

TES211E _ PROJECT III

DEPARTMENT OF INDUSTRIAL DESIGN

2020-2021 FALL SEMESTER

Project Teams

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PROMOTING ECOLOGICAL TRANSPORT: BICYCLE ACCESSORIES FOR A SPECIAL PURPOSE

1. Scope and Theoretical Background of the Project

With the technological advancements of manufacturing technologies, new materials, ecological awareness, new user needs and social trends the use of bicycles is increasing worldwide. This increase in usage has also accompanied with new bicycle typologies.

Foldable bicycles gained significant popularity and an important market share worldwide. Global market leaders and trendsetter manufacturers such as DAHON North America, Inc., Brompton Bicycle Ltd and Tern Bicycles were quickly followed by many global and local manufacturers with various designs.

Its multi-purpose nature and easy-to-fold characteristic are the main reasons of their increasing popularity and market share. On the other hand, the bicycle is a product with a wide range of accessories and supplementary products to maximize its flexibility to increase its usage targeting a wide range of user needs.

In this project you are required to design an accessory set, targeting a user need (eg., riding and traveling need of university students, local market distribution to homes), to be used in a foldable bicycle that is available in the market.

2. Scenario and Context of the Project

The accessory set must consist at from 3 different items, each targeting a different need of the user in the context of the usage-scenario. All the items in the accessory set must be easily attachable and detachable to/from the foldable bicycle/bicycles chosen for the project.

These individual items may answer to specific needs such as, containing personal items such as wallet, smart phone etc., personal clothes such as rain jacket, transporting a specific item in the context of the scenario and other items that will be defined during the scenario building stage of the project.

3. Major Concerns of the Project

- Understanding and successful application of basic concepts of industrial design: form, function, ease of usage, aesthetics, usage context, manufacturability by industrial processes
- An analysis of foldable bicycle designs
- Innovative ideas for extending the usage of foldable bicycles
- Envisioning new lifestyles or good analysis of existing lifestyles
- Designing new experiences in terms of ecological transportation
- Appropriate use of technology and its relation to design
- Proper usage of materials and manufacturing methods

4. Expected Outcomes of the Project

- Innovative and applicable concept development
- Feasible marketing and manufacturability projection
- Improved skills of verbal and visual presentation
- Customized design for specific user groups
- Innovative proposals on material selection and technology use

5. Studio Timetable

Week	Date	Studio Content	Requirements
1	19.10.2020	PHASE 1_INTRODUCTION AND RESEARCH PHASE Introduction of the studio and project subject, Meeting with the instructors, Discussions, Q/A's	
	22.10.2020	Product sketching and ratio study	
2	26.10.2020	Technical seminar: Scenario Building, Materials in Design	
	29.10.2020	<i>REPUBLIC DAY NO CLASS</i>	
3	02.11.2020	PRELIMINARY JURY 1 Presentation of research findings, scenarios and new product ideas	<ul style="list-style-type: none"> ▪ Research findings sheet ▪ Scenario sheet ▪ New product idea proposals: written descriptions; supported by rough idea sketches
	05.11.2020	PHASE 2_IDEATION PHASE Concept development and early sketches	
4	09.11.2020	Concept development and early sketches	
	12.11.2020	Concept development and early sketches	
5	16.11.2020	COMMON MODULE I: Interdisciplinary Workshops, Seminars etc.	
	19.11.2020	COMMON MODULE II: Interdisciplinary Workshops, Seminars etc.	
6	23.11.2020	COMMON MODULE III: Interdisciplinary Workshops, Seminars etc.	
	26.11.2020	Concept development and early sketches	
7	30.11.2020	Concept development and early sketches	
	03.12.2020	Concept development and early sketches	
8	07.12.2020	Concept development and early sketches	
	10.12.2020	PRELIMINARY JURY 2 Review of concept alternatives	Colored concept sketches and low fidelity orthographic views
9	14.12.2020	PHASE 3_DETAILED DESIGN PHASE Detailed design development	
	17.12.2020	Detailed design development	
10	21.12.2020	Detailed design development	
	24.12.2020	Detailed design development	
11	28.12.2020	Detailed design development	
	31.12.2020	Detailed design development	
12	04.01.2021	PRELIMINARY JURY 3 Preliminary review of detailed designs	Detailed perspective views, detailed colored orthographic views, interior sections Material and detail refinements
	07.01.2021	Detailed design development	
13	11.01.2021	Detailed design development	
	14.01.2021	Final design refinements	

14	18.01.2021	Final design refinements	
	21.01.2021	FINAL JURY Presentation of final projects	Design drawings Technical drawings

6. Submission requirements

6.1. Design Drawings

Each project is limited to 6 A3 size drawing sheets (all used horizontally) for the presentation of the project. The drawings must include:

- Design concept based on user research and design scenario
- Perspective design drawings
- Colored orthographic drawings with basic dimensions

6.2. Technical Drawings

Each project team is limited to 4 A1 size drawing sheets for the presentation for technical drawings. Technical drawings must include:

- Scale orthographic views with detailed dimensions
- Sectional views
- Detail drawings
- Exploded perspective drawings

All final submission materials that are listed above will be made in a digital format (.pdf). No physical project materials will be submitted and accepted. All digitals that are defined above will be uploaded to Ninova. (Important note: Maximum file size for a single file that can be uploaded to Ninova is 20 Mb.)*

7. Evaluation Criteria

➤ Common module weight:	10 %
➤ Midterm Evaluation	50 %
Preliminary Jury 1	30 %
Preliminary Jury 2	40 %
Preliminary Jury 3	40 %
➤ Final Evaluation	40 %
▪ Design	60 %
Originality and functionality	40 %
Ease of use	20 %
Contextual compatibility	20 %
Correct use of industrial manufacturing techniques and materials	20 %
▪ Presentation	40 %

General Conduct of the Distant Studio

- All studio sessions will be done online using Zoom platform. In order to participate the online studio session on Zoom you will be provided a link that can be found in the Distant Learning section of Ninova.
- Attendance will be collected in the beginning of each studio session
- According to ITU education legislations minimum attendance must be %80 for studio classes. A student with an absence rate of 8 or higher will be graded VF.