓS-GRADUAÇÃO EM MATEMÁTICA PURA E APLICADA

MTM410081 Mathematical Modeling: Biomathematics

Pre-requisite: x-x

Weekly lesson hours: 06h

Discipline syllabus: Models of a single species; Continuous deterministic models and discrete Logistic equation; stochastic models and population models; Equations with delay and diffusion-reaction-diffusion equation

BIBLIOGRAPHIC REFERENCES

Text book:

1. Howard Weiss, A Mathematical Introduction to Population Dynamics, IMPA, XXVII Coloquio Brasileiro de Matematica (2009);
2. James Murray, Mathematical Biology I: An introduction, Springer (2001);
3. Thomas Erneux, Applied Delay Differential Equations, Springer (2009);
4. J.Crank, The Mathematics of Diffusion. CUP.

COMPLEMENTARY BIBLIOGRAPHY

1. Mark Kot, Mathematical Ecology, Cambridge University Press (2001);
2. James Keener and James L. Sneyd, Mathematical Physiology, Springer (2008);
3. Pierre Tu, Dynamical Systems.