

Critical Agrarian Studies and Technological Change – Theory, Methods, and Practice

BUA X-Student Research Group for MA and early-stage PhD students

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Context of Research Seminar

The bioeconomy is a political project seeking to transform the economy using biogenic resources from agriculture, forestry, and rural areas via the widespread use of high technologies. The seminar focuses on the bioeconomy's use of such technologies through the lens of Critical Agrarian Studies (CAS). CAS is a field that challenges modernization theory, dominant development frameworks as well as the logic of established economic and power structures regarding agrarian issues. In this seminar, students will work in teams of two to carry out a technology-related research project throughout the semester. In addition to gaining familiarity with CAS and bioeconomy debates, students are exposed to qualitative research methodologies, will sharpen their argumentative and critical thinking skills and gather some experience in collecting and analyzing data. MA and early PhDs in Ag. Economics, social sciences, INRM, IMRD, Geography or similar disciplines are welcome.

Research questions and Learning Goals

As part of the X-student research groups, students will be introduced to Critical Agrarian Studies as a lens from which to view agricultural bioeconomy policies in order to ask: *How can a Critical Agrarian Studies perspective on technological change and technologies in agriculture generate research and insights that can assess sustainability, equality, and democratic participation in the bioeconomy?*

To address this question, teams of two students will carry out small research projects throughout the semester in order to critically evaluate a particular technology (e.g., digital technologies, chemical use in agriculture, automation, plant breeding, etc.) or a technology-related topic (land-use change, political participation in rural areas).

By the end of the course, students will have acquired or sharpened key competences in:

- Identifying the social dimensions regarding the technologies used in the bioeconomy
- Familiarity with the research perspective of Critical Agrarian Studies
- Exposure to a range of qualitative research methodologies in the social sciences
- Working with a particular qualitative research methodology for the social sciences
- Sharpening or developing interdisciplinary teamwork techniques and cooperation skills
- Sharpening argumentative skills, critical thinking and assessment competencies in designing a research project
- Gather experience in collecting and analyzing data

Syllabus

Each session = 4SWS, usually Mondays from 2 to 6 pm, note that there are some exceptions and check carefully!

On 02.05. 2023 and 12.06. 2023 two extra hours are added for individual meetings with each research project

Dates	Course Topic	Learning Goals
Monday, 1 7.04.23 2-6 pm	<p><i>Introduction</i></p> <ul style="list-style-type: none"> Thematic introduction to: BioMaterialities project, CAS, the high-tech bioeconomy Mini-Workshop: what is the bioeconomy? what does a critical perspective mean? Students pair up in groups of two 	<ul style="list-style-type: none"> Students understand the goals of the seminar the thematic field to be studied is clear students understand what critical research means Students can formulate individual learning goals
Tuesday, 02.05.12 2-6 pm + 2 hrs. individual meetings	<p><i>Key concepts and debates of Critical Agrarian Studies</i></p> <ul style="list-style-type: none"> Mini-Workshop: how to formulate a good research question? selection of research topics individual meetings with each of the groups 	<ul style="list-style-type: none"> Students understand key concepts and debates of Critical Agrarian Studies Students can formulate an appropriate research Question for the length of the course Students can identify the socio-political relevance of the research topic
Monday, 15.05.23	<p><i>Qualitative Research Methods</i></p> <ul style="list-style-type: none"> In-class workshop on qualitative research methods in the social sciences Research design, time plan Methodology, data collection 	<ul style="list-style-type: none"> Students understand the strengths and limits of qualitative research methods in the social sciences Students can develop a research design, time plan an appropriate methodology to the research question
Tuesday, 30.05.23	<p><i>Technology and Technological Change</i></p> <ul style="list-style-type: none"> What is a critical study of technologies and society? Science and Technology from a CAS perspective 	<ul style="list-style-type: none"> Students understand what the requirements for the critical study of technologies Students can apply a critical technology studies perspective to their research project
Monday, 12.06.23 2-6 pm + 2 hrs, individual meetings	<p><i>Technological Change in Agriculture I</i></p> <ul style="list-style-type: none"> Capitalist Agriculture, Green Revolution In-depth: Biotechnology and Plant Breeding 	<ul style="list-style-type: none"> Students are introduced to concrete topics of technological change in agriculture understanding the origins of modern agriculture from a historical perspective Students are introduced one of the key technologies of the green revolution: scientific plant breeding
Monday, 19.06.23	<ul style="list-style-type: none"> <i>Technological Change in Agriculture II</i> High-Tech Agriculture: Digitalization In-depth: Precision farming 	<ul style="list-style-type: none"> Students are introduced to current topics of technological change in agriculture understanding the origins of high-tech agriculture from a historical perspective In-depth understanding of the current technological transition through example of precision farming
Monday, 10.07.23	<p><i>Movements and alternatives</i></p> <ul style="list-style-type: none"> Agroecology, rural social movements, Food sovereignty, wide technologies 	<ul style="list-style-type: none"> Introduction to technological and sociopolitical alternatives formulated by marginal actors and rural social movements Students understand the concept of 'wide' technologies
Friday, 14.07.23	<p><i>Presentation of final projects</i></p> <ul style="list-style-type: none"> Wrap up & evaluation of the seminar 	<ul style="list-style-type: none"> Students present their final projects Students receive constructive and respectful feedback from their peers regarding content and presentation