230314 - HTEL - Telecommunication History

Coordinating unit: 230 - ETSETB - Barcelona School of Telecommunications Engineering
Teaching unit: 739 - TSC - Department of Signal Theory and Communications
Academic year: 2016
Degree: BACHELOR'S DEGREE IN TELECOMMUNICATIONS SCIENCE AND TECHNOLOGY (Syllabus 2010). (Teaching unit Optional)
BACHELOR'S DEGREE IN AUDIOVISUAL SYSTEMS ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN TELECOMMUNICATIONS TECHNOLOGIES AND SERVICES ENGINEERING (Syllabus 2015). (Teaching unit Optional)
BACHELOR'S DEGREE IN TELECOMMUNICATIONS SYSTEMS ENGINEERING (Syllabus 2010). (Teaching unit Optional)
BACHELOR'S DEGREE IN NETWORK ENGINEERING (Syllabus 2010). (Teaching unit Optional)
BACHELOR'S DEGREE IN ELECTRONIC SYSTEMS ENGINEERING (Syllabus 2009). (Teaching unit Optional)
ECTS credits: 2
Teaching languages: Spanish

Teaching staff
Coordinator: Delgado Penin, Jose Antonio
Others: Delgado Penin, Jose Antonio

Opening hours
Timetable: During seminar days. Morning and afternoon

Prior skills
Ability to read and understand articles and books in English

Requirements
To have overcome the 2nd Grade course or to be studying Third Grade course or to realize some recognized Master's degree

Teaching methodology
Talks for two hours (Must to be present the student). Interval of rest every hour. Oral Presentation of a document on the history of Telecommunications. Realization and delivery of a document written about the topic presented as oral Presentation.

Learning objectives of the subject
The Seminar is transversal (History and Technology) or interdisciplinary and is divided into four different topics related with Telecommunication Services used by humankind. It explained that each service has evolved differently and in
varying stages: first, there was the telegraph, then the telephone; then the radio in various forms and finally Infocomunicación (Internet Services).

The sequential structure of the topics into account the presence of the Services in temporal succession related with technologies that endured / support today.

Understand, acquire, understand and assimilate as much information on the most important services of Telecommunication and independently to get an overview of each: In the four topics a first objective of reaching pursued. This will involve, consider the historical / social / political situation in the development of services and who were the actors (inventors, scientists, operators, standards authorities, etc).

The second objective will focus on narrow an overview of the entire sector Telecommunications considering the relationships that existed / exist between the services over time.

**Study load**

<table>
<thead>
<tr>
<th>Total learning time: 50h</th>
<th>Hours large group: 20h</th>
<th>40.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self study: 30h</td>
<td>60.00%</td>
</tr>
</tbody>
</table>
## Content

<table>
<thead>
<tr>
<th>TELECOMMUNICATION HISTORY</th>
<th>Learning time: 2h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 2h</td>
</tr>
</tbody>
</table>

### Description:

Part 0. Introduction
Telecommunication History concept. An approach
Scientific basis of Telecommunication: 18th and 19th centuries. Pioneers
International Organizations with influence on Telecommunications
Docent methodology to follow the Seminary
Topics Program
Bibliography

Part 1. Telegraphy
Optical telegraphy as first technology
Electrical Telegraphic systems: National and International networks
Telegraphic Services.
Pioneers and relationship with your historical situation
Bibliography

Part 2. Telephony
Premises to new technology based on oral telegraphy?
Telephonic Electrical devices: Meucci-Bell
Telephonic transmission systems: Multicarrier
Telephony switching. Networking. Historical evolution
Telephony Services. Evolution
Pioneers and relationship with your historical situation
Bibliography

Part 3. Radiocommunication
Introduction
Scientific basis of Radio communication. Pioneers
Spectrum management and Radiocom. Services
Radio Systems: terrestrial and satellite history
Radio networking history
Pioneering activities on Radio Communication until today
Bibliography

Part 4. Data Networks and Internet
Introduction
Data transmission history
Data networks form the point of view of Telecoms and Informatics
Data Services evolution from Narrow to Broad bands
Internet history
Pioneering activities on Data Networks and Internet
Bibliography
Participation in the classroom: 25%.
To be present in the classroom and interventions related to the ideas developed in the talks be considered positive. The teacher will propose activities based on texts, or documents.
Work: 50%.
Work in Team of two people. Each team must be a tab containing a minimum of 4 pages and Max of 6 pages (30 lines per page) on the history of a specific technology and its principal inventor/creators. Details of how to proceed indicated at the beginning of the oral and public Seminar
Public talk of essay/work: 25%.
Students must make a public presentation of their work using "PowerPoint" (ppt format) the last and penultimate day of the seminar (the maximum number of slides to present will be six) the details of how to proceed indicated at the beginning of the seminar.

Qualification system

Regulations for carrying out activities

It is mandatory indicating ETSETB

Bibliography

Basic:


Complementary:


Others resources:

Hyperlink

Nombre recurso

Resource