



# UNIVERSIDADE FEDERAL DO CEARÁ

**FEDERAL UNIVERSITY OF CEARÁ  
OFFICE OF THE VICE PROVOST FOR UNDERGRADUATION (PROGRAD)  
COORDINATION FOR PROJECT AND CURRICULUM DEVELOPMENT  
CURRICULUM DEVELOPMENT DIVISION**

**1. Academic unit offering the curricular component** (Faculty, Center, Institute, Campus):

Center of Technology

**2. Department offering the curricular component** (when applicable):

Teleinformatics Engineering Department

**3. Undergraduate course(s) offering the curricular component**

| Code of the Course | Name of the Course             | Course Degree <sup>1</sup> | Curriculum (Year/Semester) | Nature of the Component <sup>2</sup> | Semester of Offer <sup>3</sup> | Habilitation <sup>4</sup> |
|--------------------|--------------------------------|----------------------------|----------------------------|--------------------------------------|--------------------------------|---------------------------|
| 91                 | Telecommunications Engineering | Bachelor                   | 2015.1                     | Optional                             | -                              | -                         |

**4. Name of the curricular component:**

Integrated Actions in Science and Technology IV

**5. Code of the curricular component** (filled by PROGRAD):

TI0138

| 6. Prerequisites | No ( ) | Yes (x) |  |
|------------------|--------|---------|--|
|                  |        | Code    | Name of the curricular component / activity      |
|                  |        | TI0137  | Integrated Actions in Science and Technology III |
|                  |        |         |  |
|                  |        |         |  |

| 7. Corequisite | No (x) | Yes ( ) |   |
|----------------|--------|---------|---|
|                |        | Code    | Name of the curricular component / activity |
|                |        |         |   |
|                |        |         |   |

| 8. Equivalences | No (x) | Yes ( ) |   |
|-----------------|--------|---------|---|
|                 |        | Code    | Name of the curricular component / activity |
|                 |        |         |   |
|                 |        |         |   |

**9. Day period of the curricular component** (more than one option can be selected):

Morning       Afternoon       Night

<sup>1</sup> Fill with *Bachelor (Engineer), Licenciante, or Technologist.*

<sup>2</sup> Fill with *Mandatory, Optional, or Elective.*

<sup>3</sup> Fill when mandatory.

<sup>4</sup> When elective, fill with the habilitation or emphasis to which the curricular component is linked.

**10. Regime of the curricular component:** Semester Yearly Modular**11. Justificatory for the creation/regulamentation of this curricular component**

The Integrated Activities in Science and Technology (AICT) constitute a set of activities that aims to provide the student with the minimum maturity required to integrate the knowledge acquired in the Engineering Sciences curricular components with those of Engineering, in a progressive and controlled form, promoting a higher capacity of performing individually or with assistance the integration of the contents of in-depth materials within the framework of the binomial theory-practice.

**12. Syllabus:**

Variable programmatic content.

**13. Workload description**

| <b>Number of Weeks:</b> | <b>Number of Credits:</b> | <b>Total Workload in Hours:</b> | <b>Theory Workload in Hours:</b> | <b>Practice Workload in Hours:</b> |
|-------------------------|---------------------------|---------------------------------|----------------------------------|------------------------------------|
| 16                      | 02                        | 32                              | 16                               | 16                                 |

**14. Basic bibliography:**

- 1- Livros and artigos científicos referentes ao tema escolhido.
- 2- Fundamentos de Metodologia Científica; Marina de Andrade Marconi and Eva Maria Lakatos; 7th edition; Editora Atlas, 2010.
- 3- Fundamentos de Metodologia – Um Guia para a Iniciação Científica; Aidil Jesus Paes de Barros and Neide Aparecida de Souza Lehfeld; 2nd edition; Makron Books, 2000.
- 4- Metodologia Científica; Amado L. Cervo, Pedro A. Bervian and Roberto da Silva; 6th edition; Pearson / Prentice Hall, 2006.

**15. Complementary bibliography:**

- 1- Metodologia para a Pesquisa and Desenvolvimento; Carlos Fernando Jung; 1st edition; Axcel, 2004.
- 2- The Art of Scientific Investigation; William I. B. Beveridge; Blackburn Press; 2004.
- 3- Scientific Method in Practice; Hugh G. Gauch Jr.; Cambridge University Press; 2002.
- 4- An Introduction to Scientific Research; E. Bright Wilson Jr.; Dover Publications; 1991.
- 5- Scientific Integrity; Francis L. Macrina; 3rd edition; ASM Press; 2005.