SYLLABUS MINOR MAKERS LAB 2020-2021

Exploring Sustainable High and Low Tech Materials through Critical Crafts

IMPORTANT NOTE: We are will be joining the international BioDesign Challenge as part of the 2021 minor. The program will stay largely the same, but there will be more emphasis on the do's, don'ts and dilemmas of working with living organisms and synthetic biology as design material.

Getting Our Shit Together project by Miruna Vlad, Maxim Meijer and Doris Hondtong, 2021

This minor challenges you to think critically about the way you make and design. You acquire hands-on knowledge and skills that enable you to experience how things might be made differently and discover alternatives to reduce the environmental impact of man-made things. In the throw-away culture that dominates contemporary society it has become the new normal, for makers and consumers alike, to buy (semi-manufactured) products cheaply and conveniently and easily discard them. For example, many people find it easier to buy a new phone instead of repairing it. This is partly due to the non-transparency of the object, the lack of knowledge about its material structure, the complexity of its inner workings, and the system(s) in which it is embedded, which discourage altering, hacking and repairing. This discrepancy between making and consuming is also visible in other industries such as automobiles, electronics and fashion. We lose foundational knowledge of all the things involved in making something from scratch, what materials can do, and how we might connect, disconnect and (re)shape things, as high-tech innovation transforms fabrication processes into complex global systems.

In this program we go back to the fundamentals of materials and how things are made. We rethink the wealth of traditional material knowledge and craftsmanship in order to meet the demands of the

21st century. We re-envision them in the context of contemporary high-tech crafts and sustainable digital fabrication to rediscover the potential of local materials and traditions. With this minor we aim to redefine the position of the maker and her role in relation to the commons (the cultural and natural resources accessible to all members of society), by taking a DIY and open-source approach to high-tech and (smarter) smart materials that are largely compostable, locally sourced, and documented with cultural/historical awareness, accessible for anyone to use.

Learning objectives

At the end of this minor you have developed yourself as a material storyteller and critical maker. You bring valuable hands-on knowledge and skills to any professional environment: you can work with conceptual frameworks to initiate question-driven design processes for exploring sustainable material development with an awareness of the politics, cultures and histories of made objects. This allows you to develop an ethical contemporary maker practice and share your expertise in a way that allows others to build on and learn from your work.

Digital Craftsmanship

The ability to safely and creatively use lab equipment and tools to design and fabricate 2D and 3D objects and textures, make functional molds, following recipes to recreate and modify bio-polymers, grown materials and pigments.

Material Research & Documentation

The ability to analyse the properties of materials and their relationship to tools and production processes used, in order to identify areas for further question-led material exploration. Knowing how, when and what to reference and document in order for others to reproduce, replicate and continue building on your work.

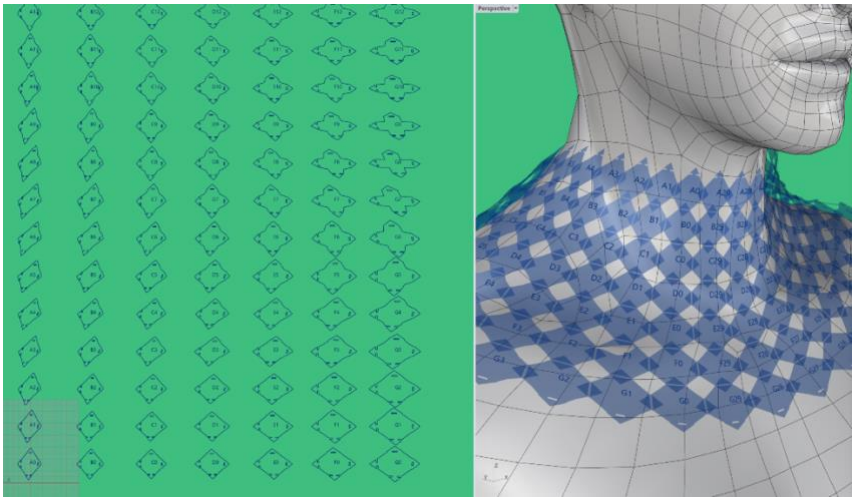
Argumentation & Storytelling

The ability to develop stimulating scenarios and use effective (material) storytelling techniques to build an argument for the future relevance, urgency and creative potential of their materials research, presented as part of an exhibition.

Requirements & Grading

Your performance will be evaluated using the following criteria:

- Substantial new work prepared for each class or team meeting
- Thoughtful responses and follow-ups to criticism
- Ability to develop a clear, workable idea and move forward in a coherent and inspired way
- Collaboration/constructive team work and class participation
- Engagement in dialog and the ability to give constructive criticism
- Attendance and promptness, ability to fulfil requirements and meet deadlines
- Thoughtful and safe conduct in relation to other people, the workspace, materials and tools



Digital Craftsmanship – 10 EC

Block 1: each week you will be given an assignment to build up your skills and competences in digital design and fabrication, culminating in a free assignment where these skills are combined. In block 2 you will develop a team project with peers, to contribute to the BioDesign Challenge. The quality of your experimentation and prototypes determines 50% of your grade.

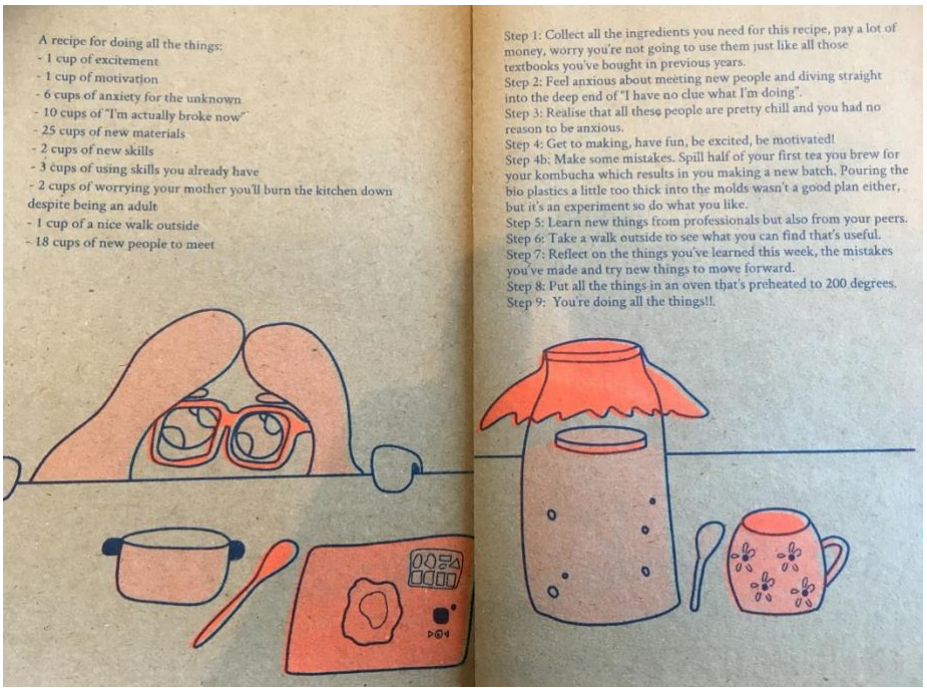
- Development of digital design & fabrication skills (block 1) 25%
- Active participation in class (presenting work etc) (block 1) 25%
- Team project: design and execution (block 2) 50%

Materials Research & Documentation – 10 EC

Block 1: minimum of 5 material samples with corresponding sample labels is required for a pass (5.5). The grade is determined based on quality and originality of the samples contributed. These can be variations on tried and tested recipes. You will create material samples to contribute to the collaborative material archive, samples are accepted if they: 1) are well-crafted and carefully finished, 2) describe the process in a reproducible way, 3) clearly state sources and the contribution made by the student.

Block 2: at least one innovative material or distinctive process or new tool will be documented in full, via extended documentation, as described in the material archive guidelines, and submitted to the online material archive. This should be an original contribution.

- Documenting and archiving of material samples (block 1) 50%
- Quality of material research and experimentation (block 2) 25%
- Extended documentation of innovative material/process/tool (block 2) 25%



Argumentation & storytelling – 10 EC

Block 1: you engage with academic and popular texts on biodesign, and actively reflect on, and process the concepts and ideas discussed in class, by developing weekly reflections in the form of a short text (e.g. a micro essay) *and* a visual component. You develop an aesthetic way of compiling your reflections and hand in your reflection document at the end of block 1 (can be deck of cards, riso printed zine, AR enriched publication, other).

Block 2: the storytelling around your team project makes a clear and compelling argument and is exhibited in a professional way at the class expo and BioDesign Challenge.

Your research documentation should always demonstrate: 1) craft and quality of writing, 2) quality, resolution and legibility of imagery (only original visual material created by you is allowed) 3) evidence of thorough research and experimentation, and 4) selective documentation of the whole work, as well as significant parts.

- Engagement with readings & class participation 25%
- Quality of reflection document (block 1) 25%
- Storytelling team project 50%

Grading policy

8,6-10,0 Student as demonstrated mastery of the learning outcomes outlined in the course syllabus. Student demonstrates excellent understanding of subject material and will be able to develop/present new and innovative concepts in the subject without additional help. He/she completes all course requirements on time, with precision and insight, as well as contributes to a stimulating classroom environment by attending all class sessions, by actively engaging in class discussions, and by interacting with other students.

6,6-8,5 Student has demonstrated some aptitude, but not necessarily mastery, of the learning outcomes. Student displays excellent to above average grasp of the subject and completed all assignments on time with precision and insight, attended class regularly and engaged in discussions. Some students may have work that is equivalent to an "A" student but may not have taken initiative to go beyond specifically assigned materials.

5,5-6,5 Student has demonstrated minimal aptitude for the learning outcomes covered in the class Student is unable to demonstrate understanding of the subject material. He/she may not have completed all course requirements on time, or attended class sessions, or participated in class discussions. In addition, a "C" student's work may not demonstrate competence in the subject material and/or may not be presentable outside of class.

Less than < 5.5 Student has demonstrated no aptitude for the learning outcomes to the instructor's satisfaction (fail)

N/A = Student is insufficient to to receive a grade and has arranged to demonstrate aptitude at a later date. N/A will only be given to clear and unambiguous cases of hardship. Having several concurrent deadlines are not cases of hardship. It is up to the instructor to provide a date when late work will be due.

When you successfully complete this course, you will receive 30 EC. Please not that 30EC equals no less than 840 hours of study. That is 40 hours per week! Plan your work realistically, making things takes time, growing them even more.

Plagiarism and academic requirements

Your documentation and research reports should not include images and other materials that others have created, unless you have permission from the owner *and* the materials are properly cited. Infringement of copyright is not acceptable. We do not expect you to invent the wheel in this course, but we do expect you to make meaningful and original contributions to a body of work, which you acknowledge and reference. You should never present someone else's work as your own. If we suspect that you handed in work that is not your own, we will perform checks with a plagiarism scanner and where necessary a manual Google search for images and text. It is your responsibility to educate yourself on what constitutes plagiarism and acceptable academic practice. Review AUAS guidelines here: https://www.amsterdamuas.com/library/support/studying/acknowledging-sources/acknowledging-sources.html

Attendance Policy

As we are very limited due to COVID-19 regulations, students are expected to be on time for class and attend all class sessions (both online and on-campus). We will not be recording any sessions and it is your own joint responsibility to take class notes. You can take your own notes, or set up a system for collaborative notetaking. You will receive grades for active class participation (see above) this can only happen if you show up, of course. If you will not be in class, notify the teacher responsible at least 1 hour in advance. Job interviews and travel commitments are not legitimate reasons for missing class.

Community principles

We expect that every member of our community acknowledges, values, and practices the following guiding principles:

We recognize that each of us has dignity, and aim to create and maintain a climate of equity and justice, which we demonstrate by showing respect for one another. We affirm the right of freedom of expression within our community as long as the exchange remains non-violent. We acknowledge that our society carries deep-rooted injustices and biases. Manifestations of discrimination are not tolerated, whether they are based on race, ethnicity, gender expression, age, visible and non-visible disability, nationality, sexual orientation, citizenship status, religious, political or spiritual beliefs, socio-economic class, knowledge or skills level, or other differences among people which have been used as an excuse for misunderstanding or hatred. We recognize and cherish the richness contributed to our lives by our diversity. We take pride in all our achievements, and we celebrate our differences, and we lift each other up. We recognize that each of us has an obligation to the learning community we have chosen to be a part of by enrolling in this course. We will strive to build and maintain a learning climate based on mutual respect and caring.

Source: adaptation from UC Davis' Principles of Community (Biodesign Syllabus, Winter 2018)

Practical information

Key dates and deadlines

- Start block 3: 1 February 2021
- Start block 4: 12 April 2021
- Deadline Biodesign Challenge: 1 June 2021
- BioDesign Summit: 21-25 June 2021
- Class expo 29 June –2 July 2021 (TBA)
- End semester: 3 July 2021
- Holidays (see schedule below and in the minor's Google Calendar): https://calendar.google.com/calendar/u/0?cid=MmtlYXBiNXJqYmhhdGI3cWhucjE1bTdqYXNAZ3JvdXAuY2FsZW5kYXIuZ29vZ2xlLmNvbQ

Capacity of spaces (as long as COVID-19 regulations apply)

- Makers Lab digital toolshop BPH 00B07: 10 pers
- Makers Lab manual toolshop BPH 00B05: 5 pers
- Biolab BPH 00B03: 7 pers

Costs

€ 150-200 euros. We will request you all put € 100 into the class cash box up front, which we will use to buy materials in bulk at better prices

Program week to week

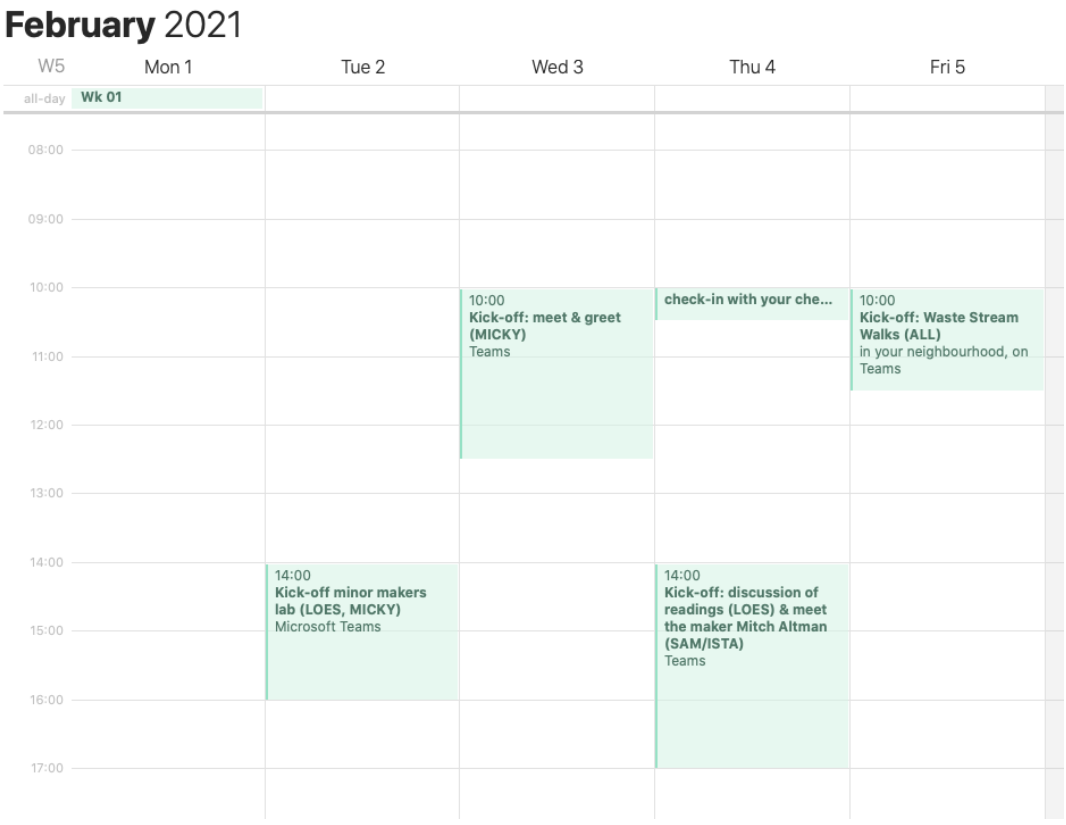
Week 1 – Kick-off (Loes) - ON CAMPUS

Tuesday 2 – 9 Feb 2021

Topic(s): Welcome to the minor Makers Lab: Making as Research. We will introduce the program, get to know each other and the Teams collaboration environment in an online session. In the afternoon we meet face to face at university before going on a shopping spree in pairs. You will each visit a local supplier to get to know some important vendors in the city. You will get the supplies you need to work on this week's assignment, which is to build a DIY lab tool that you can use later on in the course. After a tour of the workspaces on Wednesday, we will divide you into groups and assign you one of the following machines/devices to build: a microscope (to study your organisms up close), a paste printer add-on (to 3D print with starch and algae pastes), a laminar flow box (for inoculating mycelium), and a temperature and humidity-controlled grow-box (to incubate your organisms). You will also receive a kombucha SCOBY and a recipe to start growing bacterial cellulose at homce (takes a few weeks to grow).

Readings:

- Myers, Bill. "Beyond Biomimicry" in: *Bio Design: Nature, Science, Creativity.* London: Thames & Hudson, 2012: pp.10-17.



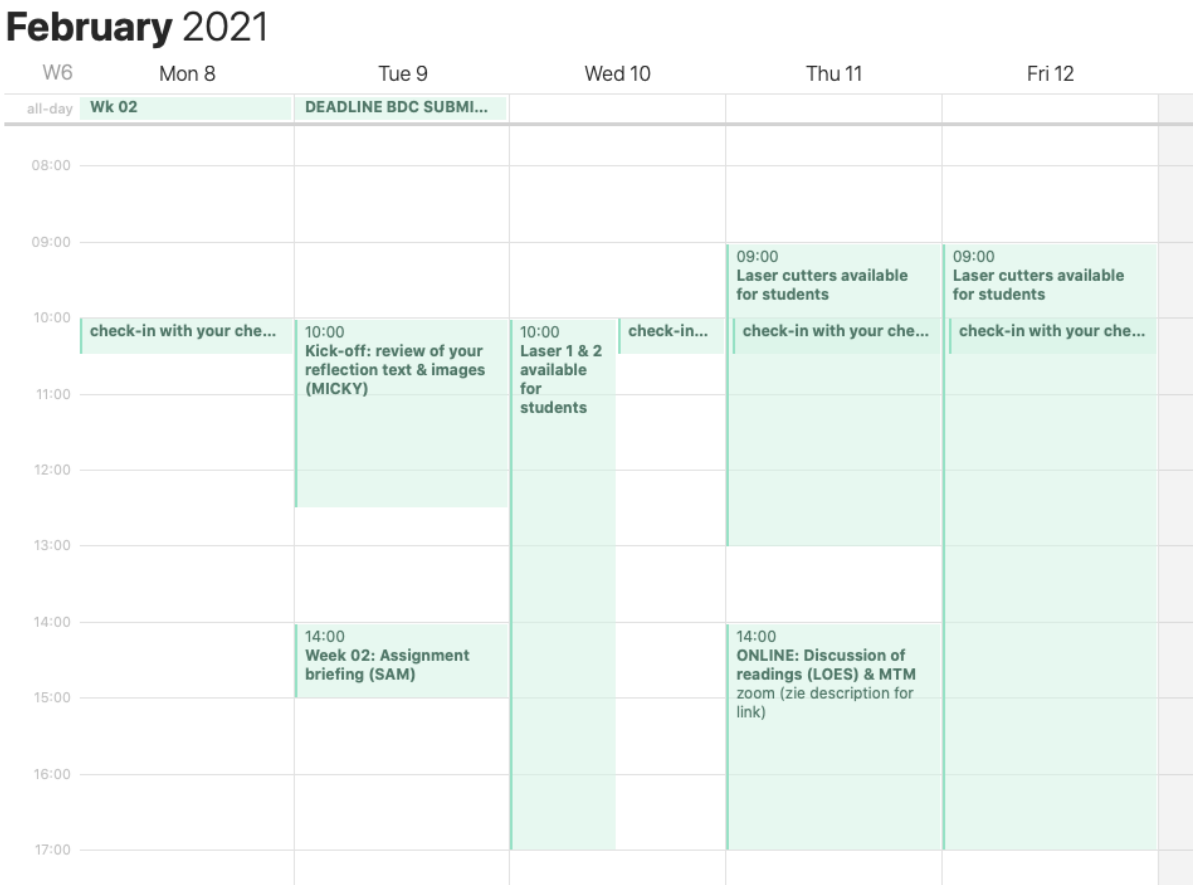
Week 2 – Auto-connecting materials (Loes)

Tuesday 9 Feb – 16 Feb 2021

Topic(s): Mono-materials are more easily recyclable than combined materials and composites. To aid this, we could take connective elements such as glue, stitches, screws and other connective hardware out of the equation, and instead explore how materials might connect to itself. For this week's assignment you are assigned a flat material (such as a sheet of bioplastic, bacterial leather, textile, other) and asked to turn it into a 3D object without adding *any* additional materials. The object can be anything (a garment, a lamp shade, a box, a plant holder) but consider that its function should match your material's qualities, limitations and size. Work in pairs, partner up with somebody you haven't worked with yet. Use Rhinoceros 6 to create a cut file for your design, cut it on the laser cutter.

Readings:

- Flusser, Vilem, "The Factory" in: *The Shape of Things: A Philosophy of Design.* London: Reaktion Books, 2017 (1999): pp. 43-50.
- Franklin, Kate, and Caroline Till (eds) "Introduction" and "Co-Creation" in: *Radical Matter: Rethinking Materials for a Sustainable Future*. London: Thames & Hudson, 2018: pp. 8-11 and 142-165.



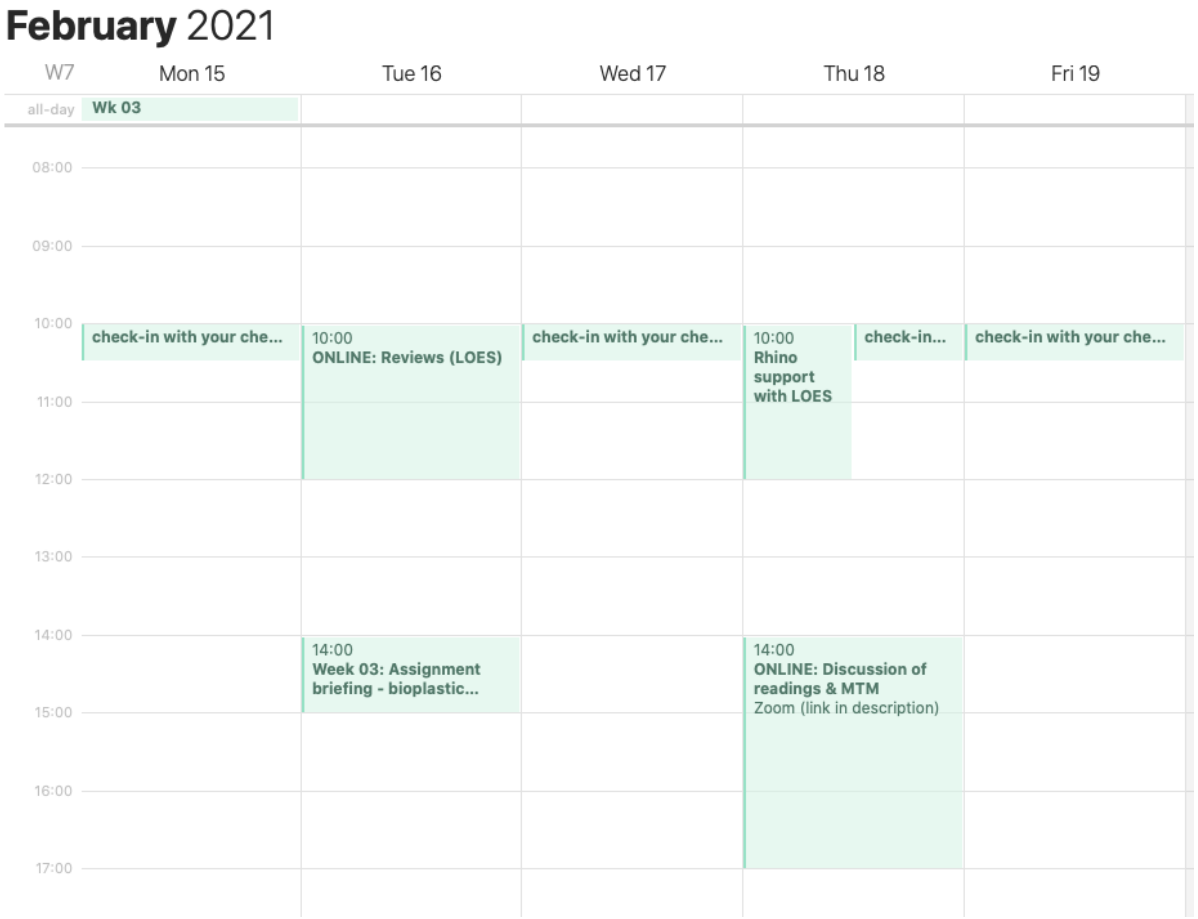
Week 3 – Material Alchemy (and Mould-making) (Micky)

Tuesday 16-19 Feb and 1-2 March (reading week in between)

Topic(s): Although science is commonly not understood as an everyday activity that is part of life, in reality, we encounter biology and chemistry all the time. Not in a laboratory, but in the household. We cultivate plants in our own gardens, in order to prepare them in our kitchens and eat them. And after all is done, we will clean the area thoroughly to make sure we don't grow unwanted microorganisms. By means of culinary, technical, chemical and biological advances we have been able to understand ingredients and the chemical processes we engage in while cooking and cleaning. Behind the scenes of the food industry, a lot of wonderful by-products are thrown away instead of used as a potential resource. Contemporary material alchemists return to the kitchen to allow us to reconnect with locally abundant materials. You will engage with several recipes to create bio-based, renewable materials, and design and fabricate your own moulds to create shapes and textures. Probably not be safe for consumption!

Readings:

- Kelley, Lindsay. "Subject P: Embodying Home Economics" in: *Bio Art Kitchen: Art, Feminism and Technoscience*. London/New York: I.B. Tauris, 2016: pp. 14-22.
- Franklin, Kate, and Caroline Till (eds) "Shit, Hair, Dust" in: *Radical Matter: Rethinking Materials for a Sustainable Future*. London: Thames & Hudson, 2018: pp. 8-11 and 74-107.



Week 4 – Reading week (Loes)

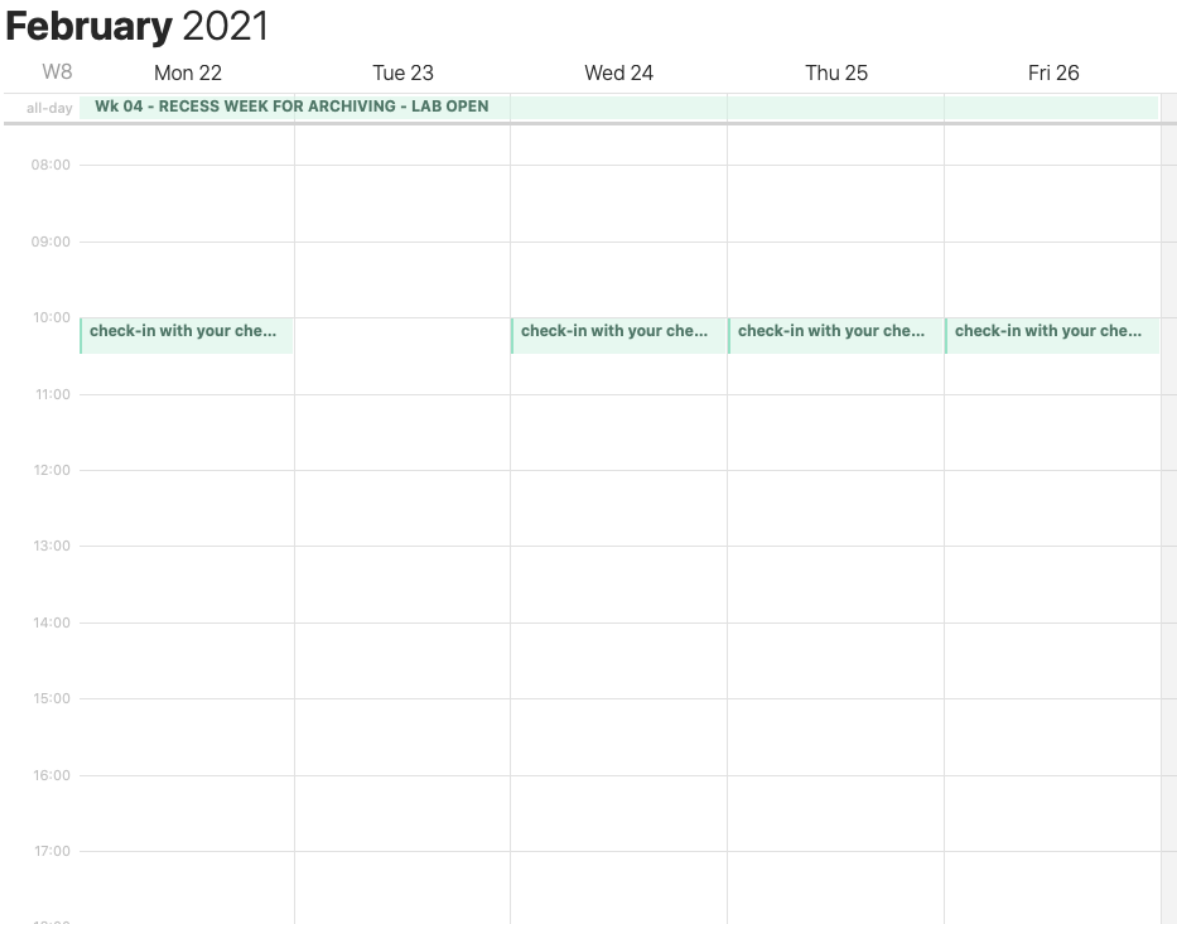
Mon 22-28 Feb 2021

Topic(s): This week is reading week, there will be no seminars and the lab will be closed except for 3D print pick-ups. Use the extra time to finalize last week's assignment that is due the Tuesday right after reading week (2 March).

Readings: no seminar this week, prepare the readings for week 5 (contains an important but rather long text)

Machine time booking links: n/a

Deadline and deliverables: see week 3



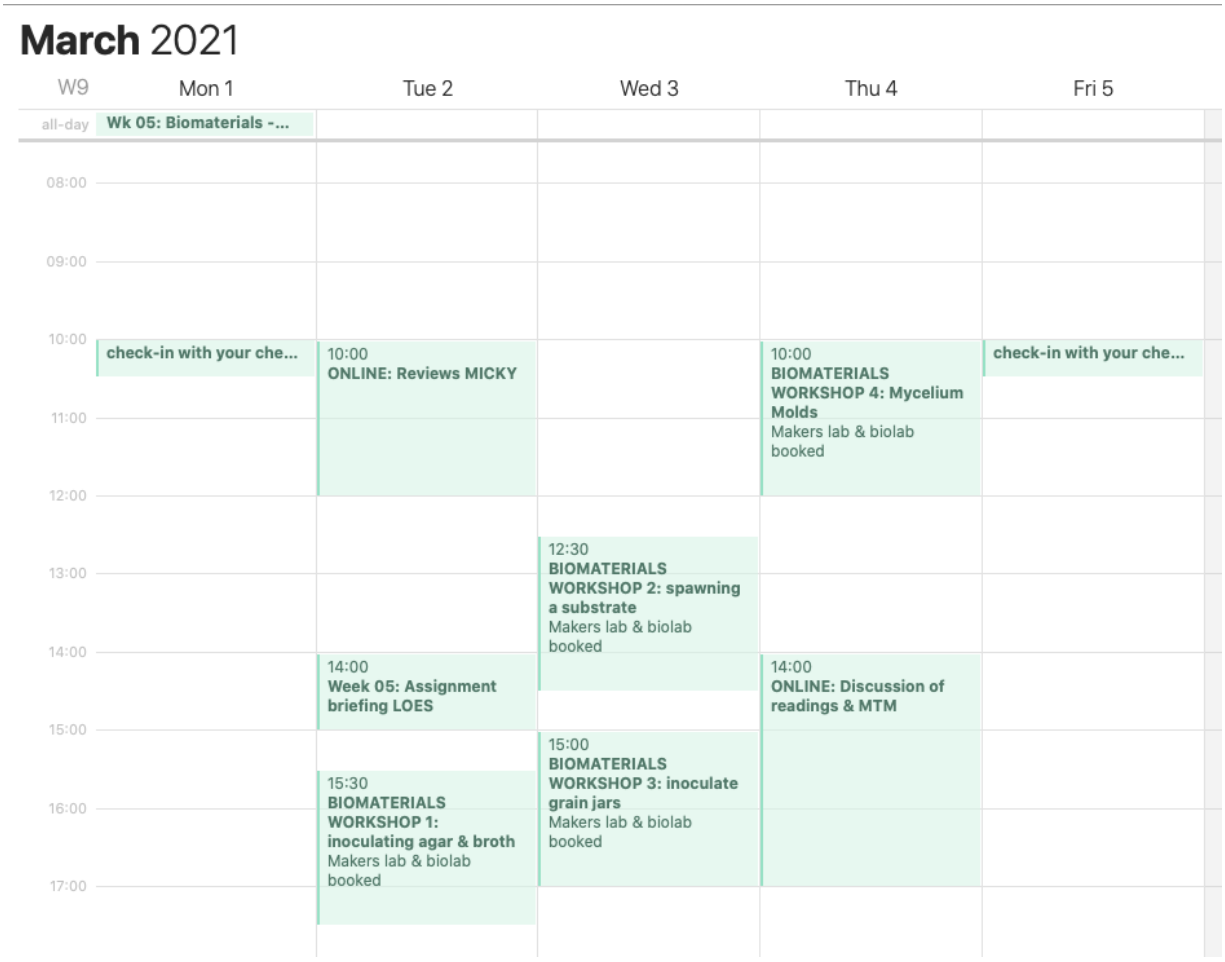
Week 5 – Biomaterials: Radical collaborations with nature (Loes)

2-9 March 2021

Topic(s): Design materials are dead. Long live design materials! As designers, we have come to appreciate predictability and malleability in materials, with cheap petrol-based plastics as its pinnacle. It is these materials we can bend to our will as designers, make them do whatever we want, in easy and scalable ways, but with devastating ecological results. What if, instead of telling materials what to do, we started listening and observing their cycles of life? We will explore radical mycology (the study of fungi, e.g. mushrooms, molds, yeasts, and lichens) as 1) a social philosophy that describes cultural phenomena through a framework inspired by the unique qualities of fungal biology and ecology, 2) a mycocentric analysis of ecological relationships, and 3) a grassroots movement that produces and distributes accessible mycological and fungal cultivation information to enhance the resilience of humans, their societies, and the environments they touch (McCoy 2016: vii)

Readings:

- Armendariz, Angela and Patrik D'haeseleer "Working with Microbes (Revised V.2)", no date. Available at: https://docs.google.com/document/d/12gavZZEyT3en6gdKVRByraGLoqybI4nn_zp8g3iSB4w
- McCoy, Peter. "Introduction: Toward a Radical Mycology" in: *Radical Mycology: A Treatise on Seeing and Working with Fungi.* Portland: Chthaeus Press, 2016 (1985): pp. xv-xx.
- McCoy, Peter. "Part IV: Working with Fungi" in: *Radical Mycology: A Treatise on Seeing and Working with Fungi.* Portland: Chthaeus Press, 2016 (1985): pp. 201- 287.



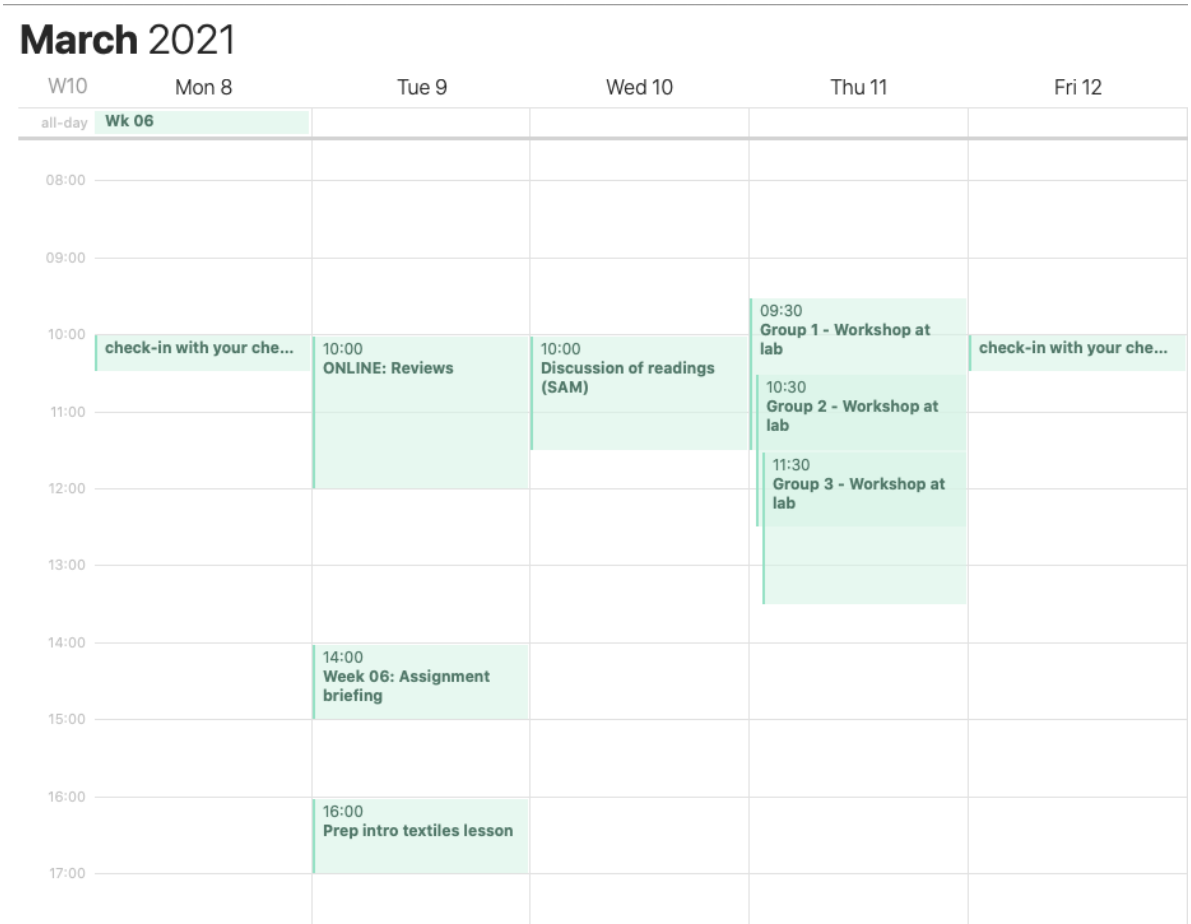
Week 6 – Materials Research & Archiving (Micky)

Tue 9 – Tue 16 March 2021

Topic(s): This week we will dive into the lab's material archive. You will learn to observe, describe and compare materials, and familiarize yourself with a number of protocols for more in-depth collaborative archiving. You will engage in further material testing at home and in the workshop(s). Elise Luttink will join us for a guest lecture/workshop on product photography.

Readings:

- Karana, Elvin, Bahareh Barati, Valentina Rognoli and Anouk Zeeuw van der Laan. "Material Driven Design (MDD): A Method to Design Material Experiences" in: *International Journal of Design*, 9(2), 2015: pp. 35-54.
- Bogers, Loes. "Archiving New Naturals". *Fabricademy,* 2019-2020. These pages in particular:
    - https://class.textile-academy.org/2020/loes.bogers/projects/archiving_new_naturals/
    - https://class.textile-academy.org/2020/loes.bogers/projects/outcomes/24_core_recipes/
    - https://class.textile-academy.org/2020/loes.bogers/projects/outcomes/tools_and_templates/recipe_template/



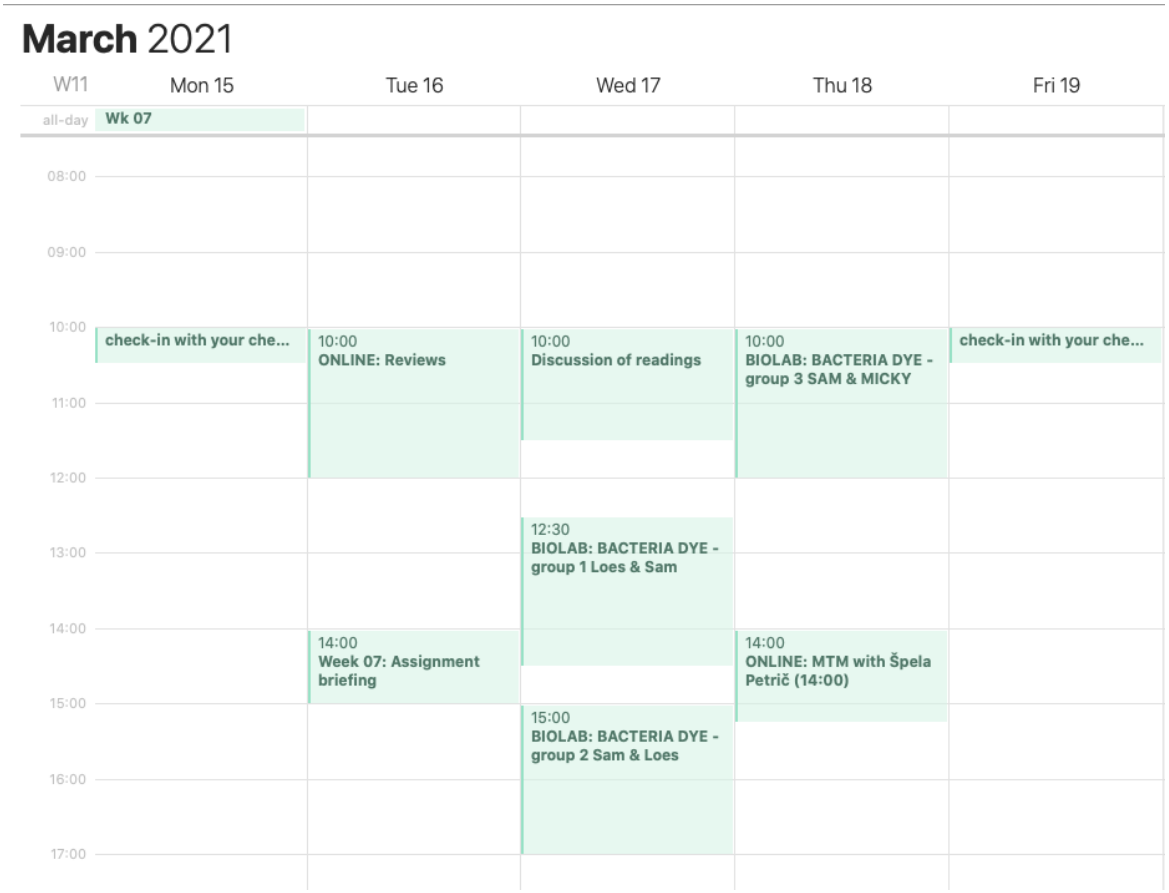
Week 7 – Color wanted: dead or alive? (Loes)

16-23 March 2021

Topic(s): Color is fundamental to our experience of the world and an interesting interplay between the thing itself and what we perceive. A tomato for example absorbs short and medium wavelenghts of the spectrum, and bounces back everything that isn't blue, violet, green, yellow and orange. Which leave red as the only color that reaches our eye. We see what the tomato is not (St Clair 2016: 13). Color is everywhere, color is life and life is color. But it is also evasive: to capture color is to kill it. And even then it may fade, change color, or disappear altogether. It is for this reason that synthetic inks, dyes and paints have been developed, but with often devastating consequences for the environment. Synthetic textile dyes for example are a major cause of water pollution. This week we will explore natural inks by extracting pigment from barks, plants, leaves and insects, and we will create a bacteria textile dye that requires hardly any water. We don't suggest that natural dyes are *the* solution, but perhaps they *can* help us appreciate again how special it is to surround ourselves with colors that are out-of-season, and that we should not take this for granted.

Readings:

- Agapakis, Christina. "Biofabrication 101", *Medium.* 23 January 2015. Available at: https://medium.com/re-form/biofabrication-101-1b1757ce5404
- St. Clair, Kassia. *The Secret Lives of Colour*. London: John Murray, 2016: pp. 10-35.



Week 8 – Biodesign (Micky)

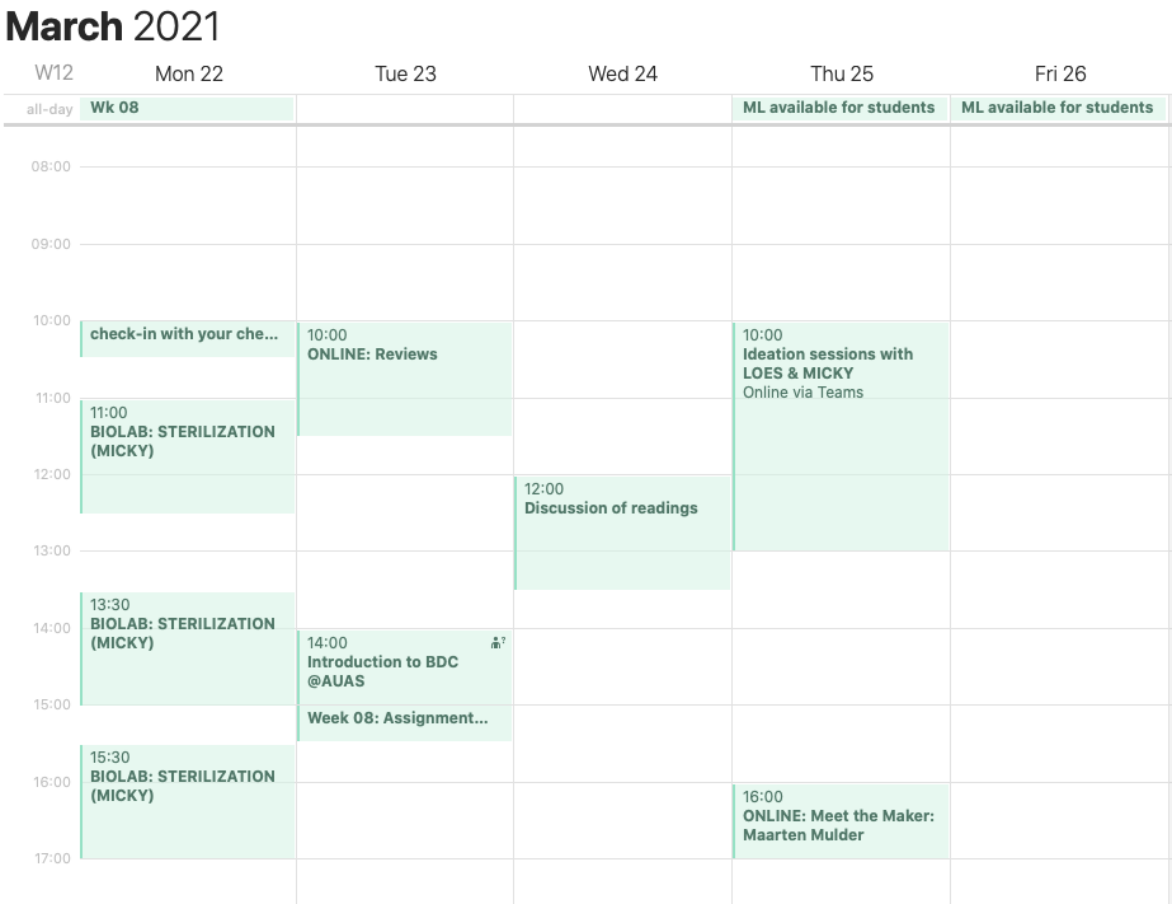
Tue 23-30 March 2021

Topic(s): This week we will start preparing for the biodesign challenge as we consider *livingness* as a material quality in design (Karana 2020). We will look at the exhibition catalogue from 2019's Milano Triennale with the topic of "broken nature". We will also discuss the biodesign challenge categories and judging criteria. Get inspired this week to start thinking about possible projects for the challenge! Your assignment for the week is to devise an experiment that combines the techniques covered so far and come up with an interesting "new" material combination or process that results in a material with qualities we haven't seen until this week. Some examples: create a composite material (matrix and reinforcement) out of waste materials, experiment with gravity in fabric formwork, or figure out the process to print with pastes using the paste extruder we build in the kick-off week.

Guest mentor Laura Mudde will visit us for an ideation workshop.

Readings:

- Karana, Elvin. *Still Alive: Livingness as a Material Quality in Design.* Breda: Avans University of Applied Sciences, 2020: pp. 6-26. Available at: https://issuu.com/caradt/docs/still_alive_caradt_avans_vweb
- Antonelli, Paola, and Ala Tannir. *Broken Nature: XXII Triennale di Milano,* 2019



Week 9 through Week 10 - Material Archiving II: documenting and reflecting (Micky)

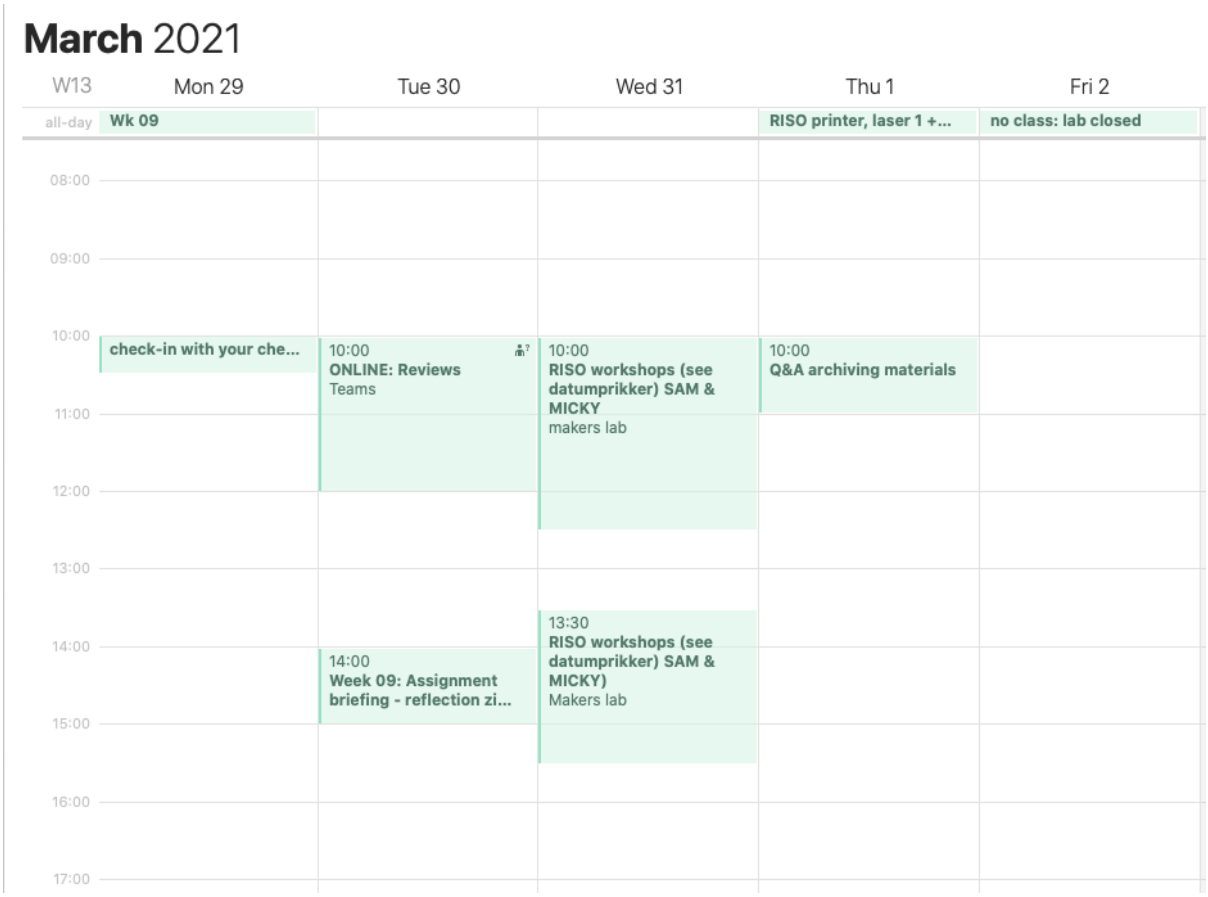
Tue 30 March – 9 April 2021 (two week assignment!)

Topic(s): we will round off the first part of the program with a synthesis of your reflections. Each week you have prepared plain text and images to reflect on each week's readings. For the midterm exam, you are asked to synthesize these reflections into a printed portfolio. You will learn to use the RISO printer (a japanese stenciling machine that uses ink based on soy, and stencils made of banana leaves). Come up with a concept to present your reflections, they may take any form (poster, card sets, booklets, combined techniques, an AR publication with AV media embedded, as long as parts of it are printed on the RISO.

Furthermore, you will finalize the in-depth documentation of the experiment(s) you did in week 8, following the documentation template discussed last week. Finalise all your material samples to contribute to the archive and finish all your pending assignments to fulfil requirements for the midterm exam.

Readings: no readings and no Meet the Makers this week.

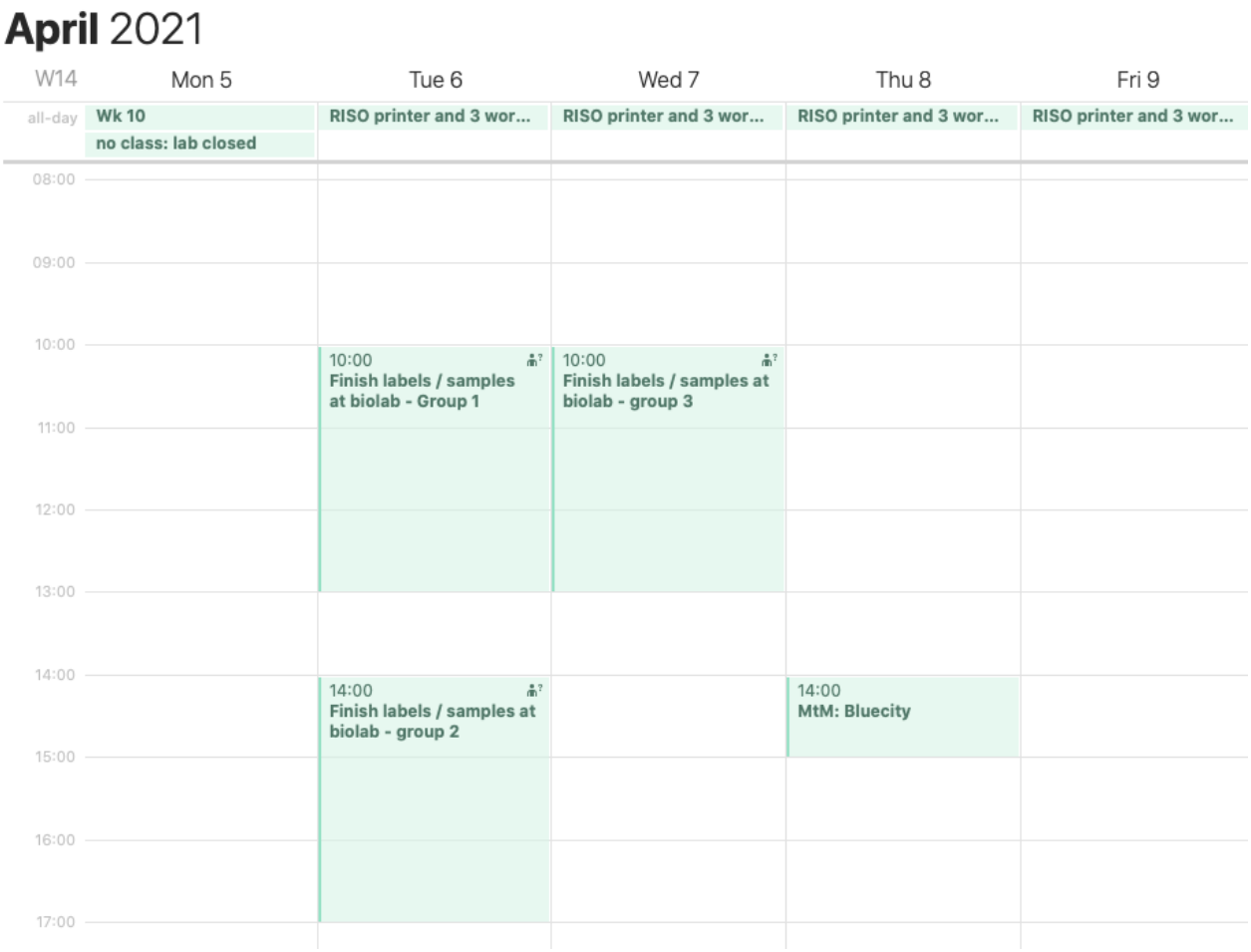
<u>Note</u>: Friday 2/4 and Monday 5/4 are public holidays (lab closed)



Week 10 – Mid-term assessment (Loes)

Deadline and deliverables:

- Finalized material samples for the material archive
- Your reflection portfolio (2 hard copies)
- Hand-in at the biolab on **Monday 12 April between 14:00-17:00**. Book your slot here: https://datumprikker.nl/pex4648hv5h7txyi



--------- END OF BLOCK 1 -----

Week 11 – Biodesign Challenge Kick-Off

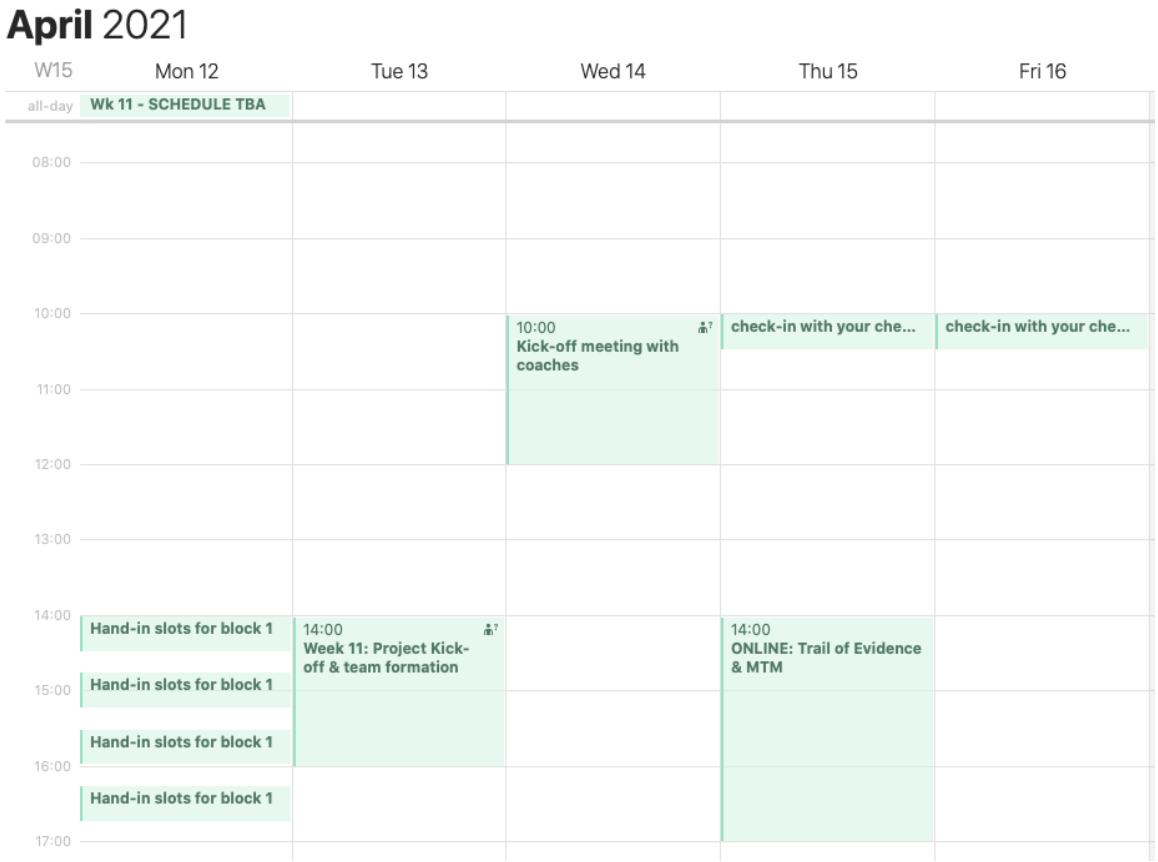
Tue 13-20 April 2021

Topic(s): We will kick-off the project phase. In the next 7 weeks you will develop a submission for the international BioDesign Challenge: www.biodesignchallenge.org/ We will review the different categories/themes, deadlines and judging criteria. You will form project teams, meet with your coaches and identify your area of interest.

Start exploring your topic/area of interest by: researching the state of the art and inspiring projects, recently published research papers, and spending time with your material(s) of choice. We will discuss a number of ideation and decision-making methods, and outline different approaches you can take to address the challenge.

Readings:

- Bar-Shai, Nurit et.al. *Cut/Paste/Grow.* Exhibition catalogue by Observatory/Genspace. New York: Observatory, 2013.
- Franklin, Kate, and Caroline Till (eds) "Living Materials" in: *Radical Matter: Rethinking Materials for a Sustainable Future*. London: Thames & Hudson, 2018: pp. 190-217.
- And we suggest you revisit the works from: Antonelli, Paola, and Ala Tannir. *Broken Nature: XXII Triennale di Milano,* 2019



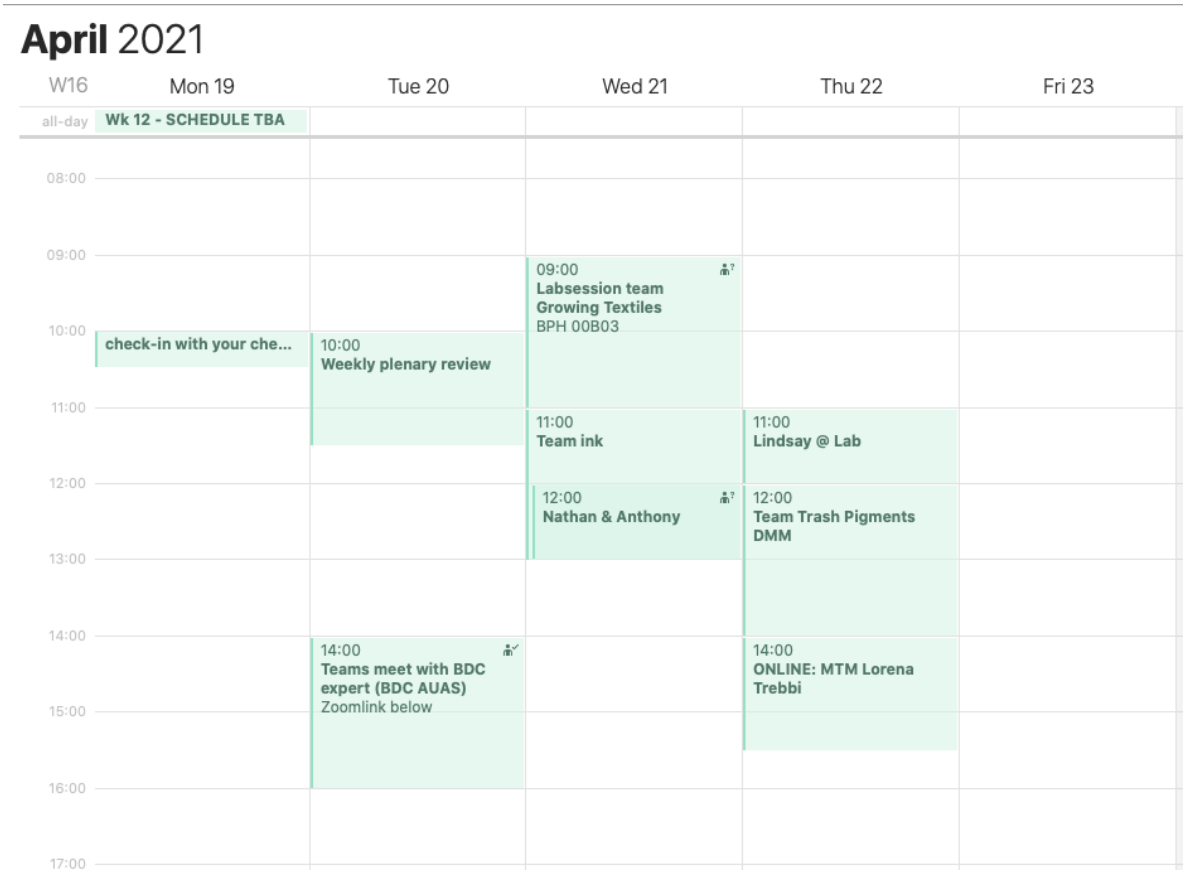
Week 12 – Project work

Tue 20 – 27 April 2021 (lab closed on Mon 26 and Tue 27 April due to public holidays)

Topic(s): Designer and researcher Angella Macky will visit us for a lecture/workshop on "living with your designs", or: how you can generate valuable insights by testing out your design proposals on yourself. Furthermore, this week is decision-time. Decide on your final biodesign proposal. We will invite experts from BDC to join us this week to help guide you with your project ideas and execution.

Readings:

- Mackey, Angella. "Research Through Design in HCI" in: *Wearing Dynamic Fabric* (unpublished PhD thesis), 2020.



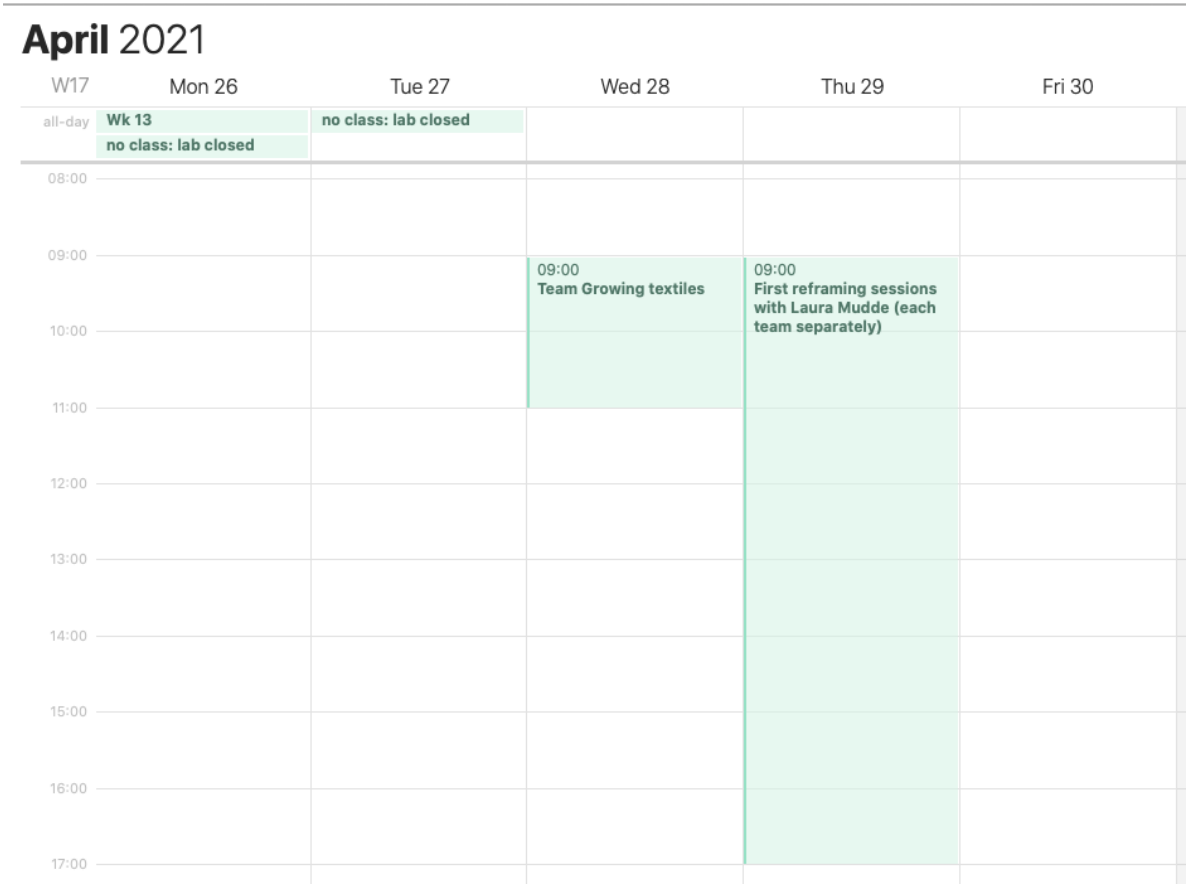
Week 13 – Project work

Wed 28 April – 4 May 2021 (lab closed on tues 27 April due to public holiday)

Topic(s): push your project forward! Reframing coach Laura Mudde will visit each project team to discuss your experiments and ideas, and explore different ways you might frame your project. We will analyse and discuss different formats for storytelling that may benefit your project.

Readings:

- Cogdell, Christina. "From BioArt to BioDesign". *American Art* 25(2) (Summer, 2011): pp. 25-29.
- Lee Sethi, Meera, and Adam Briggle. "Making Stories Visible: The Task for Bioethics Commissions" in: *Issues in Science and Technology* 27(2) (Winter 2011): pp. 29-44. Also available at: https://issues.org/sethi/

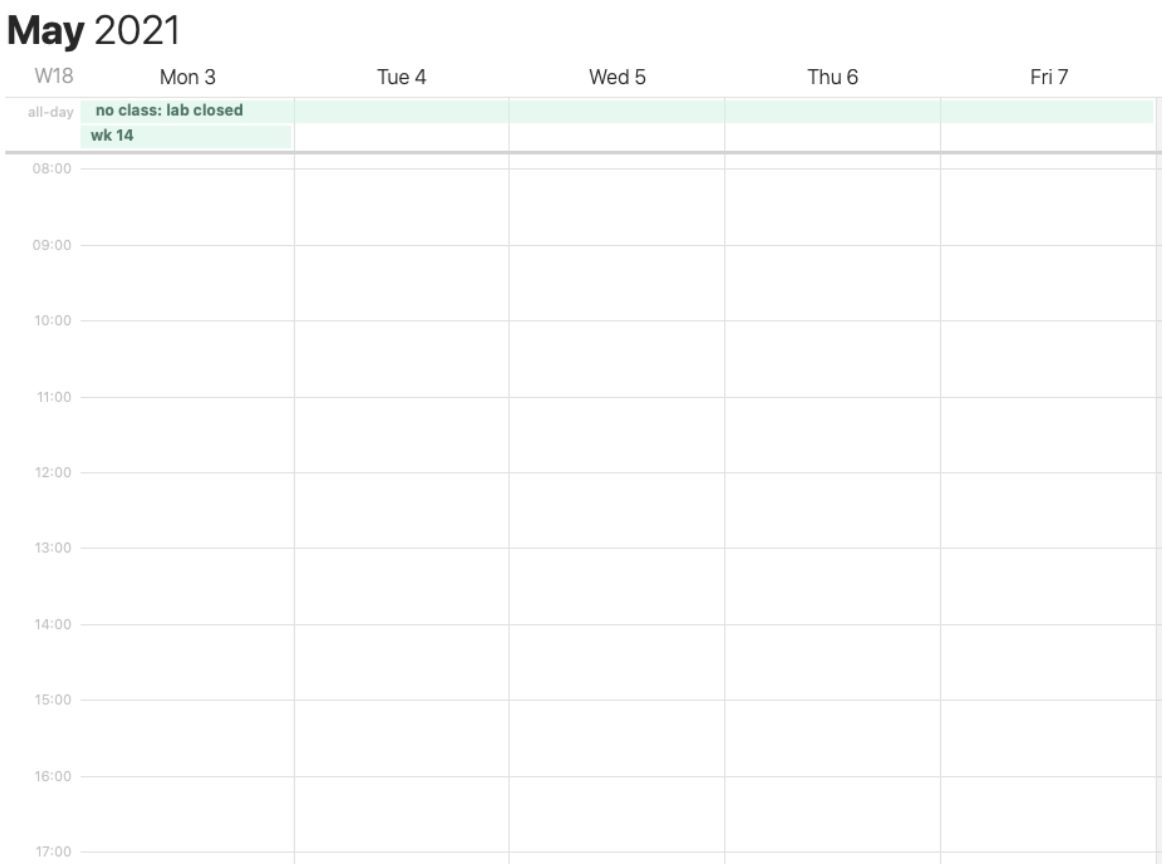


Week 14 – Project work

Tue 4 May – 11 May 2021

Topic(s): Push your project forward!

Readings: N/A

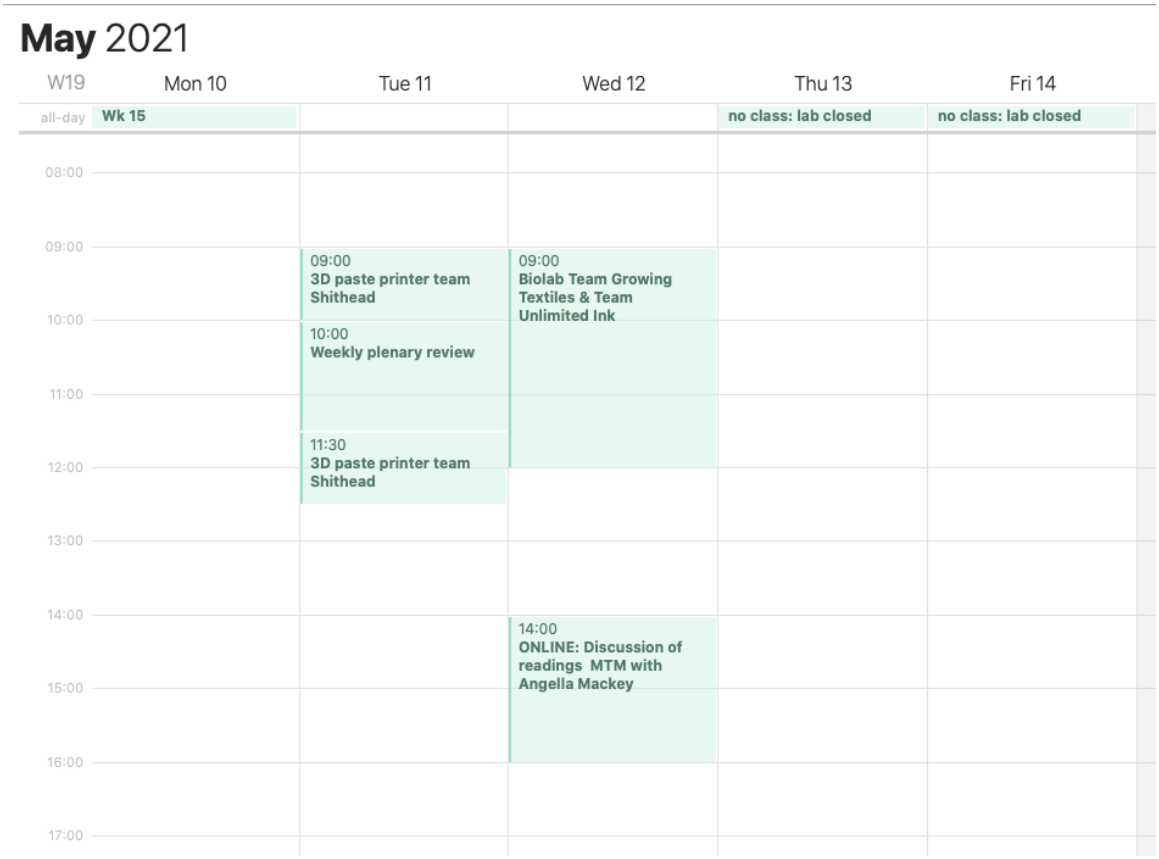


Week 15 – Project work

Tue 11 May – 18 May 2021 (lab closed due to public holidays on: Thu 13 and Fri 14 May)

Topic(s): Push your project forward! We will invite a BDC expert to join each project group for guidance and advice.

Readings: N/A

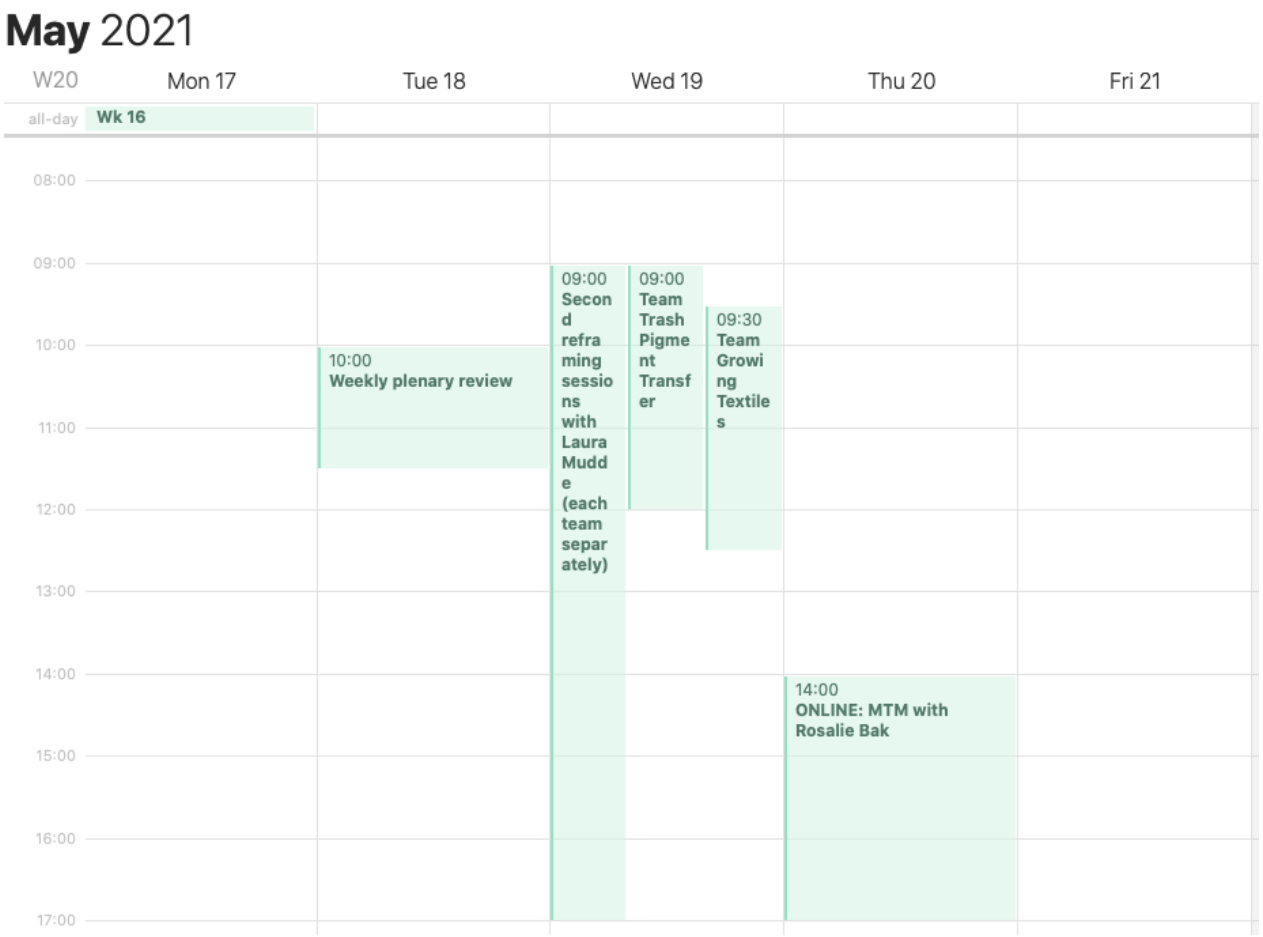


Week 16 – Project work

Tue 18-25 May 2021

Topic(s): Reframing coach Laura Mudde joins each of your teams to help you finetune your project's storytelling. Elise Luttik will also return for another workshop, this time addressing how photography can help you convey your projects' message in the most compelling way.

Readings: N/A



Week 17 – Finalizing your BioDesign Challenge Submissions

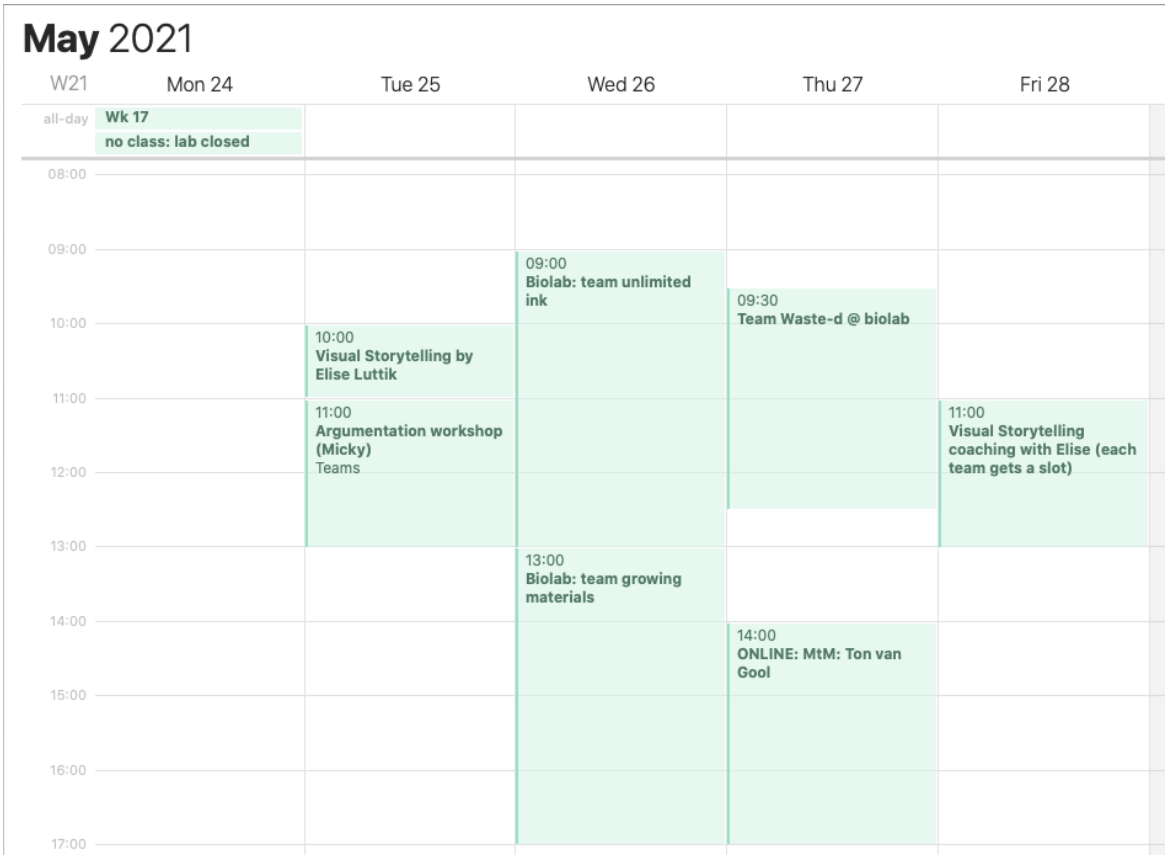
Tue 25 May – 1 June 2021 (lab closed on Mon 24 May due to public holiday)

Topic(s): This week you will finalize your BioDesign Challenge submission so you can present it to your peers at this week's review. During the review we will select which of our projects we will send in for the competition.

Readings: N/A

Deadline and deliverables:

- Be ready to present your BDC submission in class on **Tuesday 1 June**, and drop your contribution in the Teams folder:
    - A document with:
        - Project title and description (half page maximum)
        - Names of all contributing team members
    - 3-5 High-res images and/or renderings
    - Slideshow presentation
    - First version of your video (final video due on Friday 11 June 2021)
    - Link to your website

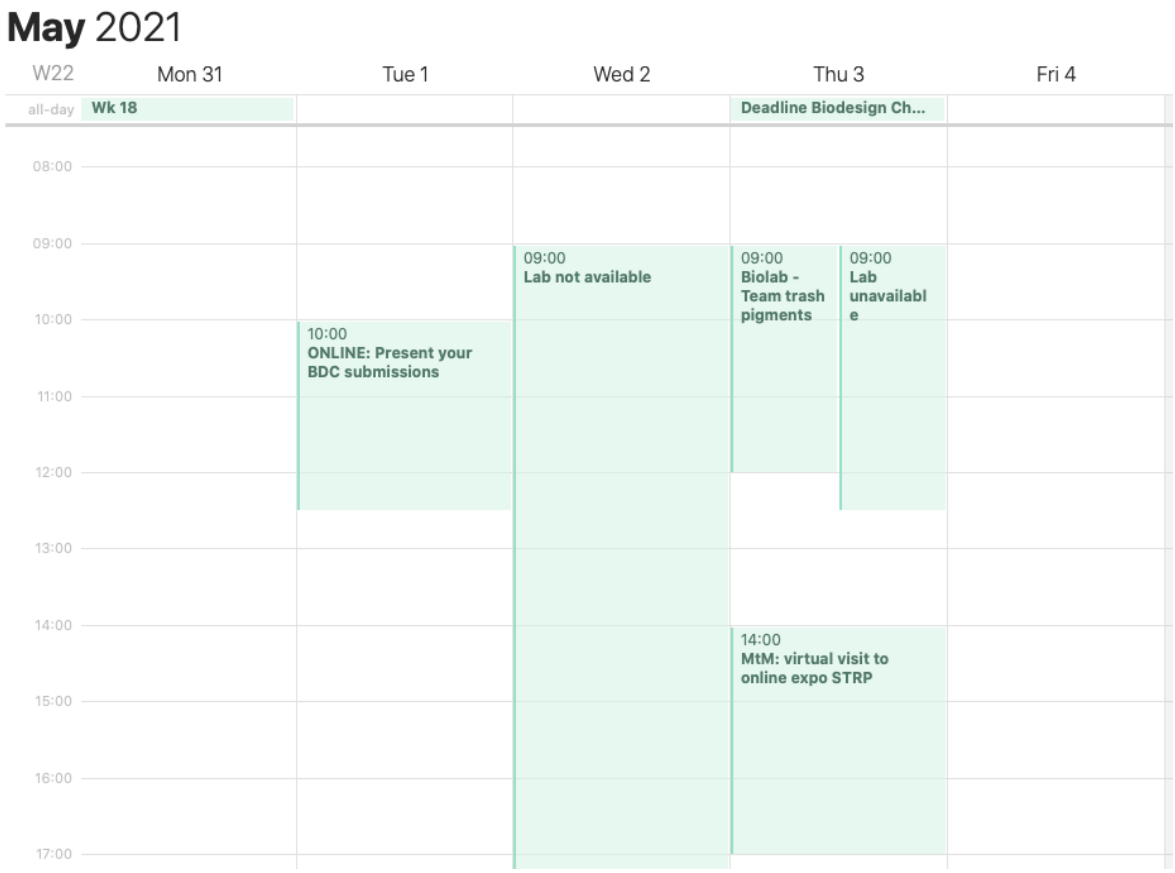


Week 18 – Preparing for the Class expo

Tue 1 – 8 June 2021

Topic(s): TBA

Readings: N/A



Week 19 – Video submissions and expo prep

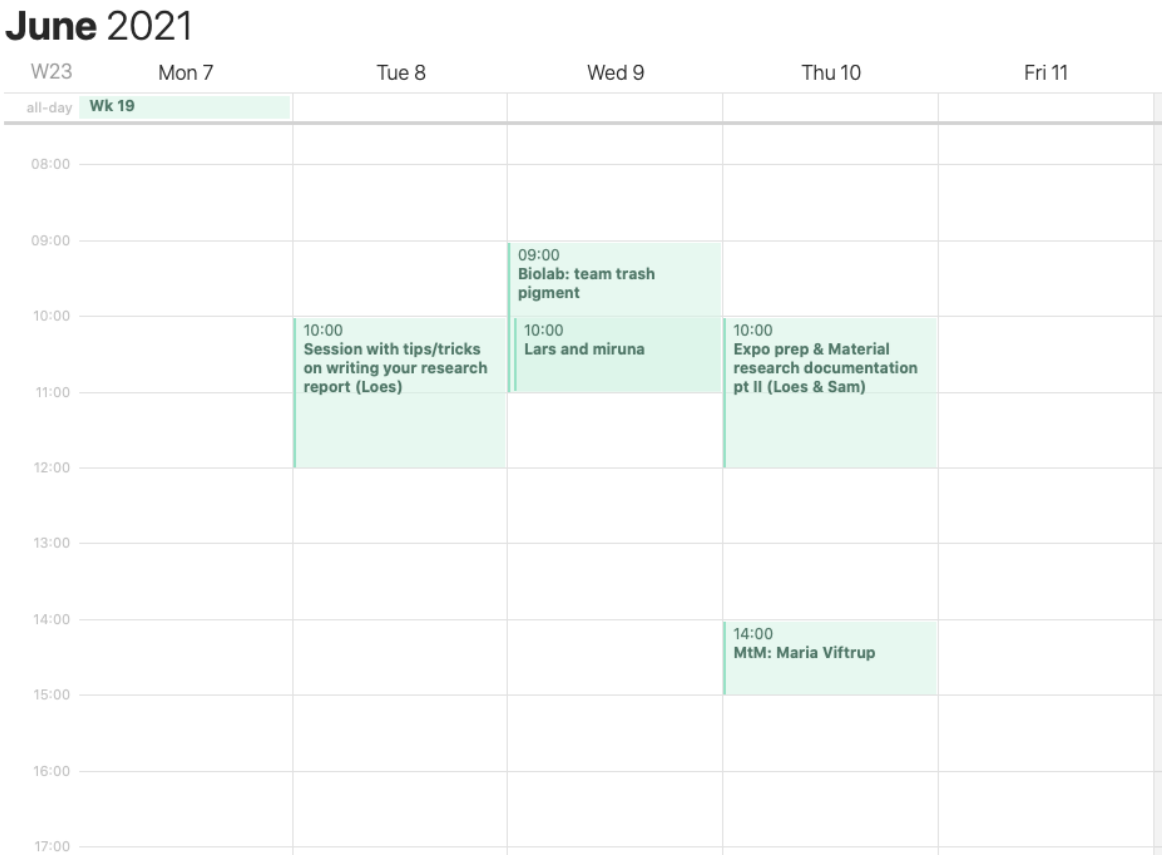
Tue 8 – 15 June 2021

Topic(s): TBA

Readings: N/A

Deadline and deliverables:

- Submit your final project video no later than **Friday 11 June at 5PM**



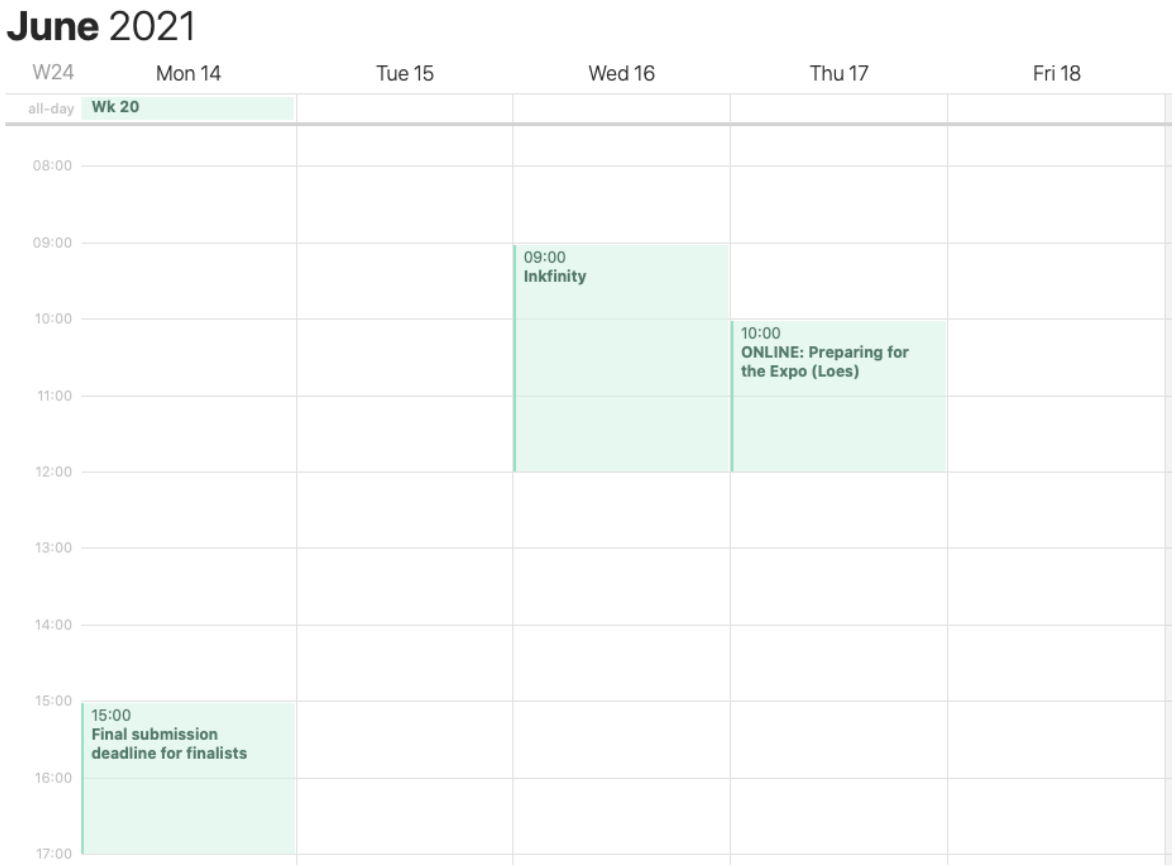
Week 20 – Expo prep

Tue 15-22 June 2021

Topic(s): push your project forward

Readings:

Deadline and deliverables: TBA



Week 21 – BioDesign Challenge Summit

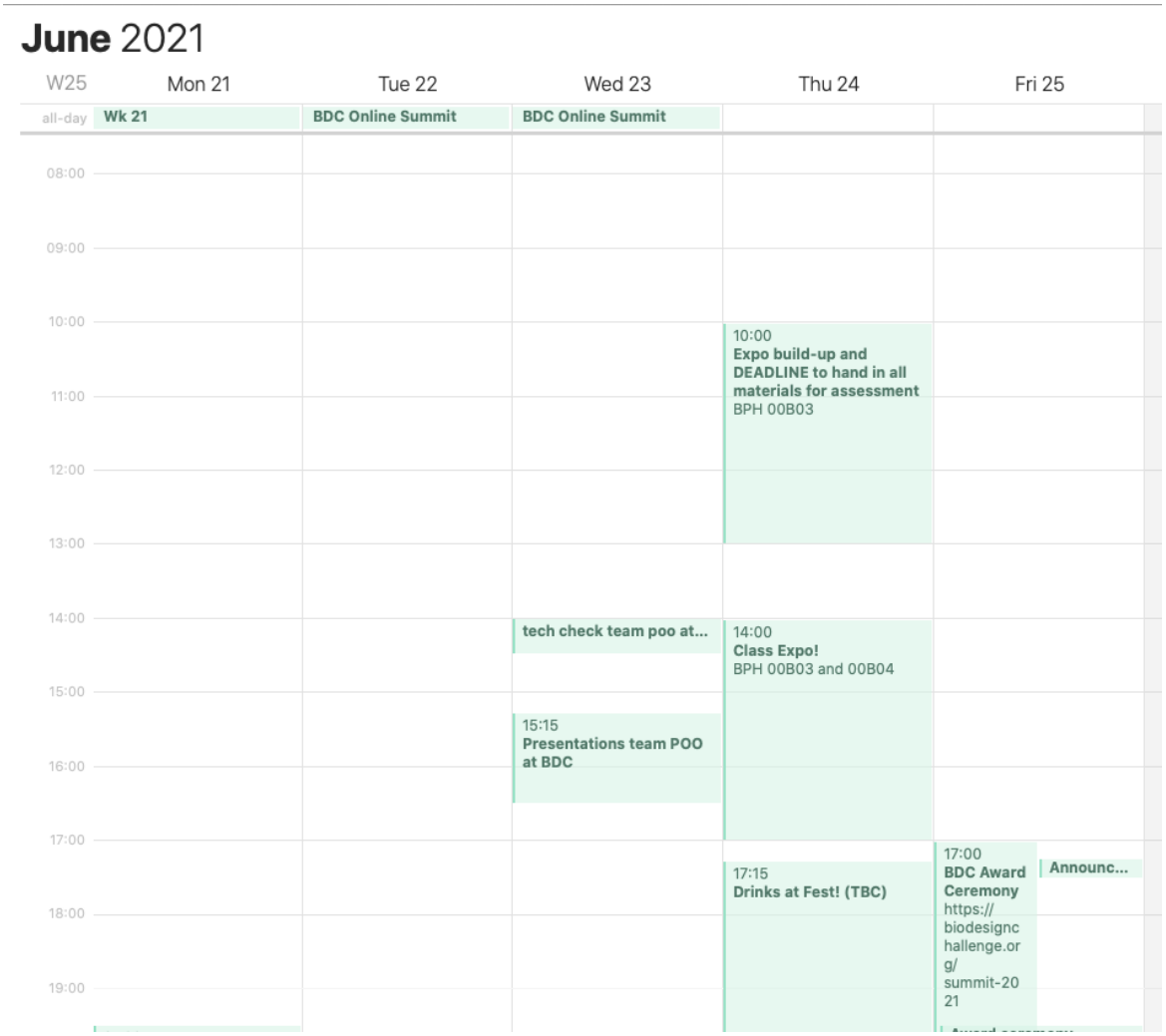
Tue 22-29 June 2021

Topic(s): We will attend the BDC online summit Mon 21- Wed 23 June 2021 and of course attend the Award Ceremony on Friday 25 June (times TBA). You will prepare your contribution and built your "booth" for the class expo.

Readings: N/A

Deadline and deliverables:

- Final hand-in deadline for all course materials: **Thursday 24 June 2021 <u>on campus</u> (time TBA)**



Week 22 – Expo and assessments

Tue 29 June – 2 July 2021

Topic(s): N/A

Readings: N/A

Deadline and deliverables:

- Final hand-in deadline for re-sits **Thursday 1 July 2021 <u>on campus</u> (time TBA)**