

Alternative Finance, Cryptocurrencies, and AI IBUS-3503 (3 credits)

Switzerland: Banking, Finance, and Social Responsibility

This syllabus is representative of a typical semester. Because courses develop and change over time to take advantage of unique learning opportunities, actual course content varies from semester to semester.

Course Description

This course is on the intersection of what may be considered as financial services and intermediaries outside of mainstream finance. These stakeholders and actors may be as diverse as citizen's initiatives within the solidarity economy, NGOs or SMEs active in the field of microfinance and complementary / local currencies. They can also be stakeholders in the Internet-driven information society and decentralized finance such as the cryptocurrency start-ups. In this context, AI and machine learning are drivers of massive social and economic change, but also are drivers producing new trends with seemingly unstoppable decision-making power over the destinies of citizens, businesses, and states today and tomorrow.

The course focuses on the new cultural values, lifestyles and modes of cooperation, equity, and innovation. Alternative finance stakeholders create, through their inter-action, a complex web to manage their activities with the purpose to challenge mainstream institutions by promoting issues ranging from the solidarity economy to decentralized finance, while using AI, machine learning and virtual reality as tools of social engineering. The course addresses the limits of neoliberal global governance which seems increasingly less capable to deal with 21st century challenges in managing a range of societal issues.

Learning Outcomes

Upon completion of the course, students will be able to:

- Explain the connection between alternative finance, blockchain technologies and social responsibility.
- Compare alternative financial systems with conventional financial institutions;
- Explain the role of microfinance, micro-credit, and social entrepreneurship in financial intermediation;
- Identify how the solidarity economy helps promote the ideals of social justice;
- Analyze how decentralized finance based on blockchain and cryptocurrencies challenges central bank authority and state issuing FIAT money;
- Assess the drivers and trends of international finance in the era of the information society, AI/machine learning and virtual reality and design 21st century scenarios for a resilient future by visioning preferable future worlds.

Language of Instruction

This course is taught in English, but students will be exposed to vocabulary related to course content as well as the nuances of economic change and development through in-country expert lectures and field visits in a wide range of venues and regional locales.

Instructional Methods

SIT's teaching and learning philosophy is grounded in the experiential learning theory developed by Kolb (1984; 2015) and informed by various scholars, such as Dewey, Piaget, Lewin, among others. Experiential learning theory recognizes that learning is an active process that is not confined to the formal curriculum; "knowledge is created through the transformation of experience" (Kolb, 2015, p. 49). Learning involves both content and process. Learning is holistic and happens through various life experiences upon which students draw to generate new ways of knowing and being. Learning involves a community and is a lifelong endeavor. Learning is transformational. The suggested four step-cycle of a *concrete experience*, *reflective observation*, *abstract conceptualization*, and *active experimentation* embedded in the experiential learning model is not linear and might not always happen in that specific order, as any learning is highly context dependent. These stages of taking part in a shared experience; reflecting on that experience by describing and interpreting it; challenging their own assumptions and beliefs to generate new knowledge; and ultimately applying new knowledge, awareness, skills, and attitudes in a variety of situations and contexts are important for students to engage in to become empowered lifelong learners.

Required Texts

Baylis, J., Smith, S., & Owens, P. (2014). *The Globalization of World Politics: An Introduction to International Relations*. Oxford University Press.

Hassan, M. K., Kayed, R. N., & Oseni, U. A. (2013). *Introduction to Islamic Banking and Finance: Principles and Practice*. Pearson.

Kurbalija, J. (2016). *An Introduction to Internet Governance*. Geneva: Diplo Foundation, Geneva, (7th edition), 159-163. Retrieved from:
http://www.diplomacy.edu/sites/default/files/AnIntroductiontoIG_7th_edition.pdf

Laville, Jean-Louis (2023). *The Solidarity Economy*. Minnesota: University of Minnesota Press.

Ledgerwood, J., Gibson, A. (2013). *The New Microfinance Handbook. A Financial Market System Perspective*. Joanna Ledgerwood (ed.), The World Bank: Washington, D.C., Retrieved from:
<https://openknowledge.worldbank.org/bitstream/handle/10986/12272/9780821389270.pdf?sequence=6&isAllowed=y>

Takahiro, Kaden (2022). *DEFI. Decentralized Finance*. Wroclaw: Amazon Fulfillment.

Miscellaneous Website for economics and management free books.
Retrieved from: www.free-management-ebooks.com.

Assignments and Evaluation

Assignment Descriptions and Grading Criteria

A Final Exam, Thematic Essay and Participation constitute the seminar requirements. In all exercises, students are asked to reflect analytically and to integrate lectures, readings, and briefings.

Final Exam (50%)

The Final Exam is a combined multiple-choice test (MCQ) with open questions on alternative finance, cryptocurrencies and blockchain. The scope of the final exam is to assess the factual knowledge students acquired during the seminar. This is an in-class closed-book and fact-based written exam. All topics discussed in class can be part of the Final Exam.

Time: Students will have 60 min to complete the Final Exam.

Thematic Essay (40%)

The objective of the in-class thematic essay is to assess the analytical skills and knowledge students obtained during the seminar on core notions and concepts, actors, goals and effects of alternative finance, cryptocurrencies and AI. This is an in-class closed-book written exam. The thematic essay includes an analytical assessment on an issue related to alternative finance, cryptocurrencies and AI. Possible topics: Microfinance and intermediation, solidarity economy and complementary currencies, globalization, cryptocurrencies and blockchain, finance and AI. The thematic essay should respond to the following requirements: Thematic introduction to the subject matter of the essay, and may consist of thematic questions, historical references, theoretical insights, or any combination of these various elements. The narrative is based on appropriate selection of facts and arguments and articulates well the core issues of the thematic essay. The conclusion represents a concise summary of the major issues discussed in the thematic essay.

Time: Students will have 90 min to complete the thematic essay.

Participation (10%)

This includes active involvement in lectures, readings, discussions, and excursions using the following criteria:

- Attendance - promptness to class and positive presence in class.
- Active Listening - paying attention in class and during field excursions, asking appropriate questions, showing interest and enthusiasm (this includes body language), entertaining contradictory perspectives, taking notes.
- Involvement in Class Discussions - either in small or large groups, sharing knowledge. This means challenging yourself to speak up if you usually don't, and also means allowing others to speak if you are a person who tends to dominate class discussions.
- Group Accountability – positive participation in the group during field excursions and classes; not keeping others waiting.
- Displaying Respect – culturally appropriate interaction with hosts, SIT program staff, SIT lecturers and communities.

Assessment

Final Exam	50%
Thematic Essay	40%
Participation	10%

Attendance and Participation

Due to the nature of SIT Study Abroad programs, and the importance of student and instructor contributions in each class session, attendance at all classes and for all program excursions is required. Criteria for evaluation of student performance include attendance and participation in program activities. Students must fully participate in all program components and courses. Students may not voluntarily opt out of required program activities. Valid reasons for absence – such as illness – must be discussed with the academic director or other designated staff person. Absences impact academic performance, may impact grades, and could result in dismissal from the program.

Late Assignments

SIT Study Abroad programs integrate traditional classroom lectures and discussion with field-based experiences, site visits and debriefs. The curriculum is designed to build on itself and progress to the culmination (projects, ISP, case studies, internship, etc.). It is critical that students complete assignments in a timely manner to continue to benefit from the sequences in assignments, reflections and experiences throughout the program.

Example: Students may request a justified extension for one paper/assignment during the semester. Requests must be made in writing and at least 12 hours before the posted due date and time. If reason for request is accepted, an extension of up to one week may be granted at that time. Any further requests for extensions will not be granted. Students who fail to submit the assignment within the extension period will receive an 'F' for the assignment.

Grading Scale

94-100%	A
90-93%	A-
87-89%	B+
84-86%	B
80-83%	B-
77-79%	C+
74-76%	C
70-73%	C-
67-69%	D+
64-66%	D
below 64	F

Program Expectations

- Show up prepared. Be on time, have your readings completed and points in mind for discussion or clarification. Complying with these elements raises the level of class discussion for everyone.

- Have assignments completed on schedule, printed, and done accordingly to the specified requirements. This will help ensure that your assignments are returned in a timely manner.
- Ask questions in class. Engage the lecturer. These are often very busy professionals who are doing us an honor by coming to speak.
- Comply with academic integrity policies (no plagiarism or cheating, nothing unethical).
- Respect differences of opinion (classmates', lecturers, local constituents engaged with on the visits). You are not expected to agree with everything you hear, but you are expected to listen across difference and consider other perspectives with respect.
- Storing Your Work: Keep several copies of your work as back up and keep one copy accessible to you through an online forum, such as an attachment in your email, the course learning management system, or cloud-based storage. This way your work will always be available to despite technical issues. Lost files, deleted drives, or computer crashes are not excuses for late, missing work.
- Personal Technology Use: Cell phones and other personal electronics can be used for taking notes and other class activities. Off-task usage is not acceptable. You may be marked as absent for habitually using them for something other than classroom activities.
- Course Communication: Course documents and assignments will be posted on the learning management system, Canvas or One Drive. Although the course calendar provides a broad overview and the general sequence of work and assignments for the course, what we accomplish in class will vary, and revisions to the calendar will be posted at the course site. You will need to check the course site regularly. You are responsible for letting me know about any network-related problems that prevent you from accessing or submitting assignments.
- Content Considerations: Some texts and activities you will encounter in this course delve into sensitive topics that may be emotionally and intellectually challenging. Our classroom is a space where we can engage with challenging ideas, question assumptions, and navigate difficult topics with respect and maturity. As possible, I will flag content and activities that are especially graphic or intense, so we are prepared to address them soberly and sensitively. If you are struggling to keep up with the work or participate in the course because of the nature of the content and activities, you should speak with me and/or seek help from counseling services.
- Classroom recording policy: To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student's own private use.

SIT Policies and Resources

Please refer to the [SIT Study Abroad Handbook](#) and the [Policies](#) section of the SIT website for all academic and student affairs policies. Students are accountable for complying with all published policies. Of particular relevance to this course are the policies regarding: academic integrity, Family Educational Rights and Privacy Act (FERPA), research and ethics in field study and internships, late assignments, academic status, academic appeals, diversity and disability, sexual harassment and misconduct, and the student code of conduct.

Please refer to the SIT Study Abroad Handbook and SIT website for information on important resources and services provided through our central administration in Vermont, such as [Library resources and research support](#), [Disability Services](#), [Counseling Services](#), [Title IX information](#), and [Equity, Diversity, and Inclusion](#) resources.

Course Schedule

**Please be aware that topics and excursions may vary to take advantage of any emerging events, to accommodate changes in our lecturers' availability, and to respect any changes that would affect student safety. Students will be notified if this occurs*

Each week this course covers major themes in a classroom seminar setting or through field visits, followed by a discussion session. Guided by SIT faculty, the discussion sessions are facilitated by students. Selected course readings for each module are available on the Canvas or OneDrive, and students should read them in advance and be prepared for each class session. Instructors' notes and slides are regularly uploaded on the Canvas or OneDrive. Beyond what is listed in the syllabus, supplemental articles are also distributed to students based on current events and relevancy, by the conference speakers, during the field visits, or by the program leadership.

Module 1: Microfinance and Intermediation

This module focuses on microfinance as a channel of intermediation between the small businesses and households lacking access to banking services, and investors. The module addresses a series of case studies related to microfinance in Africa, Indochina, and Islamic microfinance as an alternative form of intermediation with the aim to create a positive impact on the local society.

Session 1: Microfinance, Banks and Loans

This session provides an overview of the role of microfinance institutions and NGOs in the global south as well the impact of microcredit on regional development.

Required Text:

Ledgerwood, J. Ed. (2013). *The New Microfinance Handbook. A Financial Market System Perspective*. Joanna Ledgerwood (ed.), The World Bank: Washington, D.C., 15-48.

Retrieved from:

<https://openknowledge.worldbank.org/bitstream/handle/10986/12272/9780821389270.pdf?sequence=6&isAllowed=y>

Recommended Text:

OneWorld Sustainable Investments & Oxford Policy Management. (2018). *Microfinance for Climate Adaptation: From Readiness to Resilience*. Climate Investment Funds.

Retrieved from: https://www.cif.org/sites/cif_enc/files/knowledge-documents/micro-finance_research_brief.pdf

Session 2: Microfinance in Africa

This session focuses on empowering small businesses and households through African financial inclusion and access to financial services; for the poor in particular, this involves access to loans.

Required Text:

United Nations. (2013). *Microfinance in Africa Combining the Best Practices of Traditional and Modern Microfinance Approaches towards Poverty Eradication*. United Nations Economic Commission for Africa. Retrieved from:
<https://www.un.org/esa/africa/microfinanceinafrica.pdf>

Recommended Text:

Website: *Microfinancing Partners in Africa*. (2023). Retrieved from:
<https://microfinancingafrica.org/>

Module 2: Solidarity Economy and Finance

This module retraces the history of the solidarity economy, social enterprise and introduces the concept of complementary currencies. Students discuss alternative and local currencies such as leisure money, local exchange trading system (LETS), time bank, pledged money, and mutual credit clearing systems.

Session 1: Solidarity Economy and Alternative Financial Systems

The session focuses on the links between the regional / local currencies and social responsibility. Students learn about the concept of alternative and complementary currencies within their historical, social and economic context.

Required Texts:

Laville, Jean-Louis. (2023). *The Solidarity Economy*. Minnesota: University of Minnesota Press.

Larue, L., Meyer, C., Hudon, M., & Sandberg, J. (2022). The Ethics of Alternative Currencies. *Business Ethics Quarterly*, 32(2), 299-321. doi:10.1017/beq.2021.52\

Recommended Texts:

Boyle, D. (2011). More than Money: Platforms for exchange and reciprocity in public services. In *NESTA*. https://www.nesta.org.uk/documents/2/more_than_money.pdf

Kennedy, M. I., Lietaer, B. A., & Rogers, J. (2012). *People money: the promise of regional currencies*. Triarchy Press.

Greco, T. (2013). Taking moneyless exchange to scale: measuring and maintaining the health of a credit clearing system. *International Journal of Community Currency Research*, 17, pp. 19-25. <http://dx.doi.org/10.15133/j.ijccr.2013.003>

Module 3: Globalization, Cryptocurrencies and Blockchain

This module focuses on international political economy and aspects of neoliberal globalization such as internationalization, technological revolution, liberalization and 'de-territorialization'. The module discusses decentralized finance based on blockchain technologies versus the mainstream financial system governed by the central bank authority. Students learn about the drivers and trends of cryptocurrencies as an emerging alternative to fiat. Students will examine the role of stakeholders such as the technical community, governments, the business sector, civil society and international organizations involved in Internet governance in the area of financial intermediation (ITU, WTO, WIPO, ICANN, etc.).

Session 1: Neoliberal Globalization and Global Governance

The session debates the history of globalization and global governance, identifies and monitors drivers and trends of the world economy today. It also discusses the spread of global currencies, digital cash, global credit, and debit cards.

Required Texts:

Baylis, J., Smith, S., & Owens, P. (2014). *The Globalization of World Politics: An Introduction to International Relations*. Oxford University Press. (pp. 15-31.)

Khiaonarong, Tanai & Humphrey, David. (2019). Cash Use Across Countries and the Demand for Central Bank Digital Currency. *IMF Working Paper* 19(46), International Monetary Fund.

Recommended Text:

Prasad, E. (2021, August 25). *Cash will soon be obsolete. Will America be ready?* Brookings; Brookings Institution. <https://www.brookings.edu/articles/cash-will-soon-be-obsolete-will-america-be-ready/>

Session 2: Emerging Trends and Major Developments in Blockchain Technologies

This session explains the mega-trends in Internet based blockchain technologies and cryptocurrencies as an alternative to fiat money. It discusses the role of actors such as governments, the business sector, civil society, international organizations, the technical community, and the ICANN.

Required Text:

Kurbalija, J. (2016). *An Introduction to Internet Governance*. Geneva: Diplo Foundation, Geneva, (7th edition), pp. 159-163.

Session 3: Bitcoin Fundamentals

This session introduces the core concepts of Bitcoin, secure self-custodial and multi-signature wallets. It also explains the ecosystem comprised of blockchain, distributed ledger technology and the future of cryptocurrencies.

Required Texts:

Antonopoulos, A. (2018) Ch 1. Introduction. In *Mastering Bitcoin*. Available at <https://github.com/bitcoinbook/bitcoinbook/blob/develop/ch01.asciidoc>

Antonopoulos, A. (2018) Ch 2. What Is Bitcoin? *Mastering Bitcoin*. Available at <https://github.com/bitcoinbook/bitcoinbook/blob/develop/ch02.asciidoc>

Recommended Texts:

Lopp, James. (2023) *Bitcoin Information & Resources*. <https://www.lopp.net/bitcoin-information.html>

Antonopoulos, A. (2015, April 14). *What is Bitcoin? An entertaining non-technical explainer on what bitcoin is and why it matters*. YouTube. <https://www.youtube.com/watch?v=LA9A1RyXv9s&list=PLPQwGV1aLnTvCuQXCZ3RBvdlCngstTirl>

International Monetary Fund. (2018). "Money, transformed. The future of currency in a digital world", 61 p. <https://www.imf.org/external/pubs/ft/fandd/2018/06/pdf/fd0618.pdf>

Session 4: Internet Governance and the Future of E-Banking

This session focuses on internet governance in the age of the information society. It discusses economic and financial issues such as mobile commerce, electronic funds transfer, online marketing, transaction processing, electronic data exchange and automated data collection systems. The session concludes on the future of finance in an Internet driven information society.

Required Text:

Kurbalija, J. (2016). *An Introduction to Internet Governance*. Geneva: Diplo Foundation, Geneva, (7th edition), 117-139. http://www.diplomacy.edu/sites/default/files/AnIntroductiontoIG_7th_edition.pdf

Module 4: Finance and AI

This module retraces the roots of AI within intellectual history from various cultural backgrounds as 'recycling old knowledge for a new AI era' (J.Kurbalija, 2023). The module

discusses AI applied in banking and finance, and retraces current developments and future trends of applications in portfolio management, algorithm trading, electronic data exchange and automated data collection systems, lending decisions, identity theft and fraud detection.

Session 1: Recycling Ideas: Old Knowledge for a New AI Era

The growing role of AI today makes us reflect: how do we navigate this new reality? The session focuses on the rising importance of AI in the 21st century in all domains. The session maps the field of AI and finance through a discussion of AI as a tool for the financial industry.

Required Texts:

Kurbalija, J. (2023, August 1). *What can Socrates teach us about AI and prompting?* Diplo. <https://www.diplomacy.edu/blog/what-can-socrates-teach-us-about-ai-and-prompting/>

Kurbalija, J. (2023b, August 25). *The Vienna Nexus: Five thinkers who coded the operating system of modernity.* Diplo. <https://www.diplomacy.edu/blog/the-vienna-nexus-five-thinkers-who-coded-the-operating-system-of-modernity/>

Recommended Text:

Coeckelbergh, M. (2020). *AI Ethics* (The MIT Press Essential Knowledge series). The MIT Press.

Session 2: AI as a Tool for Sustainable Finance

AI and machine learning can be used to foster sustainable practices in finance and achieve the UN SDGs 2030. The AI may assist financial intermediaries to make decisions and promote goals of sustainable finance.

Required Texts:

Musleh Al-Sartawi, A. M. A., Hussainey, K., & Razzaque, A. (2022). The role of artificial intelligence in sustainable finance. *Journal of Sustainable Finance & Investment*, 1–6. <https://doi.org/10.1080/20430795.2022.2057405>

Briere, M., Keip, M., & Le Berthe, T. (2022). Artificial Intelligence for Sustainable Finance: Why it May Help. *ECMI Research Report*, 19. <https://doi.org/10.2139/ssrn.4252329>

Recommended Text:

Peterson, Gayle (2020). *Navigating Big Finance and Big Technology for Global Change: The Impact of Social Finance on the World's Poor.* Palgrave Studies in Impact Finance.

Module 5: Review and Wrap-up of the Seminar

This session provides an overview of the main issues addressed in this course. The discussion will be framed around key reflection questions that have been approached either through guest speakers' presentations, field visits, or assigned readings.