Design

Program description

A designer's mind and hand shapes, structures and supports the physical and aesthetic attributes of all the products around us. As our world changes, designer must observe carefully and

react with solutions that can inhabit, influence and further shape it.

Our Bachelor of Science (BSc) in Design (DESN) will provide you with a strong foundation in the principles, concepts, processes and practices of design; giving you the skills you need to play a meaningful role in today's design world.

Educational objectives

Graduates of the Design program will be prepared for careers as entry-level designers in both the public sector and the private sector. Graduates will be able to carry out multiple design related tasks specifically related to the interior design and product design professions. In addition, graduates of the program will be able to pursue advanced studies at the graduate level. Following are some of the specific educational objective of the DESN program:

- To provide graduates with a comprehensive, critical and competency based education so that they will be able to assume professional responsibilities in a range of design industries. (Note: The program includes substantial focus on design concepts, principles, theories, applications, technologies, and the interplay of social, cultural, economic, and environmental factors).
- To help graduates refine their ability to think critically, to communicate effectively, and to solve complex design problems.
- To prepare graduates to develop the technical skills to engage effectively in multi-disciplinary teams in the design industries.
- To help graduates understand the ethical and professional issues related to design based professions, businesses and industries.

Learning outcomes

Students who successfully complete the B.Sc. in Design curriculum should be able to demonstrate the following learning outcomes:

1. Identify the physical, environmental, physiological, cognitive, cultural and social factors that shape design decisions.

2. Identify the histories and theories of design including the influential individuals, institutions, events and factors that shaped the emergence and development of the design professions.

3. Explain the contemporary design issues as it relates to regional, national and global contexts emphasizing interior design and product design.

4. The ability to solve design problems, using the skills of problem identification, research and information gathering, analysis, generation of alternative solutions and user testing, and evaluation of outcomes.

5. The ability to create and develop design solutions based on an understanding of the concepts, principles, processes and practices of design.

6. The ability to describe and analyze works of design perceptively and to evaluate them critically. This ability is predicated on an understanding of the similarities, differences and relationships among the various design disciplines.

7. Evaluate the principles of sustainability and its manifestation in the choices of materials, technologies, products, processes and systems.

8-I. The ability to select and specify materials, lighting, furniture, fixtures and equipment in interior spaces based on functional aesthetic, environmental, life cycle, cultural and economic criteria.

8-P. The ability to design new or to improve existing mass produced products ranging from small, single use objects to larger, multi-use products and systems.

9-I. The ability to design, develop and document custom, built-in and free standing furniture and case work in interior environments.

9-P. The ability to apply technological tools and software related to the ideation, representation, production and testing of materials, processes, products and design.

10-I. The ability to develop design concepts through aesthetic, functional, structural, spatial and culturally specific elements, principles and processes related to the creation of interior places, spaces, and experiences.

10-P. Explain how products work and what makes a product useful, usable, and desirable for different target audiences.

11. The ability to apply analog and digital techniques, particularly freehand sketching, constructed hand drawings, physical and virtual modeling and prototyping, and appropriate digital tools in all phases of the design process from conceptual idea to design presentation and production.

12-I. Explain the business and professional practices in interior design.

12-P. Explain the business and professional practices in product design.

13. The ability to communicate persuasively through written, verbal, graphic, analogue and digital tools.

Career opportunities

The Bachelor of Science in Design program prepares graduates to be creative managers and skilful professionals for the following fields:

Jobs directly relevant to Interior design (INTD) concentration:

- Interior designer
- Interior spatial designer
- Kitchen Designer
- Interior Lighting Designer
- Interior decorator

Jobs where INTD concentration may be useful include:

- Furniture Designers
- Exhibition designers
- Production designer, theatre/TV/film
- Visual merchandiser

Jobs directly relevant to Product design (PROD) concentration:

- Product designer
- Industrial designer
- Furniture designer
- Automotive designer
- CAD technician
- Designer/maker

Jobs where PROD concentration may be useful include:

- Design engineer
- Interior and spatial designer
- Exhibition designer
- Jewellery designer
- Textile designer
- Color technologist
- Clothing/textile technologist
- Production manager/planner

Specific BSc Design Program admission requirements

1. Personal statement

A one-page written statement explaining why the applicant wants to study on the DESN program at Effat University, and reflecting on her unique individual, distinctive experiences, characteristics and background. The Admission Committee reviews this statement as a measure of the applicant's creativity, intelligence, self-awareness, determination and vision. The statement should give the committee a sense of the applicant's long-terns goals and artistic ambitions.

2. Portfolio

The portfolio is evidence of the depth of the applicant's creative ability and expressive talent. Portfolio materials can include a range of artistic demonstrations, such as design, animation, painting, and drawing — presented in different modes (digital or print options).

3. Letters of recommendation

An official letter of recommendation from one referee (high school teacher) endorses the applicant's ability to successfully complete university work. The letter should be the original, on letterhead paper, stamped and signed.

Designation of the digits used for the course numbering

Letters	Digit 1	Digit 2	Digit 3

Every course is identified by an alphanumeric designation:

- Digit 1: designates the year at which the course is taken.
- Digit 2: designates the area of specialization of the course. (Areas of knowledge listed in the table below).
- Digit 3: designates the sequence of the course for the same area.

Designation of the second digit of the course numbers

Letter Code	Domain of Study
DESN	Design
INTD	Interior Design
PROD	Product Design

Designation of the decimal (Second) digit of the course numbers in Design (DESN, INTD, PROD)

Digit	Topic
0	Design Studio
1	Basics—Concepts and Principles
2	Skills
3	Design History, Theory and Criticism
4,5,6	Content Courses
7	Design Electives

Credit hours are listed throughout the document in the following format: (3-0-3). The first digit indicates the number of lecture hours, the second digit indicates the number of practical hours (if applicable), and the third digit indicates the total number of credit hours for the course.

Bachelor of Science in Design program graduation requirements

This section explains in detail the total credit hour requirements and the distribution of credit hours among the general education, core, and concentrations requirements. The BSc. DESN program requires 133 credits covering 4 years of study (8 semesters). Due to the delivery of the Design program in English language, students might be asked to complete a foundation level or two before they start the program if they lack the skills required to be admitted to the program, especially for their English language proficiency.

Major Requirements: 133 Credit Hours

Category	Compulsory	General Electives	Technical Electives	Internshi	Total
University General Education Core	13	29	--	--	42
Requirements in Design Major (DESN)	35	--	--	3	38
Requirements in one of the two Concentrations below: Interior Design (INTD) or Product Design (PROD)	44	--	--	--	44
Technical Electives	--	--	9	--	9
Total Credits	**92**	**29**	**9**	**3**	**133**

General Education Program Requirements: 42 Credit Hours

Pillar	Credits	Category	Courses	Credits
Skills development	20	Linguistic Communication (English)	GENG 161	2
			Any course from the category	2
		Linguistic Communication (Arabic)	Any course from the category	3
		Linguistic Communication (Foreign Languages)	Any two courses from the category	4
		Quantitative Reasoning	GMTH 141A	3
			GSTA 140 or GSTA 141	3
		Information, Media and Technology	Any course from the category	3
Literacies	9	Scientific Literacy	Any course from the category	3
		Global Awareness	Any course from the category	3
		Cultural Literacy	Any course from the category	3
Cultivating positive disposition	10	Physical and Environmental Wellbeing	Any course from the category	2
		Islamic Thought and Ethics	GISL 171	2
			Any two courses from the category	4
		Civic Engagement	Any course from the category	2
Interdisciplinary research	3		GSEM 200	3
TOTAL CREDIT HOURS	**42**			**42**

Core Requirements: 38 Credit Hours

To fulfil graduation requirements in the Bachelor of Science in Design, all students must complete 38 credit in the following core courses:

Course no.	Course title	Credits	Prerequisite(s)
DESN 101	Design Studio-1: Fundamentals of Design	1-6-4	None
DESN 102	Design Studio-2: Design Thinking and Application	1-6-4	DESN 101
DESN 121	Freehand Drawing	0-6-3	None
DESN 122	Technical Drawing	2-2-3	DESN 121
DESN 152	Color Theory: Concepts and Applications	2-2-3	None
DESN 221	Digital Modeling in Design	2-2-3	DESN 122
DESN 241	Human Factors and Design Psychology	3-0-3	DESN 102
DESN 251	Materials and Methods 1	2-2-3	DESN 122
DESN 342	Design for Sustainability	3-0-3	DESN 241 and DESN 251
DESN 363	Internship (Summer Course)	0-0-3	97 CR and INTD 302 and INTD 362 or PROD 302 and PROD 362
DESN 431	Contemporary Issues in Design	3-0-3	DESN 342 and INTD 362 or PROD 362
DESN 462	Design Entrepreneurship and Leadership	3-0-3	DESN 431
TOTAL		**38 Credits**	

Compulsory Courses In Interior Design Concentration Intd: 44 Credit Hours

Course no.	Course title	Credits	Prerequisite(s)
INTD 201	Interior Design Studio-3: Residential Design	1-6-4	DESN 102 & DESN 122
INTD 202	Interior Design Studio-4: Advanced Residential Design	1-6-4	INTD 201
INTD 231	History and Theory of Interior Design-1	3-0-3	None
INTD 232	History and Theory of Interior Design-2	3-0-3	INTD 231 & INTD 201
INTD 252	Lighting and Fixtures in Interior Design	2-2-3	DESN 251 & INTD 201
INTD 301	Interior Design Studio-5: Office and Corporate Design	1-6-4	INTD 202 & INTD 232
INTD 302	Interior Design Studio-6: Retail and Commercial Design	1-6-4	INTD 301 & INTD 351
INTD 351	Building Systems in Interior Design	2-2-3	INTD 252
INTD 353	Furniture and Equipment in Interior Design	2-2-3	INTD 202 & INTD 252
INTD 362	Professional Practices in Interior Design	3-0-3	INTD 301
INTD 461	Capstone Project Research and Programming	1-2-2	INTD 302
INTD 401	Interior Design Studio-7: Hospitality and Entertainment Design	1-6-4	INTD 302
INTD 402	Interior Design Studio-8: Capstone Project	1-6-4	INTD 401 & INTD 461
TOTAL		**44 Credits**	

Compulsory Courses In Product Design Concentration Prod: 44 Credit Hours

Course no.	Course title	Credits	Prerequisite(s)
PROD 201	Product Design Studio-3: Analysis and Design Process	1-6-4	DESN 102 and DESN 122
PROD 202	Product Design Studio-4: Product Design for Diverse Groups	1-6-4	PROD 201
PROD 222	Advanced Sketching for Product Design	0-6-3	DESN121
PROD 231	History and Theory of Product Design-1	3-0-3	None
PROD 232	History and Theory of Product Design-2	3-0-3	PROD 231 and PROD 201
PROD 301	Product design Studio-5: Product Assembly and Micro Branding	1-6-4	PROD 202
PROD 302	Product design Studio-6: User Centered and Mass Customization	1-6-4	DESN 241 and PROD 301 and PROD 321
PROD 321	Product Prototyping and Fabrication	2-2-3	DESN 221 and DESN 251 and PROD 202
PROD 322	Packaging and Branding	2-2-3	DESN 251 and PROD 301
PROD 362	Professional Practices in Product Design	3-0-3	PROD 301
PROD 401	Product design studio-7: Outdoor Products	1-6-4	PROD 302
PROD 402	Product Design Studio-8: Capstone Project	1-6-4	PROD 401 and PROD 461
PROD 461	Capstone Project Research and Programming	1-2-2	PROD 302
TOTAL		**44 Credits**	

Technical Elective Requirements

Course no.	Course title	Credits	Prerequisite(s)
DESN 371	Photography for Designers	(2-2-3)	DESN 152
DESN 372	Design, Culture and Environment	(3-0-3)	DESN 241
DESN 373	Special Topics in Design	(3-0-3)	Departmental Approval
INTD 374	Sustainable Interior Lighting Design	(2-2-3)	INTD 252
INTD 375	Interior Landscape Architecture	(3-0-3)	DESN 241
INTD 376	Spatial Detailing in Interior Design	(2-2-3)	DESN 251
PROD 377	Advanced Prototyping and Fabrication	(2-2-3)	DESN 251
PROD 378	Advanced Digital Design Techniques	(2-2-3)	DESN 221
PROD 379	Anatomy and Ergonomics in Product Design	(3-0-3)	DESN 241

Required internship: 3 credits

All students on the DESN program are required to pursue a focused internship related to design as a broad discipline and professional practice or the specific concentration of their choice or a closely allied area to their design major or concentration. To be eligible for a credit-bearing internship, students should fulfill following prerequisites:

1. Completed 97 credit and
2. Successfully complete concentration specific courses as applied:
   a. INTD 302 + INTD 362 or PROD 302 + PROD 362

Bachelor of Science in Design – Interior Design track: Study plan

Semester 1		Prereq.	CR
DESN 101	Design Studio-1: Fundamentals of Design	None	4
DESN 121	Freehand Drawing	None	3
GENG 161	Project-Based Language Learning and Critical Thinking	None	2
	Information, Media and Technology	None	3
GMTH 141A	Math for architecture and design	None	3
TOTAL			**15**

Semester 2		Prereq.	CR
DESN 102	Design Studio-2: Design Thinking and Application	DESN 101	4
DESN 122	Technical Drawing	DESN 121	3
DESN 152	Color Theory: Concepts and Applications	None	3
GSTA 140	Elementary Statistics	GMTH 41A	3
	Linguistic Communication (Arabic)		
TOTAL			**16**

Semester 3		Prereq.	CR
INTD 201	Interior Design Studio-3: Residential Design	DESN 102 DESN 122	4
INTD 231	History and Theory of Interior Design-1	None	3
DESN 251	Materials and Methods-1	DESN 122	3
DESN 221	Digital Modelling in Design	DESN 122	3
GISL 171	Social and Moral Values in Islam		2
	Linguistic Communication (English)		2
TOTAL			**17**

Semester 4		Prereq.	CR
INTD 202	Interior Design Studio-4: Advanced Residential Design	INTD 201	4
INTD 232	History and Theory of Interior Design-2	INTD 231 INTD 201	3
INTD 252	Lighting and Fixtures in Interior Design	DESN 251 INTD 201	3
DESN 241	Human Factors and Design Psychology	INTD 201	3
	Cultural Literacy		3
TOTAL			**16**

Semester 5		Prereq.	CR
INTD 301	Interior Design Studio-5: Office and Corporate Design	INTD 202 INTD 232	4
INTD 351	Building Systems in Interior Design	INTD 252	3
INTD 353	Furniture and Equipment in Interior Design	INTD 202 INTD 252	3
	Scientific Literacy		3
	Civic Engagement		2
	Islamic Thought and Ethics - 2		2
TOTAL			**17**

Semester 6		Prereq.	CR
INTD 302	Interior Design Studio-6: Retail and Commercial Design	INTD 301 INTD 351	4
DESN 342	Design for Sustainability	DESN 251 DESN 241	3
INTD 362	Professional Practices in Interior Design	INTD 301	3
	Technical Elective 1		3
GSEM 200	Interdisciplinary Seminar and Research		3
TOTAL			**16**

Summer Semester		Prereq.	CR
DESN 363	Internship	79 CR INTD 302 INTD 362	3

Semester 7		Prereq.	CR
INTD 401	Interior Design Studio-7: Hospitality and Entertainment Design	INTD 302	4
INTD 461	Capstone Project Research and Programming	INTD 302	2
DESN 431	Contemporary Issues in Design	DESN 342 INTD 362	3
	Technical Elective 2		3
	Global Awareness		3
	Linguistic Communication (Foreign Languages)		2
TOTAL			**17**

Semester 8		Prereq.	CR
INTD 402	Interior Design Studio-8: Capstone Project	INTD 401 INTD 461	4
DESN 462	Design Entrepreneurship & Leadership	INTD 461	3
	Technical elective 3		3
	Linguistic Communication (Foreign Languages)		2
	Islamic Thought and Ethics - 3		2
	Physical and Environmental Wellbeing		2
TOTAL			**16**

Bachelor of Science in Design – Product Design track: Study plan

Semester 1		Prereq.	CR
DESN 101	Design Studio-1: Fundamentals of Design	None	4
DESN 121	Freehand Drawing	None	3
GENG 161	Project-Based Language Learning and Critical Thinking	None	2
	Information, Media and Technology	None	3
GMTH 141A	Math for architecture and design	None	3
TOTAL			**15**

Semester 2		Prereq.	CR
DESN 102	Design Studio-2: Design Thinking and Application	DESN 101	4
DESN 122	Technical Drawing	DESN 121	3
DESN 152	Color Theory: Concepts and Applications	None	3
GSTA 140	Elementary Statistics	GMTH 41A	3
	Linguistic Communication (Arabic)		
TOTAL			**16**

Semester 3		Prereq.	CR
PROD 201	Product Design Studio-3: Analysis and Design Process	DESN 102 DESN 122	4
PROD 231	History and Theory of Product Design-1	None	3
DESN 251	Materials and Methods-1	DESN 122	3
DESN 221	Digital Modelling in Design	DESN 122	3
GISL 171	Social and Moral Values in Islam		2
	Linguistic Communication (English)		2
TOTAL			**17**

Semester 4		Prereq.	CR
PROD 202	Product Design Studio-4: Product Design for Diverse Groups	PROD 201	4
PROD 232	History and Theory of Product Design-2	PROD 231 PROD 201	3
PROD 222	Advanced Sketching for Product Design	DESN 121	3
DESN 241	Human Factors and Design Psychology	DESN 102	3
	Scientific Literacy		3
TOTAL			**16**

Semester 5		Prereq.	CR
PROD 301	Product design Studio-5: Product Assembly and Micro Branding	PROD 202 PROD 232	4
PROD 321	Product Prototyping and Fabrication	DESN 251 PROD 202	3
PROD 322	Packaging and Branding		3
	Cultural Literacy		3
	Islamic Thought and Ethics - 2		2
	Civic Engagement		2
TOTAL			**17**

Semester 6		Prereq.	CR
PROD 302	Product design Studio-6: User Centered and Mass Customization	DESN 241 PROD 301 PROD 321	4
DESN 342	Design for Sustainability	DESN 251 DESN 241	3
PROD 362	Professional Practices in Product Design	INTD 301	3
	Technical Elective 1		3
GSEM 200	Interdisciplinary Seminar and Research		3
TOTAL			**16**

Summer Semester		Prereq.	CR
DESN 363	Internship	79 CR INTD 302 INTD 362	3

Semester 7		Prereq.	CR
PROD 401	Product design studio-7: Outdoor Products	INTD 302	4
PROD 461	Capstone Project Research and Programming	INTD 302	2
DESN 431	Contemporary Issues in Design	DESN 342 INTD 362	3
	Technical Elective 2		3
	Global Awareness		3
	Linguistic Communication (Foreign Languages)		2
TOTAL			**17**

Semester 8		Prereq.	CR
PROD 402	Product Design Studio-8: Capstone Project	PROD 401 PROD 461	4
DESN 462	Design Entrepreneurship & Leadership	DESN 431	3
	Technical elective 3		3
	Linguistic Communication (Foreign Languages)		2
	Islamic Thought and Ethics - 3		2
	Physical and Environmental Wellbeing		2
TOTAL			**16**

Summary of courses

Dept. or Section Prefix and Course Number	Course Title	Credits (Lecture-Practical-Total)	Prerequisite(s)
DESN 101	Design Studio-1: Fundamentals of Design	1-6-4	None
DESN 102	Design Studio-2: Design Thinking and Application	1-6-4	DESN 101
DESN 121	Freehand Drawing	0-6-3	None
DESN 122	Technical Drawing	2-2-3	DESN 121
DESN 152	Color Theory: Concepts and Applications	2-2-3	None
DESN 221	Digital Modeling in Design	2-2-3	DESN 122
DESN 241	Human Factors and Design Psychology	3-0-3	DESN 102
DESN 251	Materials and Methods-1	2-2-3	DESN 122
DESN 342	Design for Sustainability	3-0-3	DESN 241, DESN 251
DESN 363	Internship [Summer Course]	0-0-3	97 Credits INTD 302 and INTD 362 or PROD 302 PROD 362
DESN 431	Contemporary Issues in Design	3-0-3	DESN 342 and INTD 362 or PROD 362
DESN 462	Design Entrepreneurship and Leadership	3-0-3	DESN 431
INTD 201	Interior Design Studio-3: Residential Design	1-6-4	DESN 102, DESN 122
INTD 202	Interior Design Studio-4: Advanced Residential Design	1-6-4	INTD 201
INTD 231	History and Theory of Interior Design-1	3-0-3	None
INTD 232	History and Theory of Interior Design-2	3-0-3	INTD 231, INTD 201
INTD 252	Lighting and Fixtures in Interior Design	2-2-3	DESN 251, INTD 201
INTD 301	Interior Design Studio-5: Office and Corporate Design	1-6-4	INTD 202 , INTD 232
INTD 302	Interior Design Studio-6: Retail and Commercial Design	1-6-4	INTD 301, INTD 351
INTD 351	Building Systems in Interior Design	2-2-3	INTD 252
INTD 353	Furniture and Equipment in Interior Design	2-2-3	INTD 202, INTD 252
INTD 362	Professional Practices in Interior Design	3-0-3	INTD 301
INTD 401	Interior Design Studio-7: Hospitality and Entertainment Design	1-6-4	INTD 302
INTD 402	Interior Design Studio-8: Capstone Project	1-6-4	INTD 401, INTD 461
INTD 461	Capstone Project Research and Programming	1-2-2	INTD 302
PROD 201	Product Design Studio-3: Analysis and Design Process	1-6-4	DESN 102, DESN 122
PROD 202	Product Design Studio-4: Product Design for Diverse Groups	1-6-4	PROD 201
PROD 222	Advanced Sketching for Product Design	0-6-3	DESN 121
PROD 231	History and Theory of Product Design-1	3-0-3	None
PROD 232	History and Theory of Product Design-2	3-0-3	PROD 231, PROD 201
PROD 301	Product Design Studio-5: Product Assembly and Micro Branding	1-6-4	DESN 251, PROD 202
PROD 302	Product design Studio-6: User Centred and Mass Customization	1-6-4	DESN 241 and PROD 301 and PROD 321
PROD 321	Product Prototyping and Fabrication	2-2-3	DESN 221, PROD 202
PROD 322	Packaging and Branding	2-2-3	PROD 202
PROD 362	Professional Practices in Product Design	3-0-3	PROD 301
PROD 401	Product design studio-7: Outdoor Products	1-6-4	PROD 302
PROD 402	Product Design Studio-8: Capstone Project	1-6-4	PROD 401, PROD 461
PROD 461	Capstone Project Research and Programming	1-2-2	PROD 302

Dept. or Section Prefix and Course Number	Course Title	Credits (Lecture-Practical-Total)	Prerequisite(s)
Technical Electives			
DESN 371	Photography for Designers	2-2-3	DESN 152
DESN 372	Design, Culture and Environment	3-0-3	DESN 241
DESN 373	Special Topics in Design	3-0-3	Departmental Approval
INTD 374	Sustainable Interior Lighting Design	2-2-3	INTD 252
INTD 375	Interior Landscape Architecture	3-0-3	DESN 241
INTD 376	Millwork and Detailing in Interior Design	2-2-3	DESN 251
PROD 377	Advanced Prototyping and Fabrication	2-2-3	DESN 251
PROD 378	Advanced Digital Design Techniques	2-2-3	DESN 221
PROD 379	Anatomy and Ergonomics in Product Design	3-0-3	DESN 241

Course descriptions

Design Requirements

DESN 101: Design Studio-1: Fundamentals of Design (1-6-4) Prerequisite: None

This course is a beginner level design studio, in the first semester of the Design Program. The course introduces the fundamental design elements and design process, in addition to covering, vocabulary, principles, concepts and processes applicable to create basic designs. In addition, orthographic representation principles will be introduced to be applied to the basic design problems. The course introduces the two main domains of Interior and Product design to provide the initial understanding of designing spaces. Through lectures, case studies, and one to one instruction, supervision and critics, knowledge will be delivered. Students will undertake number of assessments in the form of assignments, small projects, one-day sketch exam development, and a final semester project. By the end of the course, students will be able to explain and apply the design elements and design process to create basic interior spaces and simple products.

DESN 102: Design Studio-2: Design Thinking and Application (1-6-4) Prerequisite: DESN 101

This is a freshmen level 2 design studio course. This studio focuses on the application of design principles, concepts and processes, in addition to design thinking in action that were introduced in the previous semester. The principles and elements of interior design along with product design are taught at more focused level and applied in the projects. Through lectures, group discussion, focus group, and one to one supervision, knowledge is delivered. Students undertake number of assessments in the form of one-day sketch exam, assignments, projects and presentations. By the end of the course, students will be able to understand the design problems, visualize ideas through the development, analysis, composition and construction of form, space and experiences and achieve preliminary level of interior and product design competencies. Students are required to present their final project.

DESN 121: Freehand Drawing (0-6-3) Prerequisite: None

This is a freshmen level 1 course, with the emphasis to develop freehand sketching skills. This course encourages students to visualize their thoughts and ideas through the extensive exploration of the abstract and representational languages of drawing. The ability to draw quickly and to accurately communicate ideas will be stressed by an understanding of space, form and structure and the effects of light through the use of line, texture, color, shade and shadow. Interior and product design related assignments and projects allow students to apply the skills in their studio work. Through short lectures, teaching drawing techniques, group discussion, and one to one supervision, information will be delivered. Students will undertake number of practical assignments, projects and presentations. On successful completion of the course, students will be able to create freehand sketches of objects and environment; draw design concepts, apply shading and render the sketches.

DESN 122: Technical Drawing (2-2-3) Prerequisite: DESN 121

This is a freshmen course, that introduces the principles of technical drawing. The course prepares students with necessary skills required by the designers to convert their designs into technical drawing that are used by suppliers and manufacturers. The course integrates two methods of technical drawing documentation: a hand drawn working drawing and a technical drawing using Computer Aided Design software, e.g. AutoCAD to produce two and three dimensional drawings including parallel line drawings (plans, sections, elevations) and orthogonal drawings (axonometric, isometric and perspective) and design details at different scales. Through short lectures, demonstrations, workshops, and tutorials the various topics will be delivered, facilitated and taught in the drawing studio and computer lab simultaneously. Learning will be assessed using number of assessment methods, including, exams, practical assignments, projects, in-class exercises and portfolio development of drawings. Upon completing this course, students will understand the information presented in the technical drawings, and will use typical symbols, graphic conventions, dimensioning, and the professionally relevant methods of conveying design information accurately, clearly and completely as applicable to interior design and product design.

DESN 152: Color Theory: Concepts and Applications (2-2-3) Prerequisite: None

This is a freshmen course that introduces the color theory to be used in design development. The course focuses on the concepts, principles, theories and systems of color. Beginning with the nature of color, and through understanding concepts such as hue, value, saturation, analogous and complementary colors and progress to the Munsell color system for applied design. Through detailed lectures, case studies, workshops, and tutorials the various color topics will be delivered and taught. Learning will be assessed using, exams, practical assignments, projects and in-class exercises. Students will be able to explain and apply color theory to the design problems and use the learning in their interior and product design studio work.

DESN 221: Digital Modeling in Design (2-2-3) Prerequisite: DESN 122

This is a sophomore level course that focuses on 2-D image generation, manipulation, and 3-D object creation and surfacing. This course allows students to understand and investigate computer technology potential as a tool for creative exploration, representation, and documentation of design. Students will explore 3D modeling, cameras, lighting, surface textures, material application and rendering output along with presentation concepts such as narrative, rendering style, visual mood board and image composition for interior and product design. Through short lectures, demonstration, workshops, and tutorials, digital application will be taught to create and develop 2D media material, e.g. using Photoshop and 3D models development e.g. using 3D Max. Learning will be assessed using, timed exams, practical assignments, projects and in-class exercises. Students will be able to use the software application and apply digital techniques to present the projects related to interior and product design.

DESN 241: Human Factors and Design Psychology (3-0-3) Prerequisite: DESN 102

This is a Sophomore level theory course, introduce students to the important topics of human factors and design psychology. The course examines the vital role of human factors such as anthropometrics and ergonomics as tools to optimize the physical and emotional aspects of design. Topics include standards and data related to different user groups regarding function and safety. In addition, the role of proxemics and cultural issues in the design and experience of products, spaces and environments are introduced. The principles of universal design and the need to seamlessly integrate these factors in design processes are emphasized. Through lectures, in class exercises, case studies and design scenarios, teaching will be delivered. The students learning will be assessed using, timed exams, in-class exercises, assignments, and small projects. Students will be able to apply anthropometrics and ergonomics as tools to optimize the physical and emotional aspects in their design project.

DESN 251: Materials and Methods-1 (2-2-3) Prerequisite: DESN 122

This is a sophomore level course, that present students with the primary types of materials and methods used in creation of design. Students are introduced to basic properties and fabrication techniques materials such as wood, metals, plastics and other materials that are typically used to develop design concepts. Fabrication Laboratory (FabLab) safety rules and policies are introduced to establish standards for safe working environment. The use and setup of basic workshop equipment is demonstrated and students will fabricate items using different equipment. An introduction to rapid prototyping technique (3D Printing) will expose the students to fabrication methods that enable the transition from fabrication for design development to fabrication for low volume production and commercial uses. Through detailed lectures, process videos, process demonstration, FabLab training, and tutorials, various aspects of theory and competency will be taught. Learning will be assessed using, timed exams, practical tasks, projects and in-class exercises. Students will be able to identify the basic types of materials and use manual and automatic tools to develop the study models and mockups.

DESN 342: Design for Sustainability (3-0-3) Prerequisite: DESN 241 and DESN 251

This is a junior level theory course that presents sustainable design philosophies. The course identifies, describes and analyzes the important principles, approaches and aspects of sustainable design. By contextualizing sustainability as an optimal problem solving that considers environmental, socio-cultural, physiological and financial dimensions of design decisions at any scale the course material is presented under five broad themes related to reduce, reuse, recycle, restore and process. Resiliency, the twin concept to sustainability, is also identified and discussed as a complementary topic for holistic design thinking. Through lectures, in class exercises, case studies and design scenarios, knowledge will be delivered. The students learning will be assessed using, timed exams, in-class exercises, assignments, and small projects. The students will be able to understand and apply the principles of sustainable design in the interior and product design problems.

DESN 363: Internship (0-0-3) Prerequisites: Completed 97 credit and INTD 302 + INTD 362 or PROD 302 + PROD 362

This is an internship course, taken after completing 97 credit hours, when students have passed through higher studio learning and gained sufficient design knowledge. The course provides an opportunity for students to gain professional experience supporting the application and further development of the knowledge and skills acquired in the classroom. Under the supervision of a faculty and an industrial supervisor, students identify the scope of their work, based on the specialty of their choice in the field of interior and product design. Training happens during the work experience in the form of completing assigned tasks and attending workshops or training offered by the employer. The students will submit a final report and present the portfolio of work experience to the jury members. The students will be fully conversant with work environment and be prepared with required commitment level by the industry. A minimum number of 240 hours of documented work is necessary to earn credit for this course.

DESN 431: Contemporary Issues in Design (3-0-3) Prerequisites: DESN 342 and INTD 362 or PROD 362

This is a senior level course that explores the contemporary design issues emerging in current era. The course identifies the currently emerging design issues at the local, regional, national and global contexts. The influence of factors such as interconnectivity and interactivity, increasing computing power, digitization, emergence of knowledge economies, technological, material and experiential innovations, mechanization and urbanization, resource conservation, depletion and renewal, sustainability and resilience, schools of thought such as non-linearity, bio- mimicry, reflective and networked practices, and quality of life in shaping our understanding of the what, why, how, when, and where of design are analyzed and articulated. Through lectures, seminars, discussion, verbal presentation and case studies, various aspects of contemporary issues are taught that can be directly applied to the design problems. The students learning will be assessed using, timed exams, position papers submission, in-class exercises, assignments, and small projects. The students will be able to understand the contemporary issues emerging in interior and product design, in the current time and develop appropriate design solution in response.

DESN 462: Design Entrepreneurship and Leadership (3-0-3) Prerequisites: DESN 431

This senior course exposes students to a higher level academic skills useful for entrepreneurship and leadership. It presents creative intelligence as a new form of cultural literacy and design thinking as a powerful catalyst for change. When combined with entrepreneurship, ethics and leadership, design thinking has tremendous potential to transform human experience. Examples of intended and unintended, positive and negative consequences are identified and discussed. The leadership qualities, business canvas along with reflective practice for entrepreneurs are embedded within course content. Teaching methods include, lectures, seminars, discussion, verbal presentation and case studies, to deliver the knowledge and develop advanced academic skills. The students learning will be assessed using, exams, position paper, reflection paper, quiz, in-class exercises, and assignments. The students will be able to explain and apply “design thinking process” into design entrepreneurship to resolve the organizational issues; and develop effective skills, useful for new entrepreneurs and leaders.

INTD 201: Interior Design Studio-3: Residential Design (1-6-4) Prerequisites: DESN 102 and DESN 122

This sophomore design studio course is the first specialized studio of the Interior Design concentration that focuses on “Residential - Home Design”. The study is combining the lectures and practical projects where students work to apply the concepts of design process, interior design principals, interior design elements (flooring, walls, ceiling, lighting, furniture), ergonomics and human factors. Varieties of projects cover all housing spaces such as reception, living area, dining area, kitchen, as well as bedrooms, bathrooms, and multi-purpose rooms. Assessment methods will be implemented in the form of projects and assignments (sketching and manual hand rendering). By the end of this course, students will be able to design residential interiors and develop creative applicable solutions.

INTD 202: Interior Design Studio-4: Advanced Residential Design (1-6-4) rerequisite: INTD 201

This second Interior Design studio focuses on “Advanced Residential and Housing Design”. The teaching methods combine lectures and practical projects, where students think deeper about the design process starting with a pre-design stage (research, identifying the actual users’ needs, select the suitable style, identifying materials and color scheme), then a design stage, and finally a modifying stage for the whole design for improvements and increase users’ comfort and safety. Two different projects during the semester cover all housing spaces with focusing on stairs, flooring plan, ceiling plan and electricity, wall treatments & cladding and furniture & equipment. Assessment methods will be implemented in the form of projects and assignments (Sketching, manual & computerized rendering). By the end of this course, students will be able to design a variety of residential or housing interiors with enough knowledge about details and applications.

INTD 231: History and Theory of Interior Design-1 (3-0-3) Prerequisite: None

This is a sophomore level course which focuses on the history & theories of interior design. Through lectures supported by visual imagery and descriptive narrative, this course provides a critical overview of interior design history from pre-historic periods until the end of the 19th century, going through many historical and cultural stages such as Ancient Egyptians, Greeks, Romans, Coptic, Islamic periods and styles, Middle Ages, Renaissance, Gothic style, English styles, French styles. Assessment methods will be implemented in the form of reports, exams, assignments, portfolio of sketches, and final exam. By the end of this course, students will be able to recognize and identify the main historical interiors with the possibility to represent through any contemporary interior design.

INTD 232: History and Theory of Interior Design-2 (3-0-3) Prerequisite: INTD 231 and INTD 201

This course builds on the (pre-requisite) INTD 231. Referring to the end of the 19th century and the begin of 20th century as the next starting point, the course focuses on the major stylistic movements, influential theories and prominent individuals and institutions that shaped the interior design profession such as Victorian Style, Art & Craft Movement, Art Nouveau, Cubism, De Stijl, Art Deco, Bauhaus, Postmodernism, De-constructivism as well as sustainability, do it yourself and futurism. Through lectures, discussions and the analyses of case studies students learn about factors such as societal and environmental influences, politics, economics, science, technology, psychology and media that have shaped interior design. By the end of this course, students will be able to recognize and identify the 20th century interiors styles and movements with the possibility to represent any of them through any contemporary interior design.

INTD 252: Lighting and Fixtures in Interior Design (2-2-3) Prerequisites: DESN 251 and INTD 201

This course introduces the principles of lighting including terminology, definitions and characteristics of light. Students select and apply luminaries and light sources based on graphic exercises in lighting design and lighting calculations. A second major focus of the course is the important role of fixtures; finish materials and furnishings (textiles) in the creation of residential, commercial and institutional interiors. Through lectures, discussions and the analyses of case studies students learn about many topics include the selection, specification, and application of textiles and finish materials based on their properties and performance criteria; sources of textiles, fabrics and finish materials; the concept of sustainable resources; appropriate installation and maintenance requirements; codes; and regulations and standards. By the end of this course, students will be able to design the lighting of any interior space, identify the suitable fixtures and materials.

INTD 301: Interior Design Studio-5: Office and Corporate Design (1-6-4) Prerequisites: INTD 202 and INTD 232

This junior level interior design studio focuses on office and corporate design. The studio is combining the lectures and practical projects, where students study, design, and develop two main different projects; the first is a small office consist of (main office, secretary, waiting area and meeting room) and the second is a bigger corporate office, such as a company, a bank branch, an administrative or service sector. Through this studio course, students learn more about the efficiency and the functionality of interior design, in addition to improving their research, analysis and presentation skills. Assessment methods will be implemented in the form of projects and assignments (Sketching and computerized rendering). By the end of this course, students will be able to study, design and upgrade small size office or medium size corporate office interiors with enough knowledge about the technical and the construction details and applications.

INTD 302: Interior Design Studio-6: Retail and Commercial Design (1-6-4) Prerequisites: INTD 301 and INTD 351

This advanced studio emphasizes the resolution of complex design issues in interior environments such as retail interiors. The design process involves program analysis, ecological and environmental factors, design concept articulation and development of a completed design that incorporates advanced technological and aesthetic principles. Holistic development of concept, application of current sustainable design practices, effective space planning, appropriate material, finish and furniture selection, expression of lighting design, building systems and codes and universal design are emphasized in the final presentation. A three dimensional representation of the interior space through physical or virtual models is required.

INTD 351: Building System of Interior Design (2-2-3) Prerequisites: INTD 252

This junior level course is about studying the Interior Design systems. Through lectures, the course focuses on explaining the different building systems that play a critical role in the health, safety and welfare of occupants of any interior environments. Students will become knowledgeable about the typical flooring, ceiling, wall treatments, electrical, acoustical, plumbing, HVAC, security and other building systems used in interior environments. In addition, students will become knowledgeable about fire detection, protection and firefighting in building interiors. Through multiple exercises, case studies analyses, and projects students will be able to understand, evaluate and develop interior building systems.

INTD 353: Furniture and Equipment in Interior Design (2-2-3) Prerequisites: INTD 202 and INTD 252

This course introduces the principles and the practical of furniture design process. Students will design and draw many types of furniture and present a study about the used materials, joints, fittings and the production process. A second major focus of the course is the important role of equipment and accessories in the creation of residential, commercial and institutional interiors. Through lectures, discussions and the analyses of case studies students will learn how to design and select the furniture and interior equipment based on their properties and performance criteria; the concept of sustainable resources; appropriate installation and regulations and standards. By the end of this course, students will be able to design furniture and select the suitable interior equipment.

INTD 362: Professional Practices in Interior Design (3-0-3) Prerequisites: INTD 301

This junior level lecture based course focuses on topics related to the specialized services performed by professional interior designers by focusing on the administrative, legal, ethical and financial aspects of professional practice. Contract documents, specifications, safety standards and building codes will be studied within the context of a contract design project. Additional topics will be covered in terms of, business principles applicable to interior design such as marketing, purchasing, accounting, development of business plans, budgeting and collaboration with teams and other consultants. Through lectures, one to one instruction, and supervision knowledge will be delivered. Students will undertake number of assessments in the form of exams, assignments, and practical projects. By the end of the course, students will be able to explain the legal requirements for interior design, and will be able to create professional documents.

INTD 401: Interior Design Studio-7: Hospitality and Entertainment Design (1-6-4) Prerequisites: INTD 302

This is an advanced level of interior design studios that focuses on “Touristic & Entertainment Design”. The studio is combining lectures and practical applications on one real project. Students will understand the correlation between indoor and outdoor design with the consideration of the number of users and their variable needs. The studio brief is mainly about one complex heavy crowded project such as cinema, theatre, coffee shops and restaurants. Assessment methods will be implemented in the form of one project which divide into many assignments (Sketching & computerized rendering). By the end of this course, students will be able to study, design and upgrade touristic and entertainment interiors with enough knowledge about the project’s relation with the surrounded exterior environment and all the applicable technical and constructional details.

INTD 402: Interior Design Studio-8: Capstone Project (1-6-4) Prerequisites: INTD 401 and INTD 461

This studio is the Capstone Project. Following one semester of interior design capstone project research and programming, this studio requires students to integrate all knowledge and skills acquired throughout their program. A well designed multifunctional projects such as Hotels, Resorts, Service Centers, Sport Clubs, Libraries, Educational Institutions, Governmental buildings, and so on, are expected. In addition to the lectures, this culminating design experience is a self-directed, faculty monitored project requiring students to demonstrate the breadth and depth of their design thinking and skills. Each student pursues the design exploration, development and presentation based on the design brief or programming document of a specific design project that was defined by them in the previous semester. Though each project may have a different focus, the course is structured so that every project is of comparable scope, sophistication, and complexity. By the end of this studio, students graduate as professional interior designers who can study, design, update and manage any type of interior projects.

INTD 461: Capstone Project Research and Programming (1-2-2) Prerequisites: INTD 302

This is a senior course, aimed to prepare the chapters to inform the student’s Capstone Project in the subsequent semester. Within a specific area of interest, students undertake precedent studies, programming, and functional analyses based on which they organize and synthesize this information to hypothesize and propose solutions to interior design problems. Students are required to complete extensive research documenting the role of cultural, sociological, political, economic, environmental, anthropometric and human factors in addition to life safety, and materials, methods and technologies. The “programming document or design brief” produced by each students includes written and graphic communication, which in turn complement their oral presentations to design faculty and professionals with expertise in their area of research. Through detailed lectures, discussion, case study analysis, presentation, and tutorials, various aspects of design research methods will be taught. The students will present the design problem proposal, and review will happen at the midterm. Thesis chapters will go through iterative process submitted by the end of the semester. The students will be able to effectively communicate design problems; explain and apply design process to solve the design problem, in addition to using design research methods.

PROD 201: Product Design Studio-3: Analysis and Design Process (1-6-4) Prerequisites: DESN 102 and DESN 122

This sophomore level design studio is a first specialized course of the Product Design concentration that focuses on analysis and design of simple products. Through an iterative design process, students learn and apply the concepts, theories, terminology and methodologies related to the creation of products. By conducting product analysis, students will explore, how products work. Through the formation of simple objects, students gain basic competence in model making and prototyping. Emphasis includes the development of appropriate design sketches and the construction of representational prototypes. Assessment methods include, projects, assignments (sketching and manual hand rendering) and exams to develop students’ quick ideation skills. By the end of the course, students will be able to analyze the products functions and explain how it works, identify the design and functional variables in a simple product design, as well as explore and evaluate alternatives by building models and prototypes.

PROD 202: Product Design Studio-4: Product Design for Diverse Groups (1-6-4) Prerequisite: PROD 201

This is a sophomore level course that enhances students’ skills in product design research methods, including observational research, and use the results of their research outcome to design simple, single or limited use objects for various client groups including special populations such as children, elderly, and disabled. The course focuses on generation of product form while developing meticulous attention to every aspect of the design process by limiting the complexity of the projects. Short lectures, case studies, and group discussion are some teaching methods that are used, in addition to skills development in digital software for product design. By the end of the course, the students will be able to deliver complete, clear, compelling design documentation and construction of multiple study models and presentation models at different scales.

PROD 222: Advanced Sketching for Product Design (0-6-3) Prerequisite: DESN 121

Following the successful completion of DESN 121, this sophomore level course focuses on developing students’ advanced sketching skills. The course enhances the understanding of sketching elements, visualizing ideas, and components of product design. The delivery begins with the basics of product design sketching techniques, and go through the steps using design elements up to advance level, in addition to using the markers to finalize the product sketches. Through practical guidance, hands-on demonstrations, lectures, workshops, and one to one instructions, knowledge will be delivered. Students will undertake number of assignments, and a final assessment, which results in a comprehensive portfolio presentation. By the end of the course, students will be able to prepare quick ideation, finished illustrative sketches with the application of colors resembling materials.

PROD 231: History and Theory of Product Design-1 (3-0-3) Prerequisites: None

This is a sophomore level course which focuses on the history and theories of Product Design. Through lectures supported by visual imagery and descriptive narratives, this course provides a critical overview of product design history from pre-historic periods until the end of the 19th century, going through many historical and cultural stages such as Ancient Egyptians, Greeks, Romans, Coptic, Islamic periods and styles, Middle Ages, Renaissance, Gothic style, English styles, French styles. Assessment methods will be implemented in the form of reports, exams, assignments and final exam. By the end of this course, students will be able to recognize and identify the main historical products with the possibility to represent through any contemporary product design.

PROD 232: History and Theory of Product Design-2 (3-0-3) Prerequisites: PROD 231 and PROD 201

This sophomore level course introduces the major stylistic movements, influential theories and prominent individuals and institutions that shaped the product design profession from the 20th-century to present. Through lectures and case studies, students will analyze product designs in terms of design values and ideals, style, materials, production, technology, ergonomics and context. In depth discussions of case studies will focus on how societal and environmental influences, politics, economics, science and technology and media among other factors have shaped the greater context for product design. Students will undertake number of assessments in the form of exams, assignments and small projects. By the end of the course, students will be able to classify artefacts, products and objects by period, designers and country. Also they will be able to describe the distinguishing characteristics of the major periods of modern design, and comparing artefacts of the same period and of different periods.

PROD 301: Product design Studio-5: Product Assembly and Micro Branding (1-6-4) Prerequisites: DESN 251 and PROD 202

This junior level studio focuses on the design of products with increasing levels of complexity. The projects are broad in scope, requiring the application of design research techniques, continuing the emphasis on product form and function and understanding the effect of design decisions on the product development process. Additional emphasis is placed upon designing product components for assembly. In the second part of the semester, “micro branding” or the current trend of developing products for a niche market. Assessment methods are implemented in the form of assignments and projects. By the end of the course, students will be able to determine market information about a product category, using basic research techniques, review a product’s functional limitations and efficiencies, develop proof of concept models and develop a product’s components for assembly into a functional prototype and manufacturing.

PROD 302: Product design Studio-6: User Centred and Mass Customization (1-6-4) Prerequisites: DESN 241 and PROD 301 and PROD 321

This Junior studio emphasizes the integration of five broad domains (design research, human factors, material innovation, technology, product customization), in the creation and development of advanced products for specialized and niche markets. Through lectures, case studies, and one to one supervision and critics, knowledge will be delivered on design research, user interface information, and ethnographic methods of data collection. Students will undertake a comprehensive design project that has two parts. The first part of the project focuses on the integration of design research, human factors, material innovation and technology in the creation, development and fabrication of a product for a specialized or niche market. The second part of the same project involves refining and improving the designed for a mass customization. By the end of the course, students will be able to integrate and apply knowledge and skills in creating and developing advanced product solutions for specialized markets.

PROD 321: Product Prototyping and Fabrication (2-2-3) and DESN 251 and PROD 202 Prerequisites: DESN 221

This junior level lecture-lab based course focuses on the development of 3D mock-ups or prototypes using both hand-operated tools and CNC automated devices. Students develop the ability to safely and appropriately use different techniques, equipment and materials. The course includes additive processes such as 3D printing and subtractive processes such as CNC Milling programming and file preparation for laser cutting process. In addition, students develop their understanding of appropriate material selection for manufacturing in product. Students will undertake number of assessments in the form of exams, assignments, and practical projects. By the end of the course, students will be able to safely operate a number of manual and automatic machine to develop mock-ups and prototypes.

PROD 322: Packaging and Branding (2-2-3) Prerequisite: PROD 301

This is a junior level course which focuses on three-dimensional packaging structures for a broad range of products that will not only protect the contents but also create an experience for the user. Students will examine the role of visual, structural, ergonomic and environmental factors in the design of rigid and flexible packaging containers. Through lectures, case studies, and one to one instruction, supervision and critics, knowledge will be delivered. Students will undertake various projects to include conceptual development, prototyping, materials, typography, image making, composition, design and form are reviewed and explored to create innovative and memorable packaging. By the end of the course, students will be able to apply graphical elements to 3D forms to communicate relevant values through packaging, explore a variety of packaging types, prototype original packaging designs, develop structures that protect products during shipping and handling and assess the environmental impact of selected packaging materials.

PROD 362: Professional Practices in Product Design (3-0-3) Prerequisite: PROD 301

This junior level lecture based course focuses on topics related to the different structures of professional practices in product design including contracts, agreements, billings, and business procedures. Additional topics include the need for multi-disciplinary teams to bring a product to market, building a business around a core competency in design, and the development and protection of intellectual property. Topics related to legal and ethical aspects related to the practice of product design in a closely connected global world are also discussed. Through lectures, one to one instruction, and supervision knowledge will be delivered. Students will undertake number of assessments in the form of exams, assignments, and practical projects. By the end of the course, students will be able to explain the legal requirements for product design, while will be able to create professional documents.

PROD 401: Product design studio-7: Outdoor Products (1-6-4) Prerequisites: PROD 302

This senior studio deals with one of the outdoor projects (e.g. bus stop- kiosks- booths -food trucks-outdoor home appliances) that applies the four domains (design research, human factors, material innovation, and technology) in addition to integrating “design for manufacturing”. Teams of students will work collaboratively on the project from precedent analyses through concept development and schematic design to design development and culminating in design presentation. The scope, scale and nature of the assigned project is such that students are required to think concurrently at the macro, micro, and mediated scales of design. Each team will develop one set of presentation documents and artifacts showcasing one integrated, holistic design rather than a collection of three or more separate efforts. Opportunities to demonstrate individual student skills and knowledge will also be integrated into the design project through assignment. By the end of the course, students will be able to solve medium to large scale outdoor design problems.

PROD 402: Product Design Studio-8: Capstone Project (1-6-4) and PROD 401 Prerequisites: PROD 461

This is a senior level product design capstone studio that require students to integrate knowledge and skills acquired throughout the design curricula. This culminating design experience is a self-directed, faculty monitored project requiring students to demonstrate the breadth and depth of their design thinking and skills. Each student pursues the design exploration, development and presentation based on the design brief or programming document of a specific design project that was defined by them in the previous semester. Though each project may have a different focus, the course is structured so that every project is of comparable scope, sophistication, and complexity. Instructor acts as a facilitator and closely monitors and guides students to achieve the final outcome set in the brief. By the end of the course, students will be able to solve complex product design problems with competency in technical communication, design research, freehand sketching, physical and digital modelling and prototyping.

PROD 461: Capstone Project Research and Programming (1-2-2) Prerequisites: PROD 302

This is a senior course, aimed to prepare the chapters to inform the student’s Capstone Project in the subsequent semester. Within a specific area or topic of interest, students undertake precedent studies, programming, and functional analyses based on which they organize and synthesize this information to hypothesize and propose solutions to product design problems. Students are required to complete extensive research documenting the role of cultural, sociological, political, economic, environmental, anthropometric and human factors in addition to life safety, and materials, methods and technologies. The “programming document or design brief” produced by each students includes written and graphic communication, which in turn complement their oral presentations to design faculty and professionals with expertise in their area of research. Through detailed lectures, discussion, case study analysis, presentation, and tutorials, various aspects of design research methods will be taught. The students will present the design problem proposal, and review will happen at the midterm. Thesis chapters will go through iterative process submitted by the end of the semester. The students will be able to effectively communicate design problems; explain and apply design process to solve the design problem, in addition to using design research methods.

Technical Elective Requirements

DESN 371 Photography for Designers (2-2-3) — Prerequisites: DESN 152

This course will equip the student with a wide range of basic photographic techniques and practices. This includes an introduction to the fundamentals of photography along with the study of photographic art and its use in design graphic and presentation. Issues covered include angle of vision, image formation center, photographic perspective and background, use of light and photographic illusion techniques. The course will also involve hands-on demonstrations and development of skills by utilising various types of equipment and image manipulation applications. Basics of photographic print techniques are covered. Assessment of student's work includes assignments, portfolio, and presentation.

DESN 372 Design, Culture and Environment (3-0-3) — Prerequisites: DESN 241

This course introduces students to the complex interactions between humans and their environment. Students address specific cases of cultural artifacts and cultural designs that emerged as a result of the exploitation of earth's natural resources and how sustainable design can help to minimize man's harmful impacts and maximize benefits. Assessment of students includes assignments, research paper, and exam.

DESN 373 Special Topics in Design (3-0-3) — Departmental Approval

This course offers approved topics that are of timely interest to the design careers.

INTD 374 Sustainable Interior Lighting Design (2-2-3) — Prerequisites: INTD 252

In this junior level lecture-lab technical elective course, students first learn about the principles of lighting including terminology, definitions and characteristics of light. Then, students select and apply luminaires and light sources based on graphic exercises in lighting. Students also learn color and directional effects of lighting, natural and artificial light sources, the relationship between energy, the environment and sustainable design, illumination, human health and behavior. Through lectures, case studies, and one to one instruction, supervision and critics, knowledge will be delivered. Students learning will be assessed through multiple, structured exercises and one culminating project. By the end of course, students will be able to develop and apply lighting systems using luminaires, controls and technological developments such LED and OLEDs.

INTD 375 Interior Landscape Architecture (3-0-3) — Prerequisites: DESN 241

This elective course introduces interior design students to the use of landscape architecture in design process. Students learn how to define the use of green areas, interior patios, outdoor rooms, and roof gardens. The course enhances students' skills to map out paths that lead the eye (and the body) through a series of transitions to different kinds of places in the indoor-outdoor environments. Students will learn how to frame views to and from the home, carefully consider how various outdoor spaces interact with each other and how they relate to the home through openings, windows, and integrated visual links. Assessment is according to students' engagement with in class discussions, assignments, and a proposal for indoor use of landscape architecture.

INTD 376 Spatial Detailing in Interior Design (2-2-3) — Prerequisites: DESN 251

This junior level lecture-lab technical elective course focuses on specific finish components of interior environments that are classified as millwork and detailing. Examples of interior millwork and detailing include architectural woodwork, partitions, floors, ceilings, stairs, custom cabinetry, furniture and specialty elements. Millwork and detailing serve functional and aesthetic purposes by providing spatial, material, and experiential character to interior spaces. Through lectures, case studies, and FabLab practical tasks, knowledge will be delivered. Students undertakes number of assessments in the form of assignments, small projects and a final project. By the end of the course, students will be able to apply the vital building blocks in the creation and development of interior spaces and places in the built environments.

PROD 377 Advanced Prototyping and Fabrication (2-2-3) — Prerequisites: DESN 251

This lecture-lab elective course builds on the students' fabrication and prototyping skills and knowledge from PROD 321 (Product Prototyping and Fabrication). This advanced course focuses on methods of integrating interactive experiences in products. Students will use Arduino or similar system, which is a flexible open source micro-controller platform designed to make electronic components in projects. With an almost unlimited range of input and output add-ons, sensors, indicators, displays, motors and more, Arduino offers countless ways to create novel user experiences in products, through interactivity. Using short lectures, workshops, demonstration, teaching will be facilitated. Students will undertake number of assessments in the form of assignments, small projects and a final project. By the end of the course, students will be able to identify, select and implement number of technologies into a given product.

PROD 378 Advanced Digital Design Techniques (2-2-3) — Prerequisites: DESN 221

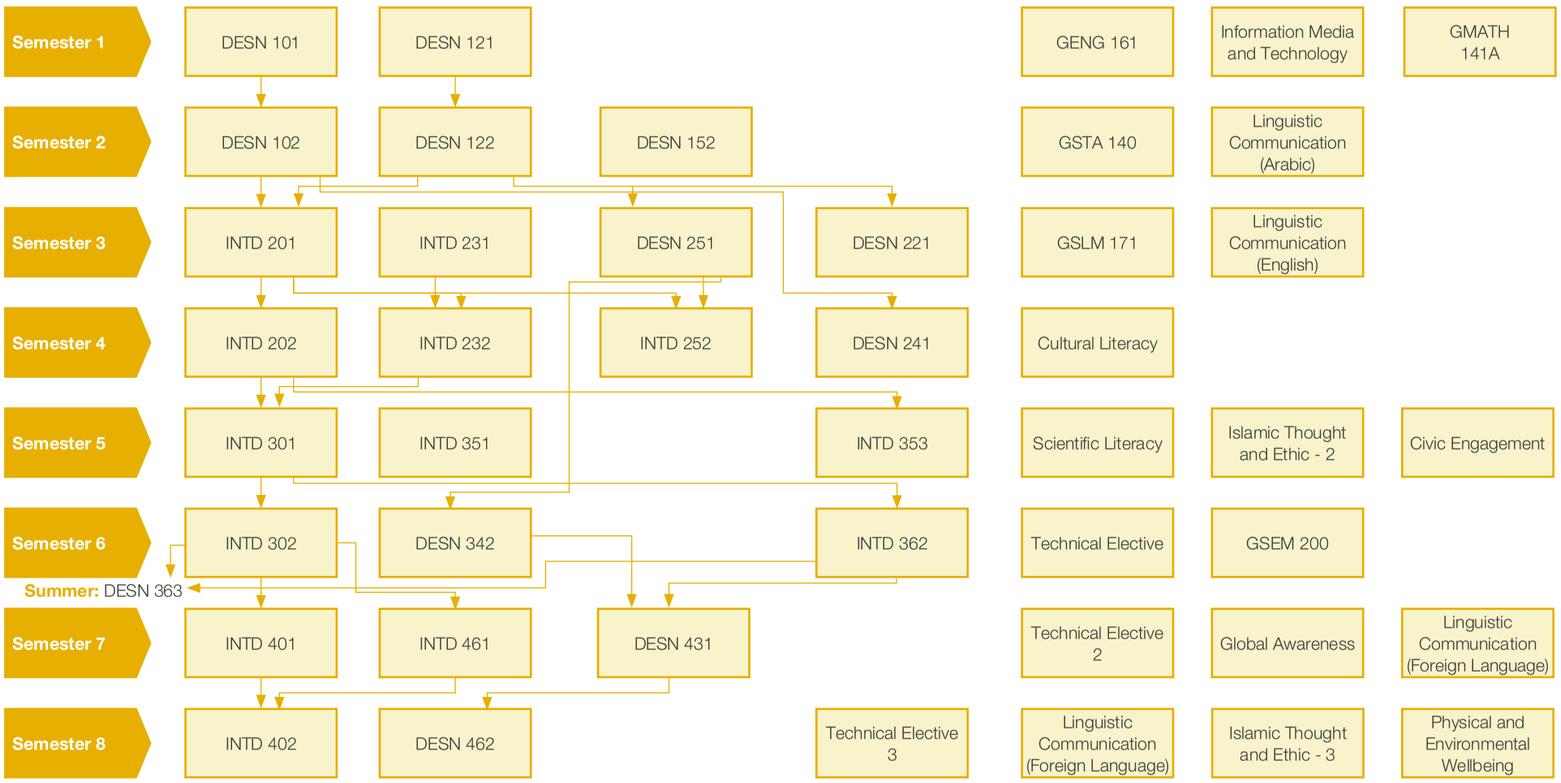
This lecture-lab elective course builds upon the skills and knowledge of digital modelling, which the students have acquired from the pre-requisite courses (DESN 221 and PROD 321). In this course, students will learn how to take their early design concepts through to the final presentation using advanced digital representation and exploration techniques including animation. Students will use high-end digital design software packages. Through demonstration and workshops, students are taught how to export the 3D models into rendering environment to create high quality product image for advertise and marketing purposes. Students will undertake number of assessments in the form of assignments, ongoing exercises and a final project. By the end of the course, students will be able to create products 3D models with high quality render.

PROD 379 Anatomy and Ergonomics in Product Design (3-0-3) — Prerequisites: DESN 241

This advanced level of anatomy and ergonomics course uses the principles of physics to understand human anatomy as a mechanical system. Emphasis is placed on physiological issues related to age, gender, and physical disabilities. Consideration is also given to the implications of these principles for applied ergonomics. Students will be assessed on their proposals for innovative product ideas and the capacity of expressing their visual communication skills.

Bachelor of Design – Interior Design track

Advising flowchart



Bachelor of Design – Product Design Track

Advising flowchart