



**CURRICULAR STRUCTURE**

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

**CONTENT OF STUDIES**

**ANALOGUE AND DIGITAL ELECTRONICS**

**SUBJECT NAME/ACTIVITY**  
Power Electronics

**CODE**  
TEE00127

**CONCEPTION ( )**  
**ALTERATION: NAME ( ) CL ( )**  
**TRANSLATION: (X)**

**DEPARTMENT/IMPLEMENTATION COORDINATION:** ELECTRICAL ENGINEERING DEPARTMENT

**COURSE LOAD:** 60 HOURS

**THEORETICAL:** 60 HOURS

**PRACTICAL:** 0 HOURS

**INTERNSHIP:** 0 HOURS

**PROGRAM CONTENT**

SEMICONDUCTORS POWER DEVICES: DIODES, THYRISTOR, TRIAC, GTO, BJT TRANSISTOR, MOSFET, IGBT. AC/DC CONVERTERS (RECTIFIERS), DC/DC CONVERTERS (CHOPPERS), DC/AC CONVERTERS (INVERTERS) AND AC/AC CONVERTERS - CYCLE-CONVERTERS.

**BASIC BIBLIOGRAPHY:**

1. I. BARBI E D. C. MARTINS, ELETRÔNICA DE POTÊNCIA - CONVERSORES CC-CC BÁSICOS NÃO ISOLADOS, ED. DOS AUTORES, 2000;
2. M. H. RASHID, POWER ELECTRONICS, CIRCUITS, DEVICES AND APPLICATIONS, PRENTICE-HALL, INC., THIRD EDITION, 2004;
3. N. MOHAN, T. M. UNDELAND AND W. P. ROBBINS, POWER ELECTRONICS, JOHN WILEY & SONS, THIRD EDITION, 2003;
4. AHMED, A., ELETRÔNICA DE POTENCIA, PEARSON BRASIL, 2000;
5. B. K. BOSE, MODERN POWER ELECTRONICS AND AC DRIVES, PRENTICE HALL; 1ST EDITION, 2001;
6. J. G. KASSAKIAN, M. F. SCHLECHT, G. C. VERGHESE, PRINCIPLES OF POWER ELECTRONICS, ADDISON-WESLEY, 1991.

**COMPLEMENTARY BIBLIOGRAPHY:**

1. HART, D. W., ELETRÔNICA DE POTENCIA, EDITORA BOOKMAN, 2011;
2. MARC COUËDIC, CIRCUITOS INTEGRADOS PARA TRISTORES Y TRIACS: DESCUBRA Y DOMINE LA ELECTRÓNICA DE POTENCIA, MARCOMBO, 1999;
3. B. K. BOSE, MODERN POWER ELECTRONICS AND AC DRIVES, PRENTICE HALL; 1ST EDITION, 2001.

COURSE COORDINATOR

DATE 23 / 01 / 2018

November/2017

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HEAD OF ELECTRICAL ENGINEERING DEPARTMENT

DATE 23 / 01 / 2018

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