ESCUELA SUPERIOR
DE ARTE
DE ASTURIAS

Design

Course catalogue for Erasmus+ students

Graphic Design

Year 1. First semester.

Code	Course title	Description	ECTS
1G_LYC	Visual language and communication	Study of visual language and communication in design space, art and global advertising. Analysis of psychology and communication concepts.	4
1G_DIB1	Drawing I	Perception and representation of reality by freehand drawing. Development of formal categories, emphasizing the structuring of the forms, the study of light as shaping element volume and the principles governing the organization of visual forms on the two-dimensional support.	4
1G_HISD1	History of design I	Introduction to the concept of design and main areas: product, graphic, interior and fashion design.	3
1G_HDR1	Computer graphics I	Introduction to the use of computer tools for project representation. Bitmap features and vector images: manipulation with professional software.	4
1G_SISPG1	Print production I	Managing color, printed products, workflow from design to printed product, print tests and electronic publishing.	3
1G_INNO	Innovation	Behavior of creative thinking. Introduction to creative techniques (brainstorming, lateral thinking...), definition of future trends, leading to innovation in design projects.	4
1G_FUNDG	Fundamentals of graphic design	Graphic design and communication. Parts of graphic design projects. Elements of graphic design and visual language. Techniques to stimulate creative thinking.	5
1G_TIPO1	Typography I	The evolution of typography and typefaces. Anatomy of letterforms. Type classifications. Typometry. Text layout.	3

Year 1. Second semester.

Código	Course title	Description	ECTS
1G_METP	Project methodology	Methodological guide for the implementation of projects. Teamwork, development of presentations and organization of project documents.	3
1G_EXGR	Graphic expression	Development of skills for sketching based on the knowing of the fundamentals of plane geometry, representation systems and color theory. Application to design projects.	5
1G_DIB2	Drawing II	Elementary processes of drawing as an essential tool in the process of ideation. Perception and configuration of space and the human figure and its representation and interpretation by freehand drawing.	4
1G_HDR2	Computer graphics II	Introduction to the use of computer tools for project representation. Bitmap features and vector images: manipulation with professional software.	6
1G_HISD2	History of design II	Trends and icons of the history of design from Arts and Crafts up to now.	3
1G_TIPO2	Typography II	Text layout. Grid systems. Hierarchy. Legibility. Orthography and orthotypography.	5
1G_SISPG2	Print production II	Managing color, printed products, workflow from design to printed product, print tests and electronic publishing.	4

Year 2. First semester.

Código	Course title	Description	ECTS
2G_CIAP	Science applied to design	Scientific concepts applied to design. Mathematics for computer aided design. Statistics. Physical basis of light and color. The design process and the scientific method. Ecoefficiency and sustainable development.	4
2G_MARKP	Marketing and persuasion	Introduction to marketing parameters. Structure and organization of the market. Consumer behaviour. The 4P's. Marketing mix.	3
2G_DISIC	Corporate identity design	Image and corporate identity. Brand typology. Building a brand. Corporate identity manual.	7
2G_HDPE	Desktop publishing software	Use of professional layout software for editorial design projects.	6
2G_HISDG	History of graphic design	History of graphic design from the origins up to now, covering designs from around the world.	4
2G_DIBEX1	Expressive drawing I	Development of technical fundamentals of drawing and expression for an effective graphic communication.	6

Year 2. Second semester.

Code	Course title	Description	ECTS
2G_FOTO	Photographic technique	Fundamentals of photography. Camera equipment. Digital processing of photographic images.	3
2G_TEOCD	Communication and design theory	Analysis of the design as an instrument of the nonverbal communication. The evolution of the communication theory through the study of the historic context, going into detail about aesthetic, composition, technique classic tools and new technological resources.	6
2G_DIBEX2	Expressive drawing II	Practical course on the expressive language of visual communication and drawing: research, innovation, creativity, insight and responsibility.	3
2G_DISED	Design for publishing	Anatomy of a page. Grids. Brochures, catalogues, newspapers, magazines, books. Design for digital production-	6
2G_MATPG	Materials and finishes for print production	Materials for printing. Finishing processes. Print workflow. Data sheet for printing. Evaluation of costs.	2
2G_ILUS	Illustration	Practical course on the skills and technical, artistic and expressive components of visual representation, expanding them to the communication needs of illustrators.	6
2G_INFOGR	3D computer graphics	Image and video production using professional 3D computer graphics programs	4

Year 3. First semester.

Code	Course title	Description	ECTS
3G_DISUS	User-centered design	Principles of user-centered design. Analysis of user's profiles and context related to the product use. Proposal of solutions based in these determinants and ergonomic rules.	3
3G_PRMM	Multimedia project	Fixed image vs image motion. Narrative storytelling. Scripts and storyboards. Multimedia projects. Graphic elements in motion pictures. Interactive design.	4
3G_PRAV	Audio and video production	Production of audiovisual clips: editing audio and video and effects in postproduction. Video production oriented to media projects and audiovisual graphic design projects.	4
3G_WEB	Web design and layout	Websites: design and layouts. Standard web design technologies. Usability criteria.	6
3G_IMFOT	Photographic image	Photographic images in graphic design projects. Editing and organization of image files.	5
3G_DPUBL	Advertising design	Overview of advertising activity, its specific process of communication and work methodology. "Above the line" and "below the line" advertising design projects.	8

Year 3. Second semester.

Code	Course title	Description	ECTS
3G_SOCUL	Society and culture	The concept of art and society from the historical avant-garde to the present day, relating to culture, history and society.	5
3G_INTER	Interactive development	Computer basics for developing interactive contents, interactive platforms, development technologies and the publication and distribution of contents.	6
3G_DGESP	Environmental graphic design	Development of fundamental skills related to graphic design applied to space. Projects in areas such as signage and wayfinding, exhibition graphics, supergraphics or ephemeral design.	5
3G_ANIM	Motion graphics	Motion graphics clips. Digital animations oriented to media projects. Integration in graphic design projects.	4
3G_PACK	Packaging	Product and packaging. Types of packagings. Packaging and marketing. Materials, manufacturing processes and print production. Graphic design applied to packaging. Normative.	5
	Optional courses		5

Year 4. First semester.

Code	Course title	Description	ECTS
4G_CPRD	Design professional context	Development of a business project. Legal basis for business.	3
4G_GABDG	Graphic design studio	Creating a company. Legal forms. Marketing plan. Intellectual property. Brand management.	6
4G_PRGLO	Global project	Graphic design in relation with other areas of design. Project documentation. Project presentation.	6
	Optional courses		15

Year 4. Second semester.

Code	Course title		ECTS
4G_PRAEX	External training	These subjects are not eligible for Erasmus+ exchanges	6
4G_TRFIN	Degree thesis		24

Product Design

Year 1. First semester.

Code	Course title	Description	ECTS
1P_LYC	Visual language and communication	Study of visual language and communication in design space, art and global advertising. Analysis of psychology and communication concepts.	4
1P_DIB1	Drawing I	Perception and representation of reality by freehand drawing. Development of formal categories, emphasizing the structuring of the forms, the study of light as shaping element volume and the principles governing the organization of visual forms on the two-dimensional support.	4
1P_HISD1	History of design I	Introduction to the concept of design and main areas: product, graphic, interior and fashion design.	3
1P_HDR1	Computer graphics I	Introduction to the use of computer tools for project representation. Bitmap features and vector images: manipulation with professional software.	4
1P_INNO	Innovation	Behavior of creative thinking. Introduction to creative techniques (brainstorming, lateral thinking...), definition of future trends, leading to innovation in design projects.	4
1P_PRODP1	Product design problems I	Definition and specification of the new foundations that are unique to industrial design, leaving behind old views and approaches. Recognition, identification and solution of basic design problems.	4
1P_GEOES1	Spatial geometry I	Representation of space with the support of Euclidean geometry.	3
1P_DPAO1	Parametric 3D CAD I	Production of 3D digital prototypes with 3D mechanical and parametric solid modelling design software.	4

Year 1. Second semester.

Code	Course title	Description	ECTS
1P_METP	Project methodology	Methodological guide for the implementation of projects. Teamwork, development of presentations and organization of project documents.	3
1P_EXGR	Graphic expression	Development of skills for sketching based on the knowing of the fundamentals of plane geometry, representation systems and color theory. Application to design projects.	5
1P_DIB2	Drawing II	Elementary processes of drawing as an essential tool in the process of ideation design professional. Perception and configuration of space and the human figure and its representation and interpretation by freehand drawing.	4
1P_HDR2	Computer graphics II	Introduction to the use of computer tools for project representation. Bitmap features and vector images: manipulation with professional software.	6
1P_HISD2	History of design II	Trends and icons of the history of design from Arts and Crafts up to now.	3
1P_DISP1	Design for production I	Development of creative thinking skills to find design solutions from some simple premises of production (use of raw materials, amount of handling, weight, simplicity,…)	4
1P_DPAO2	Parametric 3D CAD II	Design, control and management of assemblies and generation of related documentation with 3D mechanical and parametric solid modelling design software.	5

Year 2. First semester.

Code	Course title	Description	ECTS
2P_CIAP	Science applied to design	Scientific concepts applied to design. Mathematics for computer aided design. Statistics. Physical basis of light and color. The design process and the scientific method. Eco-efficiency and sustainable development.	4
2P_MARKP	Marketing and persuasion	Introduction to marketing parameters. Structure and organization of the market. Consumer behavior, the 4P's. Marketing mix.	3
2P_PRODP2	Product design problems II	Development of skills to solve design problems. Analysis of the origins, causes and different levels of problems.	6
2P_MATPF	Materials and manufacturing processes	Materials science: structure and properties. Manufacturing processes: conventional and non-conventional. Materials and manufacturing process selection in product design.	5
2P_NORM1	Standardization I	Technical drawings of simple products according to Spanish standards.	3
2P_VOL	Volume	Volume concepts in product design. Study of shapes applied to the object. Materials, works and functionality.	5
2P_HISDP	History of product design	History of product design from the origins up to now, covering designs from around the world.	4

Year 2. Second semester.

Code	Course title	Description	ECTS
2P_FOTO	Photographic technique	Fundamentals of photography. Camera equipment. Digital processing of photographic images.	3
2P_TEOCD	Communication and design theory	Analysis of the design as an instrument of the nonverbal communication. The evolution of the communication theory through the study of the historic context go into detail about aesthetic, composition, technique and classic tools besides the evolution of the new technological resources.	6
2P_GEOES2	Spatial geometry II	Problem solving and ideation in 3D Euclidean space using CAD programs and intuitive methods.	4
2P_PROYDP1	Product design projects I	Development of product design projects. Planning of the targets, tools and basic activities. Generation of technical documentation.	6
2P_DIBA	Product design sketching	Applying drawing tools to the design process. Elaboration of the project visualizing idea. Interfacing with other professionals in the design process.	4
2P_FISAD	Physics applied to design	Metrology. Mechanics (kinematics, dynamics, statics). Electricity and electronics. Light sources and lamps. Energy: forms and sources, applied thermodynamics.	3
2P_MAQ	Prototypes	Modeling of accurate scale prototypes with basic resources available in prototyping workshops. Prototypes for the development of functional products, as presentation models or as concept design models.	4

Year 3. First semester.

Code	Course title	Description	ECTS
3P_DISUS	User-centered design	Principles of user-centered design. Analysis of user's profiles and context related to the product use. Proposal of solutions based in these determinants and ergonomic rules.	3
3P_DISP2	Design for production II	Development of complex products taking advantage of the close relationship between the constraints of production systems and the initial stages of concept design. Projects are manufactured at mechanical workshops both at the school and at external installations.	7
3P_NORM2	Standardization II	Finding, interpreting and applying spanish standards in product design.	4
3P_SMEC	Mechanical and structural systems	Mechanisms and mechanical devices: analysis and design. Structures and structural concepts. Structural typologies. Pneumatics and hydraulics.	4
3P_DPEE	Packaging design and projects	Relevance of the packaging both to products and to users and consumers. Functions of packaging: transportation, protection and communication of the product. Environmental conditions in relation to the production process and recycling, making the best use possible of materials and resources.	6
3P_MOD3D	3D computer modelling and rendering software	Realistic 3D images to communicate or analyze the product, on the basis of the information generated by parametric modeling software.	6

Year 3. Second semester.

Code	Course title	Description	ECTS
3P_SOCUL	Society and culture	The concept of art and society from the historical avant-garde to the present day, relating to culture, history and society.	5
3P_PRODP3	Product design problems III	Specific design problems concerning innovation, eco-efficiency, sustainability, new trends, new materials, new technologies, new concepts of use, cultural and social trends.	5
3P_FABR	Manufacturing	Manufacturing systems. Manufacturing process management: process planning, resource planning, computer aided manufacturing, inspection and quality management.	4
3P_RESMAT	Strength of materials	Types of loadings. Stress and strain. Materials response to loadings. Fatigue of materials. The Finite Element Method in the analysis of strength and behavior of materials and structures.	4
3P_REPOB	Advanced product design sketching	Representation of formal, functional and creative objects that occur in the exercise of professional activity, relating design products with usage environment and users aspects.	4
3P_ECOLEG	Economics and law	Analysis of the economic context of the industrial sector, obtaining knowledge in the viability and control of the production process, with the purpose of achieving excellence and quality in the professional activity.	3
	Optional courses		5

Year 4. First semester.

Code	Course title	Description	ECTS
4P_CPRD	Design professional context	Development of a business project. Legal basis for business.	3
4P_PROYDP2	Product design projects II	Projects of Product Design based on innovation and new concepts. Proposal of new solutions to new problems caused by the evolution of users needs.	6
4P_PROYEM	Design business project	Creating a company. Legal forms. Marketing plan. Intellectual property. Brand management.	6
	Optional courses		15

Year 4. Second semester.

Code	Course title		ECTS
4G_PRAEX	External training	These subjects are not eligible for Erasmus+ exchanges	6
4G_TRFIN	Degree thesis		24