SUBJECT PROGRAM

I. IDENTIFICATION OF THE SUBJECT

<table>
<tr><td colspan="2">Subject: Computer Networks</td><td>Acronym: INF-256</td><td colspan="3">Approval date
10/11/2016
(CC.DD. Agreement 13/2016)</td></tr>
<tr><td>UTFSM Credits: 3</td><td rowspan="2">Prerequisites:
INF-246</td><td rowspan="2">Exam: Does not have</td><td colspan="3">Faculty.</td></tr>
<tr><td>SCT Credits: 5</td><td colspan="3">Computer Science Department</td></tr>
<tr><td>Lecture Hours Weekly: 3</td><td>Weekly Assistantship Hours: 1.5</td><td>Weekly Laboratory Hours: 1.5</td><td colspan="3">Semester in which it is taught</td></tr>
<tr><td colspan="3"></td><td>Odd _</td><td>Pair</td><td>Both</td></tr>
<tr><td colspan="6">Formative axis: Applied Engineering - Development and Management of ICT Infrastructure</td></tr>
<tr><td colspan="6">Total time dedicated to the subject: 139 chronological hours</td></tr>
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Subject Description.

Students learn the fundamentals on which computer networks and their associated services are built. They configure, manage simple networks and use their services through applications. The student integrates the concepts that support modern computer networks and the services that are built on them as a substrate of distributed information systems.

Entry requirements

- It uses the Linux operating system.

Contribution to the graduation profile

Specific Competence

- Understand and analyze the operation of computers at the level of hardware, operating system, digital communications, and distributed systems.

Transversal Competencies

- Communicate oral and written information effectively within the organizations in which one works, as well as with entities in the environment.
- Integrate, coordinate and direct work teams, applying knowledge of human, technical, economic and time management.
- Incorporate a dynamic of permanent updating of their skills, strengthening their innovative and entrepreneurial spirit.

Learning outcomes expected to be achieved in this subject

- **Manage** simple networks, **configuring** network devices.
- **Build** simple distributed applications, **using** the networking services of a computer.
- **Defines** the needs of a network application, **listing** the requirements imposed by the applications.

Thematic contents

- Computer networks and Internet.
- The application layer.
- The transport layer.
- The network layer.
- Local area networks.
- Wireless networks and mobility.

Teaching and learning methodology.

- Expository classes supported by audiovisual media.
- I work in the laboratory developing experiences based on real cases.
- Project-based learning.

Evaluation and grading of the subject. (Adjusted to Institutional Regulations-Regulation No. 1)

Qualification approval and requirements.	The evaluation of the subject consists of: three exams (C_1, C_2 and C_3) and a Laboratory note (T). NF is the final grade and PC is the average of the three tests. $$NF = PC \times (1-\alpha) + \alpha \times T$$ $$Donde: \quad PC = \frac{C_1+C_2+C_3}{3} \qquad T \geq 60$$ $$y \qquad \alpha = \begin{cases} 0.30 & \text{Si } PC \geq 60 \\ 0 & PC \leq 30 \\ \frac{PC}{100} - 0.3 & \sim \end{cases}$$

Resources for learning.

Virtual platform.

Bibliography:

Guide Text	• James, F. Kurose and Keith W. Ross. (2013). Computer Networking: A Top-Down Approach, Pearson, 6 th Edition, May 2013.
Complementary or Optional	• Peterson L. and Davie B. (2011). Computer Networks: A System Approach, Morgan Kaufmann Publishers, Fifth Edition.

II. CALCULATION OF NUMBER OF HOURS OF DEDICATION - (SCT-Chile) - SUBJECT SUMMARY TABLE.

ACTIVITY	Number of hours of dedication		
	Number of hours per week	Number of weeks	Total number of hours
PRESENCE			
Lecture or theoretical classes	3	14	42
Assistantship/Exercises	1.5	12	18
Industrial visits (from Field)			
Laboratories / Workshop	1.5	4	6
Evaluations (exams, others)	1.5	3	4.5
Others (specify)			
NO PRESENCE			
Assistantship			
Mandatory tasks			
Personal Study (Individual or group)	4	fifteen	60
Others (Preparation of Laboratory)	2	4	8
TOTAL (HOURS)			**139**
Total number of TRANSFERABLE CREDITS			**5**