Universida_{de}Vigo

Subject Guide 2017 / 2018

IDENTIFYING DATA Physics: Analysis of Linear Circuits Subject Physics: Analysis of Linear Circuits Code VOSG300/01201 Study Degree in programme Telecommunications Technologies Technologies Degrineering Descriptors ECTS Credits Choose Year Quadmester 6 Basic education 1st 2nd Teaching Spanish language Department Coordinator Garcia-Tuñón Blanca, Inés Coordinator Garcia-Tuñón Blanca, Inés Coordinator Garcia-Tuñón Blanca, Inés Gordinator Garcia-Tuñón Blanca, Inés Coordinator Garcia-Tuñón Blanca, Inés Coordinator Garcia-Tuñón Blanca, Inés Condition Carcia-Tuñón Blanca, Inés Gordinator Garcia-Tuñón Blanca, Inés Coordinator Garcia-Tuñón Blanca, Inés Condition Carcia-Tuñón Blanca, Inés Gordinator Garcia-Tuñón Blanca, Inés Coordinator Garcia-Tuñón Blanca, Inés Cordinator Garcia-Tuñón Blanca, Inés Gordinator Garcia-Tuñón Blanca, Inés Coordinator Garcia-Tuñón Blanca, Inés Cordinator Garcia-Tuñón Blanca, Inés Cordinator Garcia-Tuñón Blanca, Inés Cordinator Garcia-Tuñón Blanca, Inés Bergerine electronic systems is based. These include lumped circuit principles and abstractions on which the design of descriplo		Subje	Ct Guiue .	2017/2018
Physics: Analysis of Linear Circuits Subject Physics: Analysis of Linear Circuits Subject Physics: Analysis of Linear Circuits Code V05G300/01201 Suby Degree in Programme Telecommunications Technologies Engineering Descriptors ECTS Credits Choose Year Quadmester 6 6 Basic education 1st 2nd Teaching Spanish Basic education 1st 2nd Teaching Spanish Code Code Code Code Code Code Code Code				
Subject Physics: Analysis of Linear Circuits Code Code V05G300V01201 Study Degree in orgarame. Telecommunications Technologies Engineering Descriptors Descriptors ECTS Credits Choose Year Quadmester G Basic education 1st Teaching Spanish Teaching Inguage Department Coordinator García-Tuñon Blanca, Inés Coordinator García Mato, Carmen Gárcía Mato, Carmen Gárcía-Tuñon Blanca, Inés Gómez Araújo, Marta Prol Rodriguez, Miguel Prol Rodriguez, Miguel E-mail Inesgl@com.uvigo.es Web http://www.fait.uvigo.es Web http://www.fait.uvigo.es Coordinators set include lumped circuit principles and abstractions on which the design of description electronic systems is based. These include lumped circuit principles and abstractions on which the design of description electronic systems is based. These include lumped circuit principles and abstractions on the description analysis (integer-differential analysis, phasors and inpedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Code Sc3: The knowledg				
Linear Circuits Code V056300/01201 Study Degree in programme Telecommunications Technologies Engineering Descriptors ECTS Credits Choose Year Ouadmester 6 Basic education 1st 2nd Descriptors Code Triptors Code Tr				
Code V05G300/01201 Study Degree in programme Telecommunications Technologies Engineering Choose Year Quadmester 6 Basic education 1st 2nd 6 Basic education 1st 2nd Ingruage Image and the provide of t				
Study Degree in programme Telecommunications Technologies Engineering Descriptors ECTS Credits Choose Year Quadmester 6 Basic education 1st 2nd Teaching Spanish Basic education 1st 2nd Department Coordinator García-Tuñón Blanca, Inés Coordinator García-Tuñón Blanca, Inés Coordinator García-Tuñón Blanca, Inés García - Tuñón Blanca, Inés García-Tuñón Blanca, Inés Coordinator García-Tuñón Blanca, Inés Coordinator García-Tuñón Blanca, Inés García - Tuñón Blanca, Inés García-Tuñón Blanca, Inés Coordinator García-Tuñón Blanca, Inés General The course introduces the fundamentals of the lumped circuit principles and abstractions on which the design of Gereral The course introduces the fundamentals of the lumped circuit models for sources, resistors, Inductors, and capacitors. It intends to present some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (Integer-differential analysis, phasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Codemetace Code S2 CG3: The knowledge of basic subjects and technologies that enables the student				
programme Telecommunications Technologies Engineering Descriptors ECTS Credits Choose Year Quadmester 6 6 Basic education 1st 2nd Teaching Spanish language Department Coordinator García-Tuñón Blanca, Inés Coordinator García-Tuñón Blanca, Inés Cordinator García-Tuñón Blanca, Inés Cardenal López, Antonio José García Mateo, Carmen García-Tuñón Blanca, Inés Cordinator Mateo, Carmen García-Tuñón Blanca, Inés Cordinator Mateo, Carmen García-Tuñón Blanca, Inés Compact Structures Prol Rodríguez, Miguel E-mail Inesgt@com.uvigo.es Web http://www.faitic.uvigo.es Web http://www.faitic.uvigo.es Web http://www.faitic.uvigo.es Competencies Code Code Code Code Code Code Code Code				
Technologies Engineering Descriptors ECTS Credits Choose Year Quadmester 6 Dasic education 1st 2nd Teaching Spanish Descriptors ECTS Credits 2nd Department Coordinator García-Tuñón Blanca, Inés Coordinator García-Tuñón Blanca, Inés Coordinator García-Tuñón Blanca, Inés Cordinator García-Tuñón Blanca, Inés García Mateo, Carmen García-Tuñón Blanca, Inés García-Tuñón Blanca, Inés General The course introduces the fundamentals of the lumped circuit principles and abstractions on which the design of description electronic systems is based. These include lumped circuit models for sources, resistors, inductors, and capacitors. It intends to present some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (integer-differential analysis, phasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Competencies Cod: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations 8 CG3: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations 8				
Engineering Descriptors ECTS Credits Choose Year Quadmester 6 Basic education 1st 2nd Teaching Spanish Ianguage Instrument Coordinator Cardenal López, Antonio José Coordinator García-Tuñón Blanca, Inés Cardenal López, Antonio José García Mateo, Carmen García Mateo, Carmen García Mateo, Carmen García Mateo, Carmen García Mateo, Carmen García Mateo, Carmen Froit Rodríguez, Miguel E-traini Insegt@com.uvigo.es Web Http://www.faitic.uvigo.es Web http://www.faitic.uvigo.es Metodiages to subjects and technologies for sources, resistors, inductors, and conspectors. Conventional analysis (Integer-differential analysis, phasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Code Gard: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations. Code Code García Mateo, Lope, Jeaching and continuous quality improvement, showing a flexible, open and technologies. as well as to give				
6 Basic education 1st 2nd Teaching Spanish Ianguage Department Coordinator García-Tuñón Blanca, Inés Coordinator García-Tuñón Blanca, Inés García Mateo, Carmen García Mateo, Carmen García Mateo, Carmen García Mateo, Carmen García Mateo, Carmen García Mateo, Carmen García Mateo, Carmen Prol Rodríguez, Miguel Prol Rodríguez, Miguel E-mail Inesguêcom.uvigo.es Web http://www.faitic.uvigo.es General The course introduces the fundamentals of the lumped circuit principles and abstractions on which the design of description electronic systems is based. These include lumped circuit models for sources, resistors, inductors, and capacitors. It intends to presents some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (integer-differential analysis, phasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Code Bac CG3: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations B4 CG4: The ability to solve problems with initiative, to make creative decisions and to communicate and transmit knowledge and skills. understanding the ethical and professional responsibility of the Technical Telecommunication Engi				
Teaching Spanish Janguage Department Coordinator García-Tuñón Blanca, Inés Edurers García Tuñón Blanca, Inés García-Tuñón Blanca, Inés García-Tuñón Blanca, Inés Gárcía-Tuñón Blanca, Inés General The course introduces the fundamentals of the lumped circuit principles and abstractions on which the design of description electronic systems is based. These include lumped circuit models for sources, resistors, inductors, and capacitors. It intends to present some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (Integrat-differential analysis, Intagences in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Code Edertheability to solve problems with initiative, to make creative decisions and to communicate and transmit knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 C4. The ability to solve problems with initiatical and professional responsibility of the Technical Telecommunication Engineer activity. C4 C4. FIFAH: Comprehension and command of basic concepts in linear systems and their related functions and transforms; electric circ	Choose	Year	Quadm	nester
Ianguage	Basic education	1st	2nd	
Department Coordinator García-Tuñón Blanca, Inés Coordinator García-Tuñón Blanca, Inés García Mateo, Carmen García-Tuñón Blanca, Inés Gómez Araújo, Marta Prol Rodríguez, Miguel E-mail inesgt@com.uvigo.es Web http://www.faitic.uvigo.es General The course introduces the fundamentals of the lumped circuit principles and abstractions on which the design of description electronic systems is based. These include lumped circuit models for sources, resistors, inductors, and capacitors. It intends to present some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (integer-differential analysis, phasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Competencies Code Code Code Code Code Code Code Code				
Coordinator García-Tuñón Blanca, Inés Lecturers Cardenal López, Antonio José García Mateo, Carmen García-Tuñón Blanca, Inés Gámez Aradjo, Marta Prol Rodríguez, Miguel E-mail Inesgut@com.uvigo.es Web http://www.faitic.uvigo.es General The course introduces the fundamentals of the lumped circuit principles and abstractions on which the design of description electronic systems is based. These include lumped circuit models for sources, resistors, inductors, and capacitors. It intends to present some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (integer-differential analysis, phasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Code Code B3 CG3: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations E4 C64 B4 C64: The ability to solve problems with initiative, to make creative decisions and to communicate and transmit knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 CE4/FB4: Comprehension and command of basic concepts in linear systems and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. D2				
Lecturers Cardenal López, Antonio José García Mateo, Carmen García-Tuñón Blanca, Inés Gómez Araújo, Marta Prol Rodríguez, Miguel E-mail inesgt@com.uvigo.es Web http://www.faltic.uvigo.es General The course introduces the fundamentals of the lumped circuit principles and abstractions on which the design of description electronic systems is based. These include lumped circuit models for sources, resistors, inductors, and capacitors. It intends to present some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (integer-differential analysis, phasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Competencies Code B3 CG3: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations B4 CG4: The ability to solve problems with initiative, to make creative decisions and to communicate and transmit knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 CE4/FB4: Comprehension and command of basic concepts in linear systems and their related functions and transforms; electric circuits theory, electronic circuits, physical principles of semiconductors and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. D2 CT2 Understanding Engineering within a framework of sustainable development. D3 CT3 Awareness of the need for long-life training and continuous quality improvement, showing a flexible, open and ethical attitude toward different opinions and situations, particularly on non-discrimination based on sex, race or religion, as well as respect for fundamental rights, accessibility, etc. Learning outcomes Expected results from this subject Training and continuous quality improvement, showing a flexible, open and ethica				
García Mateo, Carmen García Tuñón Blanca, Inés Gómez Araijo, Marta Prol Rodriguez, Miguel E-mail inesgt@com.uvigo.es Web http://www.faitic.uvigo.es General The course introduces the fundamentals of the lumped circuit principles and abstractions on which the design of description electronic systems is based. These include lumped circuit models for sources, resistors, inductors, and capacitors. It intends to present some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (integer-differential analysis, phasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Competencies Code Code Code Code Cad: The ability to solve problems with initiative, to make creative decisions and to communicate and transmit knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 CE4/FB4: Comprehension and command of basic concepts in linear systems and their related functions and transforms; electric circuits theory, electronic circuits, physical principles of semiconductors and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. C2 C12 Understanding Engineering within a framework of sustainable development. C3 C3 CT3 Awareness of the need for long-life training and continuous quality improv				
García-Tuñón Blanca, Inés Gómez Araújo, Marta Prol Rodríguez, Miguel E-mail E-mail inesgt@com.uvigo.es Web http://www.faitc.uvigo.es General The course introduces the fundamentals of the lumped circuit principles and abstractions on which the design of description electronic systems is based. These include lumped circuit models for sources, resistors, inductors, and capacitors. It intends to present some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (integer-differential analysis, phasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Code B3 CG3: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations B4 CG4: The ability to solve problems with initiative, to make creative decisions and to communicate and transmit knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 CE4/FB4: Comprehension and command of basic concepts in linear systems and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. C2 C12 Understanding Engineering within a framework of sustainable development. C3 CT3 Awareness of the need for Iong-life trainining and Continuous quality improvement, showing a flex				
Gómez Araújo, Marta Prol Rodríguez, Miguel E-mail inesgt@com.wigo.es Web http://www.faitic.uvigo.es General The course introduces the fundamentals of the lumped circuit principles and abstractions on which the design of description description electronic systems is based. These include lumped circuit models for sources, resistors, inductors, and capacitors. It intends to present some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (integer-differential analysis, phasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Code Code B3 CG3: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations B4 CG4: The ability to solve problems with initiative, to make creative decisions and to communicate and transmit knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 CE4/FB4: Comprehension and command of basic concepts in linear systems and their related functions and transforms; electric circuits theory, electronic circuits, physical principles of semiconductors and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. D2 CT2 Understanding Engineering within a framework of sustainable development. D3 CT3				
Prol Rodríguez, Miguel E-mail inesgt@com.uvigo.es Web http://www.fatic.uvigo.es General The course introduces the fundamentals of the lumped circuit principles and abstractions on which the design of description description electronic systems is based. These include lumped circuit models for sources, resistors, inductors, and capacitors. It intends to present some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (integer-differential analysis, phasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Competencies Code B3 CG3: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations B4 CG4: The ability to solve problems with initiative, to make creative decisions and to communicate and transmit knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 CE4/FB4: Comprehension and command of basic concepts in linear systems and their related functions and transforms; electric circuits theory, electronic circuits, physical principles of semiconductors and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. D2 CT2 Understanding Engineering within a framework of sustainable development. D3 CT3 Awareness o				
E-mail inesgt@com.uvigo.es Web http://www.faitic.uvigo.es General The course introduces the fundamentals of the lumped circuit principles and abstractions on which the design of description electronic systems is based. These include lumped circuit models for sources, resistors, inductors, and capacitors. It intends to present some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (integer-differential analysis); sphasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Competencies Code B3 CG3: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations B4 CG4: The ability to solve problems with initiative, to make creative decisions and to communicate and transmit knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 CE4/FB4: Comprehension and command of basic concepts in linear systems and their related functions and transforms; electric circuits theory, electronic circuits, physical principles of semiconductors and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. D2 CT3 Awareness of the need for long-life training and continuous quality improvement, showing a flexible, open and ethical attitude toward different opinions and situations, particularly on non-discrimination based on sex, rac				
Web http://www.faitic.uvigo.es General The course introduces the fundamentals of the lumped circuit models for sources, resistors, inductors, and capacitors. It intends to present some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (integer-differential analysis, phasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Competencies Code B3 CG3: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations B4 CG4: The ability to solve problems with initiative, to make creative decisions and to communicate and transmit knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 CF4/FB4: Comprehension and command of basic concepts in linear systems and their related functions and transforms; electric tic tuits theory, electronic circuits, physical principles of semiconductors and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. D3 CT3 Awareness of the need for long-life training and continuous quality improvement, showing a flexible, open and ethical attitude toward different opinions and situations, particularly on non-discrimination based on sex, race or religion, as well as respect for fundamental rights, accessibility, etc. D3 CT3 Awareness of the need for long-life training and continuous quality improvement, showing a flexibl				
General The course introduces the fundamentals of the lumped circuit principles and abstractions on which the design of description description electronic systems is based. These include lumped circuit models for sources, resistors, inductors, and capacitors. It intends to present some techniques to analyze (to determine currents and voltages) such systems: conventional analysis (integer-differential analysis, phasors and impedances in sinusoidal regime) and linear systems theory based analysis (by using the Laplace and Fourier transforms). Competencies Code B3 CG3: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations B4 CG4: The ability to solve problems with initative, to make creative decisions and to communicate and transmit knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 CE4/FB4: Comprehension and command of basic concepts in linear systems and their related functions and transforms; electric circuits theory, electronic circuits, physical principles of semiconductors and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. D2 CT2 Understanding Engineering within a framework of sustainable development. D3 CT3 Awareness of the need for long-life training and continuous quality improvement, showing a flexible, open and ethical attitude toward different opinions and situations, particularly on non-discrimination based on sex, race o				
Code B3 CG3: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations B4 CG4: The ability to solve problems with initiative, to make creative decisions and to communicate and transmit knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 CE4/FB4: Comprehension and command of basic concepts in linear systems and their related functions and transforms; electric circuits theory, electronic circuits, physical principles of semiconductors and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. D2 CT2 Understanding Engineering within a framework of sustainable development. D3 CT3 Awareness of the need for long-life training and continuous quality improvement, showing a flexible, open and ethical attitude toward different opinions and situations, particularly on non-discrimination based on sex, race or religion, as well as respect for fundamental rights, accessibility, etc. Learning outcomes Expected results from this subject To know the elements and laws involved in lumped circuit analysis. C4 To show the ability to analyse linear circuits in different circumstances: B4 C4 D2 . to know how to choose among different alternatives when solving a problem. To tansite the time domain intot the transformed domains, by using transforms basic con	nalyze (to determine asors and impedance	currents and vol es in sinusoidal re	tages) suo	ch systems:
 B3 CG3: The knowledge of basic subjects and technologies that enables the student to learn new methods and technologies, as well as to give him great versatility to confront and adapt to new situations B4 CG4: The ability to solve problems with initiative, to make creative decisions and to communicate and transmit knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 CE4/FB4: Comprehension and command of basic concepts in linear systems and their related functions and transforms; electric circuits theory, electronic circuits, physical principles of semiconductors and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. C72 Understanding Engineering within a framework of sustainable development. C73 Awareness of the need for long-life training and continuous quality improvement, showing a flexible, open and ethical attitude toward different opinions and situations, particularly on non-discrimination based on sex, race or religion, as well as respect for fundamental rights, accessibility, etc. Learning outcomes Expected results from this subject Training and Learning Results To know the elements and laws involved in lumped circuit analysis. C4 C4 D2 . to know wito choose among different alternatives when solving a problem. . to know simplifying techniques, their constraints, and how to decide which ones must be used. To translate the time domain into the transformed domains, by using transforms basic concepts. C4 To abalte the gualitatively justify the role played by circuit elements and their interactions. B3 C4 D3 				
technologies, as well as to give him great versatility to confront and adapt to new situations B4 CG4: The ability to solve problems with initiative, to make creative decisions and to communicate and transmit knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 CE4/FB4: Comprehension and command of basic concepts in linear systems and their related functions and transforms; electric circuits theory, electronic circuits, physical principles of semiconductors and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. D2 CT2 Understanding Engineering within a framework of sustainable development. D3 CT3 Awareness of the need for long-life training and continuous quality improvement, showing a flexible, open and ethical attitude toward different opinions and situations, particularly on non-discrimination based on sex, race or religion, as well as respect for fundamental rights, accessibility, etc. Learning outcomes Expected results from this subject Training and Learning Results To know the elements and laws involved in lumped circuit analysis. C4 To know to choose among different alternatives when solving a problem. B4 C4 D2 . to know who to choose among different alternatives when solving a problem. To show the ability to analyse linear circuits, and how to decide which ones must be used. To translate the time domain into the transformed domains, by using tr		o loarn now mot	odc and	
knowledge and skills, understanding the ethical and professional responsibility of the Technical Telecommunication Engineer activity. C4 CE4/FB4: Comprehension and command of basic concepts in linear systems and their related functions and transforms; electric circuits theory, electronic circuits, physical principles of semiconductors and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. D2 CT2 Understanding Engineering within a framework of sustainable development. D3 CT3 Awareness of the need for long-life training and continuous quality improvement, showing a flexible, open and ethical attitude toward different opinions and situations, particularly on non-discrimination based on sex, race or religion, as well as respect for fundamental rights, accessibility, etc. Learning outcomes Expected results from this subject To know the elements and laws involved in lumped circuit analysis. C4 To show the ability to analyse linear circuits in different circumstances: . to know simplifying techniques, their constraints, and how to decide which ones must be used. To translate the time domain into the transformed domains, by using transforms basic concepts. To be able to qualitatively justify the role played by circuit elements and their interactions. B3 C4 D3	ont and adapt to new	situations		
C4 CE4/FB4: Comprehension and command of basic concepts in linear systems and their related functions and transforms; electric circuits theory, electronic circuits, physical principles of semiconductors and logical families, electronic and photonic devices, materials technology and their application to solve Engineering problems. D2 CT2 Understanding Engineering within a framework of sustainable development. D3 CT3 Awareness of the need for long-life training and continuous quality improvement, showing a flexible, open and ethical attitude toward different opinions and situations, particularly on non-discrimination based on sex, race or religion, as well as respect for fundamental rights, accessibility, etc. Learning outcomes Training and Learning Results To know the elements and laws involved in lumped circuit analysis. C4 To show the ability to analyse linear circuits in different circumstances: B4 C4 D2 to know simplifying techniques, their constraints, and how to decide which ones must be used. C4 D2 To translate the time domain into the transformed domains, by using transforms basic concepts. C4				
D3 CT3 Awareness of the need for long-life training and continuous quality improvement, showing a flexible, open and ethical attitude toward different opinions and situations, particularly on non-discrimination based on sex, race or religion, as well as respect for fundamental rights, accessibility, etc. Learning outcomes Expected results from this subject Training and Learning Results To know the elements and laws involved in lumped circuit analysis. C4 To show the ability to analyse linear circuits in different circumstances: B4 C4 D2 . to know simplifying techniques, their constraints, and how to decide which ones must be used. C4 D2 To translate the time domain into the transformed domains, by using transforms basic concepts. C4 D3	of semiconductors an to solve Engineering	nd logical familie		
ethical attitude toward different opinions and situations, particularly on non-discrimination based on sex, race or religion, as well as respect for fundamental rights, accessibility, etc. Learning outcomes Training and Learning Results To know the elements and laws involved in lumped circuit analysis. C4 To show the ability to analyse linear circuits in different circumstances: B4 C4 D2 . to know simplifying techniques, their constraints, and how to decide which ones must be used. C4 C4 To translate the time domain into the transformed domains, by using transforms basic concepts. C4 D3		ont chowing of		
religion, as well as respect for fundamental rights, accessibility, etc. Learning outcomes Expected results from this subject Training and Learning Results To know the elements and laws involved in lumped circuit analysis. C4 To show the ability to analyse linear circuits in different circumstances: B4 C4 D2 . to know simplifying techniques, their constraints, and how to decide which ones must be used. To translate the time domain into the transformed domains, by using transforms basic concepts. C4 To be able to qualitatively justify the role played by circuit elements and their interactions. B3 C4 D3				
Expected results from this subject Training and Learning Results To know the elements and laws involved in lumped circuit analysis. C4 To show the ability to analyse linear circuits in different circumstances: B4 C4 D2 to know simplifying techniques, their constraints, and how to decide which ones must be used. - C4 To translate the time domain into the transformed domains, by using transforms basic concepts. C4 C4 To be able to qualitatively justify the role played by circuit elements and their interactions. B3 C4 D3			ii sex, iac	e 0i
Expected results from this subject Training and Learning Results To know the elements and laws involved in lumped circuit analysis. C4 To show the ability to analyse linear circuits in different circumstances: B4 C4 D2 to know simplifying techniques, their constraints, and how to decide which ones must be used. - C4 To translate the time domain into the transformed domains, by using transforms basic concepts. C4 C4 To be able to qualitatively justify the role played by circuit elements and their interactions. B3 C4 D3				
Results To know the elements and laws involved in lumped circuit analysis. C4 To show the ability to analyse linear circuits in different circumstances: B4 C4 D2 to know how to choose among different alternatives when solving a problem. . <		Tr	aining and	Learning
To show the ability to analyse linear circuits in different circumstances:B4C4D2 to know how to choose among different alternatives when solving a problem to know simplifying techniques, their constraints, and how to decide which ones must be usedTo translate the time domain into the transformed domains, by using transforms basic concepts.C4C4To be able to qualitatively justify the role played by circuit elements and their interactions.B3C4D3		110		
 to know how to choose among different alternatives when solving a problem. to know simplifying techniques, their constraints, and how to decide which ones must be used. To translate the time domain into the transformed domains, by using transforms basic concepts. C4 To be able to qualitatively justify the role played by circuit elements and their interactions. B3 C4 D3 				
to know simplifying techniques, their constraints, and how to decide which ones must be used. To translate the time domain into the transformed domains, by using transforms basic concepts. C4 To be able to qualitatively justify the role played by circuit elements and their interactions. B3 C4 D3		B4	C4	D2
To translate the time domain into the transformed domains, by using transforms basic concepts.C4To be able to qualitatively justify the role played by circuit elements and their interactions.B3C4D3				
To be able to qualitatively justify the role played by circuit elements and their interactions. B3 C4 D3				
To master the language and symbolism of the discipline B3 C4 D3	ts and their interaction			
		B3	C4	D3
		Basic education Basic education d circuit principles an cuit models for source nalyze (to determine asors and impedance and Fourier transform enables the student t int and adapt to new eative decisions and to onal responsibility of linear systems and th of semiconductors and to solve Engineering nable development. us quality improvem cularly on non-discrin- ty, etc.	Choose Year Basic education 1st d circuit principles and abstractions or cuit models for sources, resistors, indunalyze (to determine currents and vollasors and impedances in sinusoidal results). enables the student to learn new methers and adapt to new situations eative decisions and to communicate a conal responsibility of the Technical Tellinear systems and their related funct of semiconductors and logical families to solve Engineering problems. nable development. us quality improvement, showing a flecularly on non-discrimination based o ty, etc. inces: B4 g a problem. Edu shick ones must be used. ng transforms basic concepts. B3	Basic education 1st 2nd Stative decisions and to expressional regime) and and Int and adapt to new situations and Parative decisions and to communicate and transmonal responsibility of the Technical Telecommunicate and to semiconductors and logical families, electrom to solve Engineering problems. Bable development. 1st 1st 2nd Station provement, showing a flexible, ope cularly on non-discrimination based on sex, rac ty, etc. 1st Station problem. 1st 1st 24

Contents

Topic Presentation and introduction. I: Continuous Response (RPC) Fundamental and derived magnitudes. Active and passive elements and their functional relationships. Kirchhoff's laws. Analysis by the technique of mesh voltages. Analysis by the techniques of node currents. Simplifying techniques; Thévenin and Norton equivalent circuits. II: Steady-state sinusoidal response (RSP) Definition and parameters. Concepts of phasor and impedance. Mesh and node analysis of steady-state sinusoidal regime networks. Divisor circuits. Autoinductance and mutual inductance. Linear and ideal transformers. Power expressions. Thévenin and Norton equivalent circuits. III: Two-ports Definition of a two-port circuit. Characteristic parameters. Combining two-ports. A two-port in a circuit. IV: Transient Response (RT) Transient regime origin. Conditions of study. Inductors and capacitors in steady-state continuous regime. Single reactive element networks. Two reactive elements networks. V: Signals and systems lasses of signals. Some relevant signals: step function, unit impulse function, exponential function, sinusoidal function. Classes of systems. System properties; linear, time invariant systems; response to impulse. VI: Laplace transform (TL) Definition. Direct transforms. Inverse transform determination. Application to linear circuits. The transference function. Steady-state response in a circuit. Response for a sinusoidal input. VII: Frequency domain analysis (RF) Filter concept. Filter classes. Filter responses. Periodic signals. Planning

	Class hours	Hours outside the classroom	Total hours
Introductory activities	0.5	0	0.5
Master Session	24.5	49	73.5
Practice in computer rooms	22	22	44
Laboratory practises	3	3	6
Troubleshooting and / or exercises	3	9	12
Practical tests, real task execution and / or	1	3	4
simulated.			
Long answer tests and development	2	8	10
*The information in the planning table is for guid	dance only and does no	t take into account the het	erogeneity of the students.

Methodologies	
	Description
Introductory activities	Presentation of the course: syllabus, bibliography, teaching methodology, and assessment and grading procedures. Through this methodology the competencies CT2 and CT3 are developed.

Master Session	The goal of this methodology is the presentation of the theoretical contents and the practical assessment about students learning abilities.
	Different exercises and problems related to the specific subject will be solved during these sessions, by the Professor or the students with his/her support, either individually or working in a group.
	Through this methodology the competencies CG3, CG4, CE4, CT2 and CT3 are developed.
Practice in computer rooms	Theses sessions will consist on a supervised either individual or team problem solving of practical applications related to the theoretical content of the subject.
	The solutions could be analyzed, checked and compared using computational tools.
	Al the end of 3 sesions, students will solve a evaluable task in a individual way.
	Through this methodology the competencies CG3, CG4 and CE4 are developed.
Laboratory practises	Two practical sessions will be carried out in the hardware lab, assembling and measuring circuits tasks will be covered. A total of 4 hours, with 1 hours dedicated to the evaluation of these sessions.
	Through this methodology the competencies CG3, CG4 and CE4 are developed.

Personalized attention			
Methodologies	Description		
Master Session	Needs and study matter queries of students will be addres by the professors on tutoring hours.		
Laboratory practises Professors set the pace of the session and resolve any questions that arise during realization of practice. Also on the schedule tutoring, professors address the need queries of the students related to laboratory practices.			
Practice in computer rooms	Professors set the pace of the session and resolve any questions that arise during the realization of practice. Also on the schedule tutoring, professors address the needs and queries of the students related to practices in computer rooms.		

	Description	Qualification	Tra	aining
				and
				arning sults
Troubleshooting and / or exercises	Three tests will take place in Group A timetable. They are expected to be carried out in week 6 (ECA1 Chapter 1), 10 (ECA2 Chapters 2 to 4) and 15 (ECA3 Chapters 5 to 7). The mark of each of these tests will be: 1.5, 3.0 and 2.5 points respectively.	85	B3 B4	C4
	Three tests will take place in Group B timetable. They are expected to be carried out in week 4(ECB1), 8 (ECB2) and 15 (ECB3). The mark of each of these tests will be 0.5 ponits.			
Practical tests, real task execution and / or simulated.	There will be one test/task (ECHW) related to assembling and measuring circuits. The test will be carried out in Group B timetable. This test is expected to be carried out in week 12 with a maximum mark of 1.5 points. The following skills will be evaluated: teamwork, fit to design specifications and presenting results.	15	B3 B4	C4
Long answer tests and development		0	B3 B4	C4

Other comments on the Evaluation

The student, in agreement to the official academic-year schedule, will have two opportunities during the academic year to pass the course:

1. First opportunity at the end of the semester. The student is free to choose the continuous evaluation system above described, without excluding the possibility to do a final exam. Possible cases:

- Students only doing the continuous evaluation: they are graded with the points obtained in the evaluation.
- Students doing both the continuous evaluation and the exam: they are graded with the best of both qualifications.
- Students only doing the final exam: they are graded with the points obtained in the exam.

2. Extraordinary exam. Students that do not reach the minimum grade at the end of the semester will have the option to do a final extraordinary exam of the full content of the subject, theory and practice. The extraordinary exam can include test type and/or reasoning questions, problem solving and/or exercises, as well as the development of practical cases. The maximum mark achieved on this exam (between 0 and 10) will be the final grade. It will replace the grade obtained during continuous evaluation (sum of the grades obtained during tests and final exam).

Additional comments:

- Students must attend to the group B assigned at the beginning of the semester.
- Group B attendance control will be carried out.
- HW sessions attendance will be mandatory.
- Doing ECA2 or successives tests and/or the final exams will prevent the student to get the "Not presented" mark.
- The average grade obtained during continuous evaluation will only be valid only for the corresponding academic year.
- It will be considered that the subject has been passed if the final grade is equal or above 5.

Re-scheduling of tests. In case of missing a test, instructors have not any compulsion to rescheduling.

Test results. Before each test, the date and revision procedure of assigned grading marks will be indicated. Such dates will imply a reasonable delay (in general, not greater than three weeks) between the date of test and the release of the grading marks.

Sources of information	
Basic Bibliography	
James W. Nilsson, Electric Circuits, 10,	
Material docente, Página web , faitic.uvigo.es,	
Complementary Bibliography	
J.H. McClellan, R.W. Schafer, M.A. Yoder, Signal Processing First,	

Recommendations

Subjects that continue the syllabus Physics: Fundamentals of Electronics/V05G300V01305 Digital Signal Processing/V05G300V01304 Signal Transmission and Reception Techniques/V05G300V01404 Microwave Circuits/V05G300V01611 Radio Frequency Circuits/V05G300V01511 Analogue Electronics/V05G300V01624 Engineering of Electronic Equipment/V05G300V01523

Subjects that are recommended to be taken simultaneously

Mathematics: Calculus 2/V05G300V01203

Subjects that it is recommended to have taken before

Mathematics: Linear algebra/V05G300V01104 Mathematics: Calculus 1/V05G300V01105

Other comments

It is strongly recommended that students are familiar with complex numbers, trigonometric functions, linear equation system solving, elemental function derivatives and computation of simple integrals.