

**Syllabus**  
**Course description**

<b>Course title</b>	<b>Project Product Design 2.d</b>  <b>A is for Apple - from fruit to cultural landscape.</b>
<b>Course code</b>	97093
<b>Scientific sector</b>	Module 1: ICAR/13 Module 2: ICAR/13 Module 3: M-FIL/04
<b>Degree</b>	Bachelor in Design and Art (L-4)
<b>Semester</b>	Winter semester 2023/24
<b>Year</b>	3 <sup>rd</sup>
<b>Credits</b>	19 (Module 1: 8 CP, Module 2: 6 CP, Module 3: 5 CP)
<b>Modular</b>	Yes

<b>Total lecturing hours</b>	180 (Module 1: 90, Module 2: 60, Module 3: 30)
<b>Total hours of self-study and/ or other individual educational activities</b>	295 (Module 1: about 110, Module 2: about 90, Module 3: about 95)
<b>Attendance</b>	not compulsory but recommended
<b>Prerequisites</b>	To have passed the Project Product Design 1; to have certified the language level proficiency B1 in the course language in years following the first.

<b>Course description</b>	<p><i>The course belongs to the class "caratterizzante" (module 1 and 2) and "affine integrativa" (module 3) in the major in Design.</i></p> <p><b>Description Module 1 – Product Design:</b></p> <p>ENGLISH</p> <p><b>A is for Apple - from fruit to cultural landscape.</b> Vinschgau controversies and design perspectives.</p> <p>The theme of the winter semester invites interested students to rethink design in the context of the economic, social and ecological challenges we are facing today. As part of the project, we will explore the history of the apple as food, commodity and cultural plant, from cultivation to sorting as well as its storage, packaging and marketing infrastructure. We will also discuss the impact of apple farming on ecosystems, the landscape and tourism in the Vinschgau region. We will shed light on the conflicts and controversies surrounding the various forms of agriculture as well as questions regarding the aesthetic value of the resulting cultural landscape. Our work takes</p>
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place against the background of specific climate challenges, such as increasing wind dynamics, water scarcity and new weather extremes. We will also consider the „Malser Weg“, a civil society movement for sustainable regional development in the upper Vinschgau, and the transformative potential of the European Green Deal in shaping a biodiverse and climate-neutral future. In his text „The Reasoning of Designers.“ (1987), design theorist Horst Rittel wrote: „Understanding what the problem is, is the problem“. We share this insight and emphasise the importance of a critical problem awareness in design, grounded in careful research, on-site observations and an understanding of the various interests of the stakeholders involved. With the support of renowned experts and in collaboration with our project partners, we will develop independent research questions and constructive design approaches that unfold in the tension between fruit farming, landscape climate adaptation and civil society common good interests. Referring to Max Bill's design slogan „from the spoon to the city“ (1949), the spectrum of potential design topics in our project ranges from the fruit to the cultural landscape.

The question here is: What do you make of it?

#### **Project partners:**

- VI.P Association of Val Venosta producers of fruit and vegetables.  
[www.vip.coop](http://www.vip.coop)
- Platform Cultural Heritage Cultural Production  
[www.culturalheritage.unibz.it](http://www.culturalheritage.unibz.it)

DEUTSCH

#### **A wie Apfel - von der Frucht zur Kulturlandschaft.** Vinschgauer Kontroversen und Gestaltungsperspektiven.

Das Thema des Wintersemesters lädt interessierte Studierende ein, Design im Kontext der (land-) wirtschaftlichen, sozialen und ökologischen Herausforderungen unserer Zeit neu zu denken. Im Rahmen des Projekts untersuchen wir die Geschichte des Apfels als Lebensmittel, Agrarprodukt und Kulturpflanze, vom Anbau über die Sortierung und Lagerung bis zur Verpackung und Vermarktungsinfrastruktur. Zudem diskutieren wir die Auswirkungen der Apfelwirtschaft auf die Ökosysteme, das Landschaftsbild sowie den Tourismus im Vinschgau.

Wir beleuchten die Konflikte und Kontroversen um die verschiedenen Bewirtschaftungsformen der Kulturlandschaft ebenso wie Fragen nach ihrem ästhetischen Wert. Die besonderen klimatischen Herausforderungen, wie die zunehmende Winddynamik, Wasserknappheit und neue Wetterextreme, bilden den Hintergrund für unsere Arbeit.

Der „Malser Weg“, eine zivilgesellschaftliche Bewegung für nachhaltige Regionalentwicklung im oberen Vinschgau und das transformative Potenzial des Europäischen Green Deals zur Gestaltung einer biodiversen und klimaneutralen Zukunft runden unseren Diskurs ab.

In seinem Text *„Die Denkweise von Designern“* (1987) schreibt der Designtheoretiker Horst Rittel: *„Zu verstehen, was das Problem ist, ist das Problem“* (1987).

Wir teilen diese Einsicht und unterstreichen die Bedeutung eines kritischen Problembewusstseins im Design, das auf sorgfältigen Recherchen, vor-Ort-Beobachtungen und dem Wissen um die verschiedenen Interessen der beteiligten Akteure beruht. Mit Unterstützung ausgewiesener Experten und im Austausch mit unseren Projektpartnern entwickeln wir eigenständige Fragestellungen und konstruktive Gestaltungsansätze, die sich im Spannungsfeld zwischen Obstwirtschaft, landschaftlicher Klimaanpassung und zivilgesellschaftlichen Gemeinwohlinteressen entfalten.

In Anlehnung an Max Bills Design-Slogan *„vom Löffel bis zur Stadt“* (1949) reicht das Spektrum der möglichen Entwurfsthemen in unserem Projekt von der Frucht bis zur Kulturlandschaft.

Es stellt sich die Frage: Was machen Sie daraus?

#### **Projektpartner:**

- VI.P Verband der Vinschgauer Obst- und Gemüseproduzenten  
[www.vip.coop](http://www.vip.coop)
- Plattform für Kulturerbe und Kulturproduktion  
[www.culturalheritage.unibz.it](http://www.culturalheritage.unibz.it)

#### ***Description Module 2 – Digital Modelling***

There are two ways to approach a project when materials are at the front end. In the first one, the designer develops the project, test, and prototype with analog and digital tools, and afterward selects the right material(s) which fits the project specifications (Ashby & Johnson, 2002). In the second one, the designer starts with the material(s) in hand, and then, through a deep understanding of the properties and qualities the material offers, the project is built (Rognoli & Ayala-Garcia, 2021).

The different languages with which the designer communicates the project intention and develops a product begin with a physical recognition of the materials through a process of tinkering (Parisi et. al, 2017). Afterward, the designer applies the skills and begins hands-on work to construct models and prototypes to test in real-time the intentions for the project. Different from the classical approach, such models and prototypes include direct contact with the material(s) of the project, allowing to gain a better understanding of the possible directions the project may take. Once everything is getting traction, and the product begins to gain form and language, it is time for digital tools to speed up and refine the project. In this module, we aim to guide the students in the development and refinement of the project by exploring both experimental tools and digital tools. We will not concentrate only on the digitalization of the project, but we will explore possibilities to expand barriers to production and manufacturing by understanding the status quo of production and blending it with new tools available.

### ***Description Module 3 – Theories and languages of product design***

The overall aim of the course is to improve the theoretical competences of the students, starting from the design practice, through successive extending loops. Conceptual distinctions will be presented and discussed starting from the facets of the project topics. Students will learn how to search for relevant scientific literature, how to approach it and integrate during the path of research and design. The multiplicity of objects around the apple, in the different phases of production, circulation/distribution and consumption will be considered. The relationship between landscape, orchard and tourism in a changing valley, due to climate change, is the occasion to introduce a critical literature about Anthropocene (Tsing, Descola). Finally, the controversy about glyphosate will be the occasion to reconstruct the cultural landscape of stakeholders, relevant actors that could be addressed by the project itself.

ITALIANO

### **Descrizione Modulo 3 - Teorie e linguaggi del design di prodotto**

L'obiettivo generale del corso è quello di migliorare le competenze teoriche degli studenti, partendo dalla pratica progettuale, attraverso successivi cicli di estensione critica. Alcune distinzioni concettuali saranno presentate e discusse a partire dalle sfaccettature dei temi di progetto. Gli studenti impareranno a ricercare la letteratura

	<p>scientificamente pertinente, ad approcciarla e a integrarla durante il percorso di ricerca e progettazione. Si prenderà in considerazione la molteplicità degli oggetti che circondano la mela, nelle diverse fasi di produzione, circolazione/distribuzione e consumo. Il rapporto tra paesaggio, frutteto e turismo in una valle in trasformazione, a causa dei cambiamenti climatici, è l'occasione per introdurre una letteratura critica sull'Antropocene (Tsing, Descola). Infine, la controversia sul glifosato sarà l'occasione per ricostruire il paesaggio culturale degli stakeholder, attori rilevanti che potrebbero essere affrontati dal progetto stesso.</p>
<p><b>Specific educational objectives</b></p>	<p><b>Knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>- have acquired one's own project methodology in the field of product design. This methodology includes the ability to oversee all phases of design, from the generation of ideas to the realisation of the finished project. Through the integrated teaching of project subjects of practical and theoretical nature, graduates will be able to simultaneously address all these aspects and consider them as synonymous with the development of a project that is successful on a formal, technical, scientific and cultural level.</li> <li>- Understanding the tensions inside the general concept of sustainability, its contradictions in communicative applications, its specificities in relationship to marble production</li> <li>- Understanding some dimension of the complexity in product communication at the crossing of innovation, sustainability and aesthetics</li> </ul>

<p><b>Lecturer</b></p>	<p><b>Module 1 – Product Design:</b>  Klaus Hackl  e-mail <a href="mailto:klaus.hackl@unibz.it">klaus.hackl@unibz.it</a>  webpage <a href="https://www.unibz.it/de/faculties/design-art/academic-staff/person/37147-klaus-hackl">https://www.unibz.it/de/faculties/design-art/academic-staff/person/37147-klaus-hackl</a></p> <p><b>Module 2 – Digital Modelling:</b>  Camilo Ayala Garcia  e-mail <a href="mailto:camilo.ayalagarcia@unibz.it">camilo.ayalagarcia@unibz.it</a>,  webpage <a href="https://www.unibz.it/de/faculties/design-art/academic-staff/person/47021-camilo-ayala-garcia">https://www.unibz.it/de/faculties/design-art/academic-staff/person/47021-camilo-ayala-garcia</a></p> <p><b>Module 3 – Theories and languages of product design</b>  Giacomo Festi  e-mail <a href="mailto:Giacomo.Festi@unibz.it">Giacomo.Festi@unibz.it</a>,  tel. +39 0471/051000,</p>
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	<p>webpage <a href="https://www.unibz.it/en/faculties/design-art/academic-staff/person/40076-giacomo-festi">https://www.unibz.it/en/faculties/design-art/academic-staff/person/40076-giacomo-festi</a></p>
<b>Scientific sector of the lecturer</b>	<p>Module 1 – Klaus Hackl: ICAR/13  Module 2 – Camilo Ayala Garcia: ICAR/13  Module 3 – Giacomo Festi: M-FIL/04</p>
<b>Teaching language</b>	<p>Module 1 – German  Module 2 – English  Module 3 – Italian</p>
<b>Office hours</b>	<p>Module 1:  Mondays: 16.00 - 18.00  Tuesdays: 14.00 - 16.00  Additional office hours by appointment only.</p> <p>Module 2: We: 11:00 – 13:00 in order to avoid overlapping the exact time of the appointment will be arranged by email.</p> <p>Module 3: Tu – 11.00 – 13.00 in order to avoid overlapping the exact time of the appointment will be arranged by email.</p>
<b>List of topics covered</b>	<p>Module 1:  «A is for Apple» covers many methodological aspects of contemporary and multi-layered design processes:</p> <ul style="list-style-type: none"> <li>- from raising initial questions and critical problem awareness, to in-depth investigations.</li> <li>- from research to ideation.</li> <li>- from hypothetical assumptions to the formulation of a coherent design concept.</li> <li>- from sketching to technical drawing.</li> <li>- from the creation of mockups &amp; prototypes to end-models</li> <li>- from project presentation to convincing project communication.</li> <li>- from questions of project planning to project Documentation.</li> </ul> <p>Module 2:</p> <ul style="list-style-type: none"> <li>- How to create an idea by understanding the material properties and qualities.</li> <li>- Move from an idea to the project (sketches, low-res prototypes, digital demonstrators).</li> <li>- Project evolution through iteration (hands-on with materiality and digital construction of the project with CAD tools)</li> <li>- Digital &amp; Craft modelling (hi-res prototypes).</li> <li>- Fab-Lab validation and testing of alternatives.</li> <li>- Use of available tools to construct a proper product narrative.</li> </ul>

	<p>- Construction of a project (product) prototype for delivery (engineering teams or company stakeholders).</p> <p>Module 3:</p> <ul style="list-style-type: none"> <li>- How to interpret the different ways we give meaning to an object? A conceptual mapping</li> <li>- Understanding the concept of landscape and the role of intensive agroindustry in shaping it;</li> <li>- Approaching sustainability as a concept: its internal tensions and translations in communication, its relationships with tourism;</li> <li>- Anthropocene and transformation of landscape. Paths of conceptual deepening</li> </ul>
<b>Teaching format</b>	<p>Module 1: Excursions and field studies, short lectures, expert talks, exercises, individual and group reviews, guest critics, discussions and workshops.</p> <p>Module 2: Short Lectures, experimentation, workshops, case studies, Reviews of work.</p> <p>Module 3: frontal lecture, student presentations of essay and class discussion, guided assignments.</p>

<b>Expected learning outcomes</b>	<p><b>Disciplinary competence</b></p> <p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>- have acquired their own project methodology in the field of product design, from the phase of planning to the phase of realisation of the project.</li> <li>- have acquired the basic practical and theoretical knowledge necessary to realise a project in the field of product design.</li> <li>- have acquired the basic knowledge to be able to turn a critical eye to their own work and to deal with contemporary complexity.</li> <li>- have acquired the basic knowledge necessary for further Master's studies in all components of project culture as well as in theoretical subjects.</li> <li>- Have acquired hands-on and experimental approach necessary to realise a project in the field of product design.</li> </ul> <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>- plan, develop and realise a project in the field of product design.</li> </ul>
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- use the basic knowledge acquired in the technical, scientific, and theoretical fields to realise a mature project.
- be able to finalize the creation of an accomplished project in the field of product design, thanks to the basic knowledge acquired in the practical and theoretical fields.
- recognise the main phenomena of contemporary society, to observe them critically, also from an ethical and social point of view, and to elaborate appropriate solutions at the level of a design proposal/response.
- make use of the skills acquired during the course of study in the event of continuing studies in a Master's degree programme in the field of product design and to develop them further.

### **Transversal competence and soft skills**

#### *Making judgements*

- Be able to make independent judgements for the purpose of developing their own design skills and in relation to all those decisions that are necessary to bring a project to completion.
- Be able to make independent judgements, both in the critical evaluation of their own work and in their ability to use the right interpretative tools in those design contexts in which they will work and/or continue their studies, also considering ethical and social aspects.

#### *Communication skills*

- Present an independently realised project in the field of product design in the form of an installation, orally as well as in writing in a professional manner.
- to professionally communicate and substantiate one's own decisions and justify them from a formal and theoretical point of view.

#### *Learning skills*

- have learned a work methodology at a professional level - in the sense of being able to identify, develop and realise solutions to complex problems by applying the knowledge acquired in the practical and theoretical fields - in order to start a professional activity and/or continue their studies with a master's degree programme.



	<ul style="list-style-type: none"> <li>- have developed a creative attitude and learned how to enhance it and develop it according to their own inclinations.</li> <li>- have acquired basic knowledge in theoretical and practical subjects as well as a study methodology suitable for continuing studies with a master's degree programme.</li> <li>- Learn how to move from an emerging problem within the project to the scientific literature and how to improve the research quality of the project.</li> <li>-</li> </ul>
<p><b>Assessment</b></p>	<p><b>Module 1:</b> The assessment in module 1 is based on:</p> <ul style="list-style-type: none"> <li>- the personal motivation, curiosity and overall design skills acquired, reflected and applied by the student during the semester.</li> <li>- the quality, autonomy, and coherence of the project results as visualised, argued and communicated during individual revisions and group reviews, a midterm and a final exam presentation.</li> </ul> <p><b>Module 2:</b> The assessment will be based on:</p> <ul style="list-style-type: none"> <li>- the personal motivation, engagement with the project and overall design skills acquired, reflected, and applied by the student during the semester.</li> <li>- the quality, autonomy, and coherence of the project output as visualised, argued, and communicated during individual reviews, group meetings, intermediate presentations and the final exam presentation.</li> </ul> <p><b>Module 3:</b> The assessment will be based on:</p> <ul style="list-style-type: none"> <li>- the quality of the theoretical insertions in the project, through assignments and the writing of a final paper;</li> <li>- the personal engagement and participation to the different phases of the course</li> </ul>
<p><b>Assessment language</b></p>	<p>The same as the teaching language</p>
<p><b>Evaluation criteria and criteria for awarding marks</b></p>	<p><i>By exam's date, each student must upload on the Microsite of the faculty detailed documentation of the work done during the course.</i></p> <p><i><a href="http://portfolio.dsgn.unibz.it/wp-admin">http://portfolio.dsgn.unibz.it/wp-admin</a> Documentation is an integral part of the exam. The documentation must include visual documentation and an abstract of the project.</i></p>

	<p><b>Modules 1 and 2</b>  The evaluation criteria - 100% in total - in product design will be divided as follows:</p> <p>A maximum of 20% can be awarded for personal motivation, team spirit and design skills acquired and applied by the student during the semester.</p> <p>A maximum of 30% can be awarded for the quality and autonomy of research and design work presented by the student in a midterm presentation.</p> <p>A maximum of 50 % can be awarded to the student for the quality and autonomy of the semester project result as developed, realised, visualised, argued, documented and communicated during the final exam presentation.</p> <p><b>Module 3</b>  Students will prepare a final document resuming both the research part, with the suggested integrations and the product/service analysis and interpretation, according to the method proposed during the classes. That document/paper will be uploaded on the devoted Teams channel a few days before the final exam.  Part of the final evaluation will also be the intermediate assignments, necessary step to approach the transversal knowledge of the course.</p>
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<p><b>Required readings</b></p>	<p><b>Module 1:</b></p> <p><b>General reading / Allgemeine Lektüre:</b></p> <p>Ackerman-Leist, Philip: A Precautionary Tale. How One Small Town Banned Pesticides, Preserved Its Food Heritage, and Inspired a Movement. Chelsea Green Publishing Co., 2017</p> <p>Antonelli, Paola; Tannir, Ala: Broken Nature. Design Takes on Human Survival. Mondadori Electa, 2019</p> <p>Arunda 46: Obst. Kultur &amp; Wirtschaft. 1997</p> <p>Burckhardt, Lucius: Warum ist Landschaft schön? Die Spaziergangswissenschaft. Martin Schmitz Verlag, 2007. (Eng.: Why is Landscape Beautiful? The Science of Strollology. Birkhäuser, 2015)</p>
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Gottfried, Eva (Hg.): Landwirtschaft. Wege aus der Krise von Artenvielfalt bis Klimawandel. Springer Verlag, 2022.

Holtkamp, Carolin: Der Malser Weg. Geschichte einer sozialen Bewegung für Demokratie und nachhaltige Regionalentwicklung. Kassel, 2020

Juniper, Barrie; Mabberley, David: Die Geschichte des Apfels. Von der Wildfrucht zum Kulturgut. Haupt Verlag 2022 (Eng.: The Extraordinary Story of the Apple. The Board of Trustees of the Royal Botanic Gardens, Kew, UK, 2019)

Koolhaas, Rem; AMO: Countryside. A Report. Taschen Verlag, 2020

Latour, Bruno; Schultz, Nikolaj: Zur Entstehung einer ökologischen Klasse. Ein Memorandum. Suhrkamp, 2022 (Eng.: On the Emergence of an Ecological Class. A Memo. Polity Press, 2022)

Latour, Bruno; Weibel, Peter: Critical Zones. The Science and Politics of Landing on Earth. ZKM & MIT Press, 2020

Mari, Iela and Enzo: La mela e la farfalla. Milano Casa Editrice Valentino Bompiani, 1960 (Eng.: The Apple and the Moth. Pantheon Books, 1970 / dt.: Der Apfel und der Schmetterling. Ellerman, 1969)

Rittel, Horst: The Reasoning of Designers (1987). Die Denkweise von Designern. Studienhefte Problemorientiertes Design. Adocs Verlag, 2012

Sachs, Angeli: Nature Design. Von Inspiration zu Innovation. Lars Müller Publishers, 2007 (Eng.: Nature Design. From Inspiration to Innovation. Lars Müller Publishers, 2007)

Schiebel, Alexander: Das Wunder von Mals. Wie ein Dorf der Agrarindustrie die Stirn bietet. Eine Anleitung zum Widerstand. Oekom Verlag München, 2017.

Schuler, Arnold: Landwirtschaft 2030. Strategiepapier für die Südtiroler Landwirtschaft. Bozen, 2021

Stappmanns, Viviane; Kries, Mateo (Hg.): Garden Futures. Designing with Nature. Vitra Design Museum, 2023.

Werth, Kurt: Südtiroler Obstbaugeschichte(n). Effekt! Buchverlag, 2022.

	<p>Yadin-Israel, Azzan: Temptation Transformed. The Story of How the Forbidden Fruit Became an Apple. University of Chicago Press, 2022.</p> <p><b>Module 2:</b></p> <ul style="list-style-type: none"> <li>- Terstiege, G. (2009). The Making of Design. From the First Model to the Final Product. Basel: Birkhäuser.</li> <li>- Ashby, M., &amp; Johnson, K. (2002). Materials and Design: The Art and Science of Material Selection in Product Design. Oxford: Butterworth-Heinemann. - Ashby, M.F. (2013).</li> </ul> <p><b>Module 3:</b></p> <ul style="list-style-type: none"> <li>- Anne Beyaert-Geslin, <i>Semiotica del design</i>, Pisa, ETS, 2017.</li> <li>- Jean-Marie Floch, "Opinel: intelligence at knifepoint", in id., <i>Visual Identities</i>, New York, Palgrave, 2001.</li> <li>- Bruno Latour, <i>Politiche del design. Semiotica degli artefatti e forme della socialità</i> (a cura di Dario Mangano e Ilaria Ventura Bordenga), Milano, Mimesis, 2021.</li> </ul>
<p><b>Supplementary readings</b></p>	<p><b>Module 1:</b> Please refer to the reading list above!</p> <p><b>Module 2:</b></p> <ul style="list-style-type: none"> <li>-Anderson, C. (2012). Makers. New York: Crown Business.</li> <li>-Ashby, M., (2005). Materials and the Environment 2nd Edition. Oxford, UK: Butterworth Heinemann. –</li> <li>-Ayala-Garcia, C (2015) The Basis of Processes - Experimenting with Food to Re-Shape the Industry Language. In: Cumulus Milan-The Virtuous Circle Proceedings (pp.84). ISBN: 978-88-386-7485-3 –</li> <li>-Ayala-Garcia, C (2014). Experimenting with Materials – A Source for Designers to Give Meaning to New Applications. In: The colors of care: Proceedings of the 9th International Conference on Design and Emotion 2014 (pp. 408-417). ISBN: 978-958-774- 070-7 –</li> <li>Bardzell, S., Rosner, D.K., Bardzell, J. (2012). Crafting quality in design: integrity, creativity, and public sensibility. In: Proceedings of the Designing Interactive Systems Conference (DIS '12), ACM, New York, NY, USA, pp. 11–20. - Bean, J., Rosner, D. (2012). Old hat: craft</li> </ul>

versus design? In: *Interaction*, vol. 19(1), ACM, New York, NY, USA, pp. 86–88.

- Bettiol, M., Micelli, S. (2014). The hidden side of design: the relevance of artisanship. In: *Design Issues* 30 (1) (Winter 2014), pp. 7–18.

- Brownell, B. (2015). DIY Design Makers Are Taking on Materials. Retrieved from [https://www.architectmagazine.com/technology/diy-design-makers-are-taking-on-materials\\_o](https://www.architectmagazine.com/technology/diy-design-makers-are-taking-on-materials_o)

- Chapman, J. (2005). *Emotional Durable Design*. London: Earthscan. - Cuffaro, D. (2006) *Processes, Materials, Measurements*. Gloucester, MA: Rockport. New York, NY: Perennial.

- Diez, T. (2012). Personal Fabrication: Fab Labs as Platforms for Citizen-Based Innovation, from Microcontrollers to Cities. *Nexus Network Journal*, 14(3), 457-468. doi: 10.1007/s00004-012-0131-7

- Gershenfeld, N. (2012). How to Make Almost Anything. *The Digital fabrication revolution*. *Foreign Affairs*, (November/December). - Kuznetsov, S. Paulos, E. (2010). Rise of the expert amateur: DIY projects, communities, and cultures. In: *Proceedings of NordiCHI '10, the 6th Nordic Conference on Human– Computer Interaction: Extending Boundaries*. ACM, New York, NY, USA. pp. 295–304.

- Lukens, J. (2013). *DIY Infrastructure*. (Doctoral dissertation). Georgia Institute of Technology. Atlanta. Retrieved from institutional repository.

- Mäkelä, M. (2007). Knowing Through Making: The role of artefact in practice-led research. *Know Techn Pol*, 2007(20), 157-163.

- Micelli, S. (2011). *Futuro artigiano: l'innovazione nelle mani degli italiani [Future artisan: Innovation in the hands of Italians]*. Venezia: Marsilio.

- Mota, C. (2011). The rise of personal fabrication. In: *Proceedings of the 8th ACM conference on creativity and cognition*, ACM.

- Nimkulrat, N. (2012). Hands-on Intellect: Integrating craft practice into design research. *International Journal of Design*, 6(3), 1- 14.

- Rognoli, V., Ayala-Garcia, C. (2021). Defining the DIY-Materials approach. Editor(s): Owain Pedgley, Valentina Rognoli, Elvin Karana. *Materials Experience 2*, Butterworth-Heinemann, Pages 227-258.

- Rognoli, V., Ayala-Garcia, C. (2018). Material activism. New hybrid scenarios between design and technology. In: Cuaderno 70 | Centro de Estudios en Diseño y Comunicación, Universidad de Palermo. pp 105-115

- Rognoli, V., Ayala-Garcia, C., Parisi, S. (2016). The emotional value of Do-It-Yourself materials. In: Celebration & Contemplation. Proceedings of the 10th International Conference on Design and Emotion 2016 (pp. 633-641). ISBN/EAN: 978-94-6186-725-4

- Rognoli, V., Bianchini, M., Maffei, S., Karana, E., (2015). DIY Materials. *Materials and Design*, 86(2015), 692-702.

- Parisi, S., Rognoli, V., & Sonneveld, M. (2017). Material Tinkering. An inspirational approach for experiential learning and envisioning in product design education, *The Design Journal*, 20:sup1, S1167-S1184

- Tanenbaum, J.G., Williams, A.M., Desjardins, A., Tanenbaum, K. (2013). Democratizing technology: pleasure, utility and expressiveness in DIY and maker practice. In: Proceedings of SIGCHI Conference on Human Factor in Computing System, CHI 2013, pp.2603-2612, April 27–May 2, Paris, France.

- Thompson, R. (2007) *Manufacturing Processes for Design Professionals*. London: Thames & Hudson.

- Thompson, R. (2017) *The Materials Sourcebook for Design Professionals*. London: Thames & Hudson.

- Vezzoli, C. (2018). Design for environmental sustainability. Life cycle design of products. Second edition. London: Springer.

### **Module 3:**

Three thematic groups of relevant readings for this project

#### **A. Orchard design and the transformation of modes of product**

- Legun, Burch, "Robot-ready: How apple producers are assembling in anticipation of new AI robotics", *Journal of Rural Studies*, 82,380–390, 2021.

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### **B. Tourism and Cultural Landscape**

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Other readings will be indicated during the course.