

## **Anexo II – Resolução nº 133/2003-CEPE**

### **UNIVERSIDADE ESTADUAL DO OESTE DO PARANÁ PRÓ-REITORIA DE PESQUISA E PÓS-GRADUAÇÃO**

**PLANO DE ENSINO - PERÍODO LETIVO/ANO: 2026/2º**

**Programa: Pós-Graduação em Zootecnia em Associação entre Unioeste e UTFPR**

**Área de Concentração: Produção e Nutrição Animal**

**Mestrado (X)                      Doutorado (X)**

**Centro: Ciências Agrárias**

**Campus: Marechal Cândido Rondon**

#### **DISCIPLINA**

| <b>Código</b> | <b>Nome</b>                                                                                                   | <b>Carga horária</b>  |                       |               |
|---------------|---------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|---------------|
|               |                                                                                                               | <b>AT<sup>1</sup></b> | <b>AP<sup>2</sup></b> | <b>Total</b>  |
|               | <b>Tópicos Especiais I – Interactions between Nutrition, Reproduction and Health in Beef and Dairy Cattle</b> | <b>15h/a</b>          | <b>-</b>              | <b>15 h/a</b> |

<sup>(1)</sup> Aula Teórica; <sup>(2)</sup> Aula Prática)

#### **Ementa**

Study of the physiological and metabolic mechanisms linking nutrition, reproductive performance and health in beef and dairy cattle. Evaluation of the effects of nutritional status, energy balance, protein, lipids, and minerals on reproductive function in males and females. Interactions among metabolism, endocrine regulation, and reproduction. Influence of nutrition on puberty, estrous cyclicity, fertility, pregnancy, embryonic and fetal development, as well as offspring health and performance. The role of nutrition in preventing and mitigating metabolic and reproductive disorders. Advanced topics in fetal programming.

#### **Objetivos**

Understand the physiological and metabolic mechanisms connecting nutrition, reproduction and health in cattle.

### **Conteúdo Programático**

1. Mineral Nutrition, and Health
2. Mineral Disorders in Ruminants
3. Nutrition and Metabolic Disorders in Ruminants
4. Fetal programming
5. Introduction to Nutritional-Reproductive Interactions
6. Reproductive Physiology of Cattle
7. Energy Metabolism and Reproduction
8. Protein Nutrition and Reproduction
9. Lipids, fatty acids, and reproductive function.
10. Nutrition During Critical Reproductive Stages

### **Atividades Práticas – grupos de ..... alunos**

Not applicable.

### **Metodologia**

Expository lectures and interactive class discussions with evaluation of published scientific papers

### **Avaliação**

(critérios, mecanismos, instrumentos e periodicidade)

Assessment will be based on the following components:

- **30%** – Active participation in class discussions and critical evaluation of the scientific literature.
- **50%** – Written assignments and/or oral presentations on selected topics to be determined by the instructor.

### **Bibliografía básica**

- Senger, P.L. Pathways to Pregnancy and Parturition. 3rd ed. Pullman, WA: Current Conceptions Inc., 2012.
- Beede, D.K. (Ed.). Large Dairy Herd Management. 3rd ed. Champaign, IL: American Dairy Science Association, 2017.
- Church, D.C.; Pond, W.G.; Pond, K.R. Basic Animal Nutrition and Feeding. 5th ed. Hoboken, NJ: John Wiley & Sons, 2002.
- Dijkstra, J.; Forbes, J.M.; France, J. (Eds.). Quantitative Aspects of Ruminant Digestion and Metabolism. 2nd ed. Wallingford, UK: CABI Publishing, 2005.
- McDonald, P.; Edwards, R.A.; Greenhalgh, J.F.D.; Morgan, C.A.; Sinclair, L.A.; Wilkinson, R.G. Animal Nutrition. 7th ed. Harlow, UK: Pearson Education, 2011.
- Hafez, E.S.E.; Hafez, B. Reproduction in Farm Animals. 7th ed. Ames, IA: Wiley-Blackwell, 2000.
- Moran, J. Managing High Producing Dairy Cows in the Tropics. 2nd ed. Collingwood, Australia: CSIRO Publishing, 2012.

### **Bibliografía complementar**

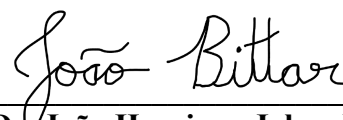
- National Academies of Sciences, Engineering, and Medicine. Nutrient Requirements of Dairy Cattle. 8th revised ed. Washington, DC: National Academies Press, 2021.
- National Academies of Sciences, Engineering, and Medicine. Nutrient Requirements of Beef Cattle. 8th revised ed. Washington, DC: National Academies Press, 2016.
- Freer, M.; Dove, H. Nutrient Requirements of Domesticated Ruminants. Melbourne: CSIRO Publishing, 2007.

**Docentes**

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| <b>Prof. Dr. Ériton Egidio Lisboa Valente</b><br><b>Prof. Dr. João Henrique Jabur Bittar</b> |
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**Data: 19/06/2026**

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**Dr. Ériton Egidio Lisboa Valente**

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**Dr. João Henrique Jabur Bittar**