



**CURRICULAR STRUCTURE**

FORM Nº 19 – **COURSE SYLLABUS/ACTIVITY**

**CONTENT OF STUDIES**

**PROGRAMMING, SIMULATIONS AND ANALYSIS OF SYSTEMS**

<b>SUBJECT NAME/ACTIVITY</b> Introduction to Machine Learning	<b>CODE</b> TEE00163	<b>CONCEPTION ( )</b> <b>ALTERATION: NAME ( ) CL ( )</b> <b>TRANSLATION: (X)</b>
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DEPARTMENT/IMPLEMENTATION COORDINATION: ELECTRICAL ENGINEERING DEPARTMENT

COURSE LOAD: 60 HOURS      THEORETICAL: 60 HOURS      PRACTICAL: 0 HOURS      INTERNSHIP: 0 HOURS

**PROGRAM CONTENT**

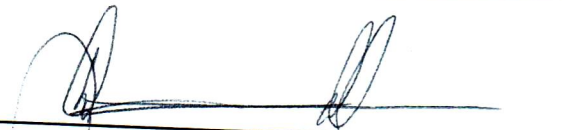
MACHINE LEARNING METHODS; ARTIFICIAL NEURAL NETWORKS; SUPPORT VECTOR MACHINE; NON-PARAMETRIC METHODS FOR DENSITY PROBABILITY FUNCTIONS ESTIMATION; DATA GROUPING.

**BASIC BIBLIOGRAPHY:**

1. S. O. HAYKIN; "REDES NEURAIS: PRINCÍPIOS E PRÁTICAS", 2ª. EDIÇÃO, BOOKMAN, 2001;
2. C. M. BISHOP; "PATTERN RECOGNITION AND MACHINE LEARNING", SPRINGER, 2006;
3. R. O. DUDA, P. E. HART, D. G. STORK; "PATTERN CLASSIFICATION", 2ND. EDITION, JOHN WILEY & SONS, 2001;
4. V. VAPNIK; "STATISTICAL LEARNING THEORY", NEW YORK, JOHN WILEY & SONS, 1998;
5. B. SCHÖLKOPF, A.J. SMOLA; "LEARNING WITH KERNELS: SUPPORT VECTOR MACHINES, REGULARIZATION, OPTIMIZATION AND BEYOND", CAMBRIDGE, MASSACHUSETTS, 2002.

**COMPLEMENTARY BIBLIOGRAPHY:**


1. J. P. S. CATALÃO (ED.), "ELECTRIC POWER SYSTEMS: ADVANCED FORECASTING TECHNIQUES AND OPTIMAL GENERATION SCHEDULING", CRC PRESS, 2012;
2. S. RUSSEL, P. NORVIG; "INTELIGÊNCIA ARTIFICIAL", EDITORA CAMPUS, 2A. EDIÇÃO, 2003;
3. S. O. HAYKIN, "NEURAL NETWORKS AND LEARNING MACHINES", PRENTICE HALL, 3RD. EDITION, 2008.

  
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COURSE COORDINATOR

DATE 23 / 01 / 2018

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November/2017

  
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HEAD OF ELECTRICAL ENGINEERING DEPARTMENT

DATE 23 / 01 / 2018

Prof. Vitor Hugo Ferreira, D.Sc.  
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