CBL

The process of finding out if CBL is a fitting approach for the premaster Spatial Engineering

Why did we get funding for this:
Due to the multidisciplinary approach, the implementation of challenge based learning (CBL) poses a number of new and different demands on the faculty (Malmqvist, Radberg, & Lundqvist, 2015). Although CBL has been around since 2008, more research is needed before implementation (Leijon, et al., 2021).

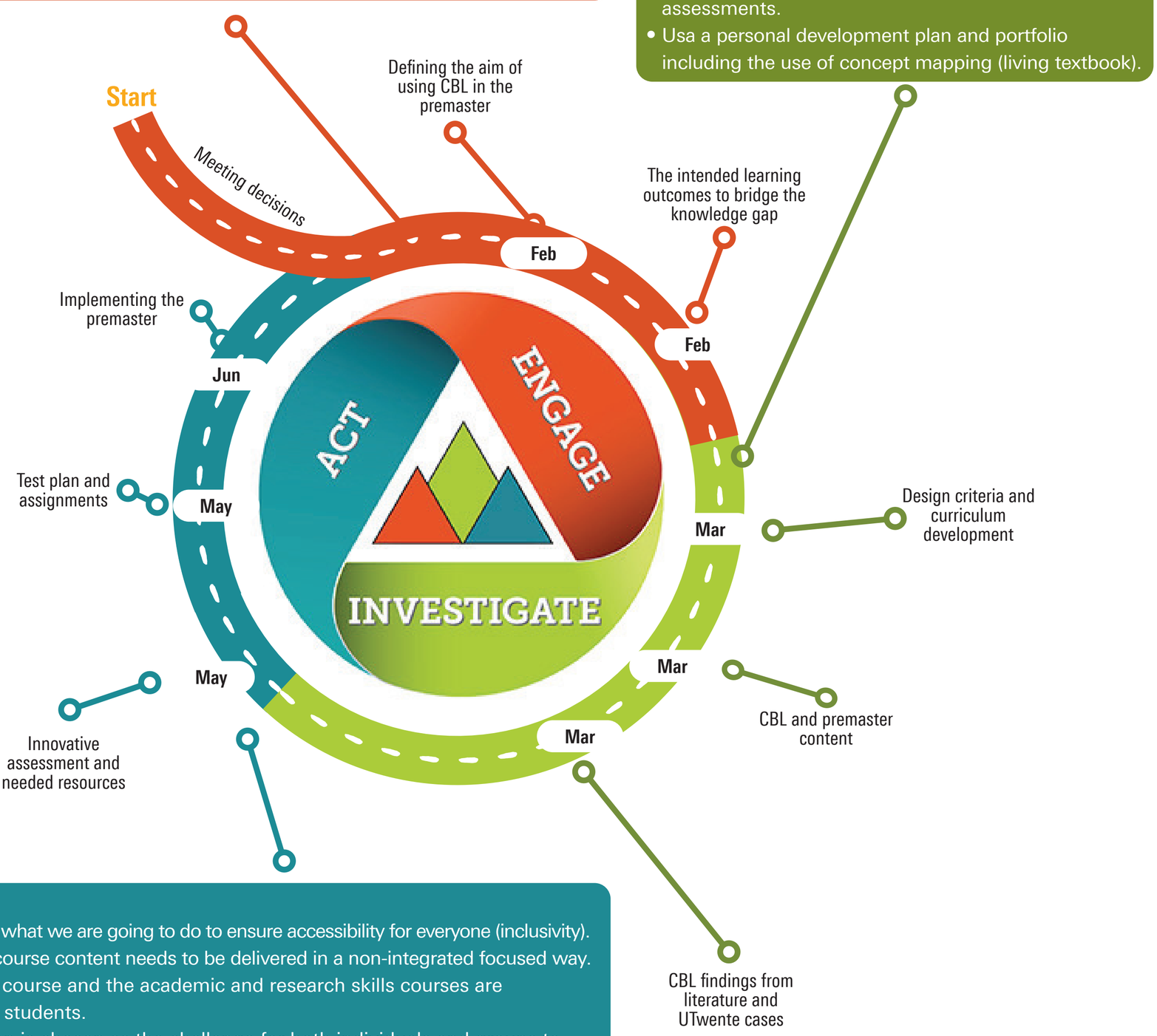
What did we investigate:
The usefulness of the approach for a distance Premaster.

How did we investigate:
As if it were a challenge
- combining the CBL approach with the ADDIE model for course development.

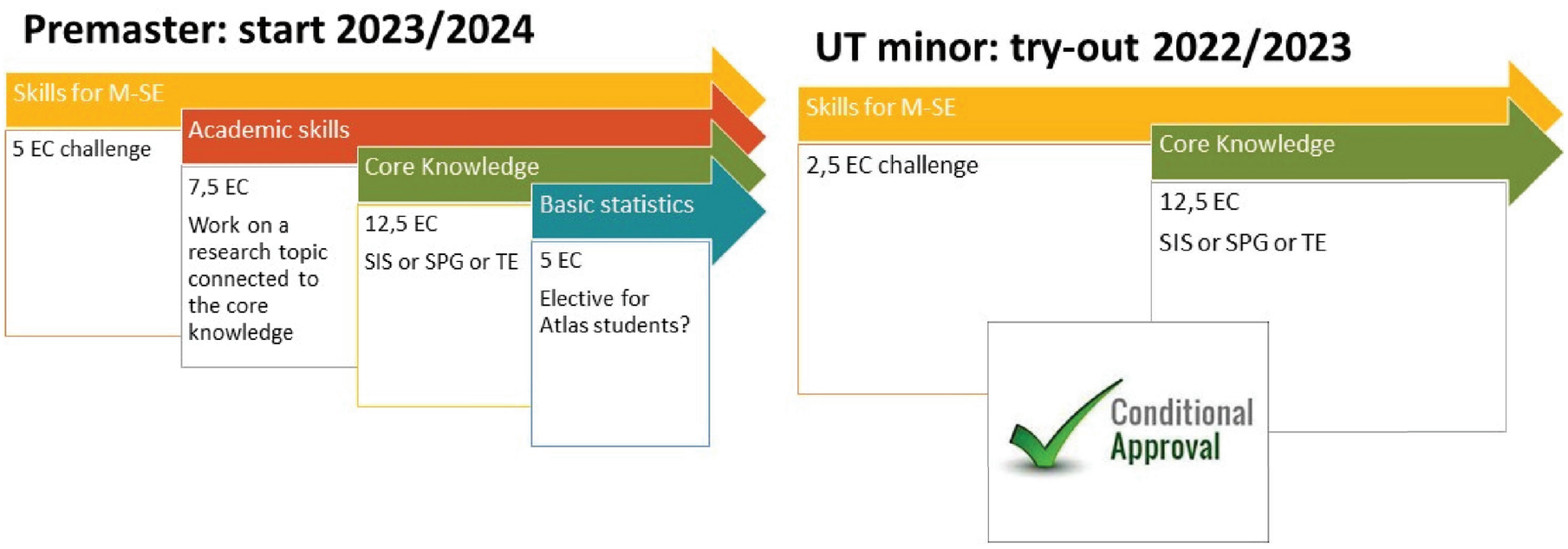
Expected usefulness CBL:
- increase the impact of our master's programme to achieve societal change by working in real life environments;
- prepare students for the master's programme by requiring, amongst others, increased levels of self-regulation;
- activate preknowledge;
- prevent fragmentation of learning.

Main outcomes
We do not intend to implement all UT fundamentals into the premaster. We focus on:
- Authentic 'problems' / real world challenges by including a challenge in the premaster.
- Self-directed student learning by including reflection, documentation and sharing.
- Stakeholder involvement by including an intended learning outcome (ILO) on contacting stakeholders.

Main outcomes
- Constructive alignment starts with the outcomes we intend students to learn, and align teaching and assessment to those outcomes.
- The masters programme aims for societal impact. Which means that communication, teamwork, negotiation and student centered learning skills need to be learned and assessed during the premaster.
- The assessment will be differentiated as each of the elements will be assessed separately using its own intermediate formative and final summative assessments.
- Usa a personal development plan and portfolio including the use of concept mapping (living textbook).



Main outcomes
- Distance course is what we are going to do to ensure accessibility for everyone (inclusivity).
- Core knowledge course content needs to be delivered in a non-integrated focused way.
- A basic statistics course and the academic and research skills courses are mandatory for all students.
- Climate adaptation is chosen as the challenge for both individuals and groups to integrate, activate and apply knowledge gained.
- Innovative ways of assessment will be used be used.



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This poster is to complete the ECIU CBL grant project activities on Challenge-based learning in a distance premaster for M-SE project.

Reference:

- Malmqvist, J., Radberg, K.K., Lundqvist, U. COMPARATIVE ANALYSIS OF CHALLENGE-BASED LEARNING EXPERIENCES. Proceedings of the 11th International CDIO Conference, Chengdu University of Information Technology, Chengdu, Sichuan, P.R. China, June 8-11, 2015
- Leijon M, Gudmundsson P, Staaf P, Christersson C. Challenge based learning in higher education– A systematic literature review, Innovations in Education and Teaching International. Innovations in Education and Teaching International. 2021. doi: 10.1080/14703297.2021.1892503.
- ADDIE model: https://educationaltechnology.net/the-addie-model-instructional-design/

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