

Title of the subject	: Precision nutrition
Subject leader	: Prof. Dr. László Babinszky
Prerequisite	: none
Credit	: 2
Short description of the subject	: Precision nutrition is one of the newest and most dynamically evolving fields of animal nutrition. The concept was developed in the USA. By applying precision nutrition, the farm animals (i.e. primarily cattle, sheep, pig, poultry) are fed so that their nutrient requirements are met with the maximum possible precision, ensuring thereby the most efficient and safest production of animal products, the best product quality and at the same time the lowest level of environmental pollution. The concept is based on information technology and the extensive international databases. Hence the term “information intensive nutrition”. Its more important fields are: review of the most recent requirement levels by species, age groups and categories; factors influencing the requirements; interactions between nutrients and minerals and vitamins; determining the requirements and predicting the product quality using mathematical programs (models); the potential for reducing N, P and CH ₄ excretion using various feeding systems and technologies. Upon the completion of this subject the students gain comprehensive knowledge about the relationship between animal nutrition and information technology; about the complex issues of meeting nutrient requirements, product quality and environmental pollution by animal species; and it contributes to establishing the product chain approach of the students.
Compulsory reading	: Cox, S. (ed) 2007. Precision livestock farming '07. Wageningen Academic Publishers Wageningen, The Netherlands Digital handouts issued by the department.
Further reading	: Mougham, P.J. , Verstegen, M.W.A. and Visser-Reyneveld, M.I. (Eds) 1995 Modeling growth in the pig. Wageningen Pers, Wageningen, NL McNamara, P.J., France, J., Beaver, D. (Eds) 2000 Modelling nutrient utilization in farm animals. CABI Publishing, Oxford University Press