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**PADM-GP 4318**

**Social Impact and Emerging Technologies**

**Spring 2024**

**Class Information:**

**Andy Moss**

Dates: Jan 23- thru March 5th

Time: 6:45pm to 8:25pm

Email: Andy.Moss@nyu.edu

Office Hours: By appointment

**Prerequisites:** Recommended - PADM.GP2311 - Social Impact Investing

# Course Description

Technology excites in its promise to help transform and improve lives. Yet we observe that this promise has not always translated into reality.

Through active / experiential learning this course examines the promises – and pitfalls – of technology for impact. Together we will co-create ways to examines how entrepreneurs and practitioners harness technologies to solve key challenges, while questioning how new technologies transform or reinforce dominant paradigms. It attempts to stimulate ideas on how new technologies and innovations can be harnessed and utilized for positive social benefit while mitigating risks and minimizing unintended consequences.

# Key Areas of Exploration:

* When does a technology become emerging?
* What does social impact really mean?
* What opportunities for impact have new technologies created?
* How disruptive or revolutionary are new technologies for impact?
* What tools do we need to improve these technology-driven initiatives?
* How might we mitigate unintended consequences of new technologies?
* Assessment, measuring and ESG?
* Mapping the stakeholders?
* Adoption Curves and critical mass for skills acquisition?

# Course Objectives

The course is intended to stimulate critical thinking and expose students to an array of different types of emerging technologies. These (and other) emerging technologies may (or may not) have a significant impact on society in the coming decade. Some examples of these new innovations include AI, Machine Learning and generative AI, Communications Technology, Quantum Computing, Space Tech and Reusable Rockets, Biotech and Gene Editing, Alternative Energy; these all appear to be approaching tipping points on their respective adoption curves. Forming an understanding for developing strategies and frameworks for assessing impact measurement is critical for decision making. The class will emphasize real world examples and practices as well as balance minimal lecture, with select guest speakers, case analysis, while emphasizing broad class discussion.

# Overview of the Semester

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| --- | --- | --- | --- |
| **Class** | **Date** | **Topic** | **Activity** |
| 1 | Jan 23 | Exploring Emerging Tech, the hype/adoption curve and reality | Discussion, Team Formation, Workshop |
| 2 | Jan 30 | What does Social Impact really Mean and how is it assessed? What are ESG considerations? | Discussion & Workshop |
| 3 | Feb 6 | Culture, re-emerging forms of community ownership and mutual benefit | Discussion & Workshop |
| 4 | Feb 13 | Mapping Impact across and among different Stakeholders | Discussion & Workshop |
| 5 | Feb 20 | Ethical Frameworks | Possible Guest: TBD |
| 6 | Feb 27 | Regulation and the role of Government | Possible Guest: TBD |
| 7 | Mar 4 | Final Presentations | Team Presentations |

# Detailed Course Overview

This section details week-by-week class topics, recommended readings, activities, and discussion questions, etc.

**Session 1:**

**Introduction/Exploring Emerging Tech, hype/adoption curve and reality.**

This first session kicks off the course by diving into the topic of recognizing emerging new technology, its potential impact and providing a brief history of how people have previously approached the transformative potential of new innovations. This session will discuss how to assess and consider when an emerging technology might be ready for deployment to address pressing challenges, such as climate change, public health crises, poverty, and inequality.

*Recommended Readings:*

* [The Rising Speed of Technological Adoption](https://www.visualcapitalist.com/rising-speed-technological-adoption/) (2018)
* [Traditional Tech Adoption Curve](https://www.slideteam.net/media/catalog/product/cache/960x720/t/e/technology_adoption_curve_with_early_and_late_individuals_slide01.jpg)
* [12 Things Everyone Should Understand About Tech](https://medium.com/humane-tech/12-things-everyone-should-understand-about-tech-d158f5a26411) (2018) Medium
* [Technology and Innovation](https://unctad.org/system/files/official-document/tir2023_en.pdf)Report: 2023 UN Conference on Trade and Development
* [Blockchain for Social Impact: Moving Beyond the Hype](https://humanrights.wbcsd.org/project/blockchain-for-social-impact-moving-beyond-the-hype/)
* [Quantum computing has a hype problem | MIT Technology Review](https://www.technologyreview.com/2022/03/28/1048355/quantum-computing-has-a-hype-problem/)
* [Seven Technologies that are Remaking the World](https://www.researchgate.net/publication/323688521_Seven_Technologies_That_Are_Remaking_the_World) MIT Sloan Management Review.
* [Five Ways Technology is Fighting Global Poverty](https://www.technoserve.org/blog/5-ways-technology-is-fighting-global-poverty/) (2020). TechnoServe
* [Getting life-changing technologies to the poor](https://unctad.org/news/getting-life-changing-technologies-poor) (2021).
* [Machine Learning and gene editing at the helm of a societal evolution](https://www.rand.org/pubs/research_reports/RRA2838-1.html)

*Discussion Questions:*

1. What are some common factors that contribute to the hype surrounding emerging technologies, and how do these factors impact public perception and expectations?
2. Can you provide examples of emerging technologies that have experienced the "Trough of Disillusionment" on the hype curve? What were the reasons for the disillusionment, and did these technologies eventually recover?
3. In your opinion, how should policymakers and industry leaders balance the need for innovation and the potential risks associated with emerging technologies, such as privacy concerns or unintended consequences?
4. How do emerging technologies like AI and blockchain have the potential to transform traditional industries, and what challenges might they face in terms of widespread adoption and acceptance?
5. When assessing the societal impact of emerging tech, what role does ethical consideration play? Can you think of examples where the ethical implications of a technology significantly influenced its adoption or regulation?
6. As future leaders and innovators, what strategies would you employ to navigate the hype cycle of emerging technologies effectively and ensure that their implementation aligns with societal needs and values?

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**Session 2:**

**Exploring strategies and approaches for assessing impact including The Theory of Change, ESG and SDG considerations**

In this session we will introduce an overview of the Theory of Change, the UN Sustainable Development Goals, and explore the ESG components:

* *Environmental*: Discuss the environmental challenges associated with emerging tech (e.g., e-waste, energy consumption) and the importance of sustainability.
* *Social*: Explore how emerging tech can affect society positively or negatively, including its impact on jobs, privacy, and equity.
* *Governance*: Explain the importance of governance, ethics, and transparency in tech development and implementation.

# *Recommended Readings:*

* Video: [Measuring your social impact – Theory of Change](http://www.youtube.com/watch?v=dpb4AGT684U)
* [UN Sustainable Development Goals](https://www.un.org/sustainabledevelopment/sustainable-development-goals/)
* [Environmental Social and Governance](https://en.m.wikipedia.org/wiki/Environmental,_social,_and_corporate_governance)
* [NPC Theory of Change – The Beginning of Making a Difference](https://npproduction.wpenginepowered.com/wp-content/uploads/2018/07/Theory-of-change2.pdf)
* [Theory of change: Methodological briefs Impact Evaluation No. 2 (Unicef)](http://www.unicefirc.org/publications/747/)
* [An Introduction to Impact Measurement and Management](https://iris.thegiin.org/introduction/#b1)
* [IRIS+ system for measuring, managing, and optimizing impact](https://iris.thegiin.org/)
* [The Power of Lean Data. Stanford Social Innovation Review.](https://ssir.org/articles/entry/the_power_of_lean_data) Dichter, S., Adams, T. & Ebrahim, A. (2016)
* [Lean Data Field Guide](https://acumen.org/wp-content/uploads/2015/11/Lean-DataField-Guide.pdf)
* [The Impact Funnel](https://slifka.substack.com/p/the-impact-funnel?r=10314)

# *Discussion Questions:*

1. **How can emerging technologies be harnessed to address pressing environmental challenges, and what methods or metrics can be employed to assess their environmental impact?**
2. **In what ways do emerging technologies influence social dynamics, including issues related to equity, privacy, and access to resources? How can we evaluate the social consequences of tech innovations?**
3. **Discuss the role of governance, ethics, and transparency in tech development and implementation. How can organizations ensure responsible tech adoption, and what assessment criteria can be used to gauge their commitment to governance and ethics?**
4. **Consider the challenges of balancing ESG goals with business objectives in the tech industry. How can tech companies navigate these challenges effectively while ensuring a positive societal impact?**
5. **Explore case studies of tech projects or initiatives that have successfully integrated ESG principles into their strategies. What lessons can we learn from these examples, and how can we apply similar principles to emerging tech projects in the future?**

**Session 3:**

**Culture, re-emerging forms of community ownership and mutual benefit**

This session will explore the importance of culture and the re-emergence of various organizational structures designed for mutual and community benefit not exclusively for profit.

# *Recommended Readings/Viewing:*

* [Why COOPS?](https://youtu.be/x3KaLZOzP5k) YouTube

# [Stuck in the gig economy? Try platform co-ops instead](https://www.ted.com/talks/trebor_scholz_stuck_in_the_gig_economy_try_platform_co_ops_instead?utm_campaign=tedspread&utm_medium=referral&utm_source=tedcomshare) – TED Talk

* [New Models and Tools for Mutual and Collective Action](https://medium.com/@Andymo/new-models-tools-for-mutual-and-collective-action-6c4912777759)
* <https://www.technologyreview.com/2018/04/12/143410/inside>[-the-jordan-refugee-campthat-runs-on-blockchain/](https://www.technologyreview.com/2018/04/12/143410/inside-the-jordan-refugee-camp-that-runs-on-blockchain/)

# [Ideal governance (for companies, countries and more)](https://www.cold-takes.com/ideal-governance-for-companies-countries-and-more/)

*Discussion Questions:*

1. **Organizational Culture and Social Impact:** How do organizations with a strong cultural focus contribute to social impact? Can you provide examples of companies that have successfully integrated cultural values into their social responsibility initiatives?
2. **Employee-Owned Enterprises:** Discuss the concept of employee ownership in organizations. What are the potential benefits of such structures for employees, communities, and the organization as a whole? Share examples of employee-owned companies and their societal impact.
3. **Cooperative Models and Tech Innovation:** Explore how cooperative and community-driven business models can foster innovation in emerging technologies. Provide examples of tech cooperatives or community-driven tech initiatives that have had a positive societal impact.
4. **Governance for Mutual Benefit:** How can governance structures within organizations be designed to prioritize mutual benefit for all stakeholders, including employees, customers, and communities? Discuss real-world cases where governance models have successfully aligned profit motives with social impact.
5. **Tech Startups with a Social Mission:** Highlight tech startups that are structured with a strong emphasis on social impact as part of their core mission. What innovative approaches have these startups used to address social issues while pursuing business success?
6. **Measuring Success Beyond Profit:** In the context of emerging tech, how can organizations redefine success to include not only financial performance but also social and environmental impact? What metrics and practices can be used to measure and communicate this broader success?

**Session 4: Understanding Impact across/among different Stakeholders**

This session will explore the growing acceptance of value and need to consider all stakeholders in organizational decision making.

# *Recommended Readings:*

* [Sustainable Economies Law Center](https://www.theselc.org/)

# [The Pillars of Partnership](https://ssir.org/articles/entry/the_pillars_of_partnership)

# [How to Create a Stakeholder Strategy](https://hbr.org/2023/05/how-to-create-a-stakeholder-strategy)

# [How To Align Your Stakeholders To Make Your Organization More Agile](https://www.forbes.com/sites/hennainam/2023/08/28/how-to-align-your-stakeholders-to-make-your-organization-more-agile/)

# [Stakeholder Governance - Making business accountable to people and planet.](https://www.bcorporation.net/en-us/movement/stakeholder-governance/)

# [Stakeholder engagement: a practical guide](https://www.theguardian.com/sustainable-business/stakeholder-engagement-practical-guide)

*Discussion Questions:*

1. **Stakeholder Prioritization:** How can organizations determine which stakeholders are most critical in the context of emerging tech adoption and social impact? What criteria can be used to prioritize stakeholder interests?
2. **Collaborative Decision-Making:** What strategies can organizations employ to involve various stakeholders in the decision-making processes related to emerging technologies? How can collaborative approaches enhance the alignment of tech adoption with societal needs?
3. **Equity and Inclusion:** Discuss the role of emerging tech in promoting or impeding equity and inclusion. How can organizations ensure that their tech initiatives benefit a diverse range of stakeholders, including marginalized groups?
4. **Balancing Stakeholder Interests:** In what ways can organizations navigate situations where the interests of different stakeholders may conflict? What principles can guide organizations in balancing these interests for the greater social good?
5. **Transparency and Accountability:** How can organizations maintain transparency and accountability in their tech adoption processes, particularly when dealing with stakeholders? What mechanisms or practices are essential for ensuring trust among stakeholders?
6. **Measuring Multi-Stakeholder Impact:** What methods or metrics can organizations use to evaluate the impact of emerging tech across various stakeholder groups? How can they assess whether the tech initiatives are aligning with their social impact goals?

**Session 5:**

**Ethical Frameworks in Tech**

# Discuss the ethical challenges posed by emerging technologies and the development of ethical frameworks for responsible tech development and deployment. Explore case studies of ethical dilemmas and their resolutions.

# *Recommended Readings:*

* [Rethinking Ethics: A Vision for a New Framework Aligned with Human Nature](https://www.ethicalsystems.org/rethinking-ethics-a-vision-for-a-new-framework-aligned-with-human-nature/)
* [Overview Of the Four Ethical Lenses](https://ethicsgame.com/exec/site/theethicalself/overviewfourethicallenses.pdf)
* [The Moral Dilemmas of Young Professionals](https://hbswk.hbs.edu/archive/the-moral-dilemmas-of-young-professionals)

***Discussion Questions:***

1. **Balancing Innovation and Ethics:** How can organizations and innovators strike a balance between technological advancement and ethical considerations in emerging tech projects?
2. **Social and Environmental Responsibility:** Discuss the role of ethical frameworks in promoting social and environmental responsibility in technology development. How can these frameworks contribute to sustainability and inclusivity?
3. **Global Perspectives on Tech Ethics:** How do cultural and regional differences impact the adoption of ethical frameworks in technology development and use? Can you provide examples of how ethical considerations vary internationally?
4. **User-Centered Ethical Design:** How can ethical frameworks be integrated into the design process of technology products and services to ensure user rights, privacy, and wellbeing?
5. **Ethical Tech Leadership:** Explore the qualities and responsibilities of ethical tech leaders. How can emerging tech leaders promote ethical behavior and decision-making within their organizations and industries?

**Session 6:**

**Tech Policy, Regulation, and the Role of Government**

Explore the current regulatory environment for emerging technologies, including AI, blockchain, biotech, etc. Discuss the challenges of regulating rapidly evolving tech and the role of government agencies and international bodies. Explore the role of government and regulatory bodies in shaping the development and deployment of emerging technologies. Discuss policy considerations related to data privacy, cybersecurity, antitrust, and intellectual property. Analyze case studies of tech regulation and its impact on innovation and society.

# *Recommended Readings:*

* [Tech, Policy Press](https://techpolicy.press/about/)

# [How To Regulate Tech: A Technology Policy Framework for Online Services](https://www.americanprogress.org/article/how-to-regulate-tech-a-technology-policy-framework-for-online-services/)

# [Rethinking technology policy and governance for the 21st Century](https://www.brookings.edu/articles/rethinking-technology-policy-and-governance-for-the-21st-century/)

# [4 ways regulators must keep up with the global digital economy](https://www.weforum.org/agenda/2021/07/4-ways-regulators-global-digital-economy/)

# [U.S., Europe take different approaches to reining in Big Tech](https://fortune.com/2021/11/12/us-europe-tech-regulation-approaches-government-consumers/)

## [The US-EU Trade and Technology Council: Assessing the record on data and technology issues](https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/us-eu-ttc-record-on-data-technology-issues/)

# [The EU as a digital regulatory superpower: Implications for the United States](https://ecfr.eu/article/commentary_the_eu_as_a_digital_regulatory_superpower_implications_for_the_u/)

# [‘Digital Empires’: The China-EU-US Competition Over Tech Regulations](https://thediplomat.com/2023/10/digital-empires-the-china-eu-us-competition-over-tech-regulations/)

# [Technology: how the US, EU and China compete to set industry standards](https://www.ft.com/content/0c91b884-92bb-11e9-aea1-2b1d33ac3271)

# Discussion Questions:

1. **Diverging Approaches:** How do the approaches to tech policy and regulation differ between the United States, the European Union, and China? What are the underlying principles and values that drive these differences?
2. **Privacy and Data Protection:** Discuss the contrasting stances on privacy and data protection in these regions. How do regulations such as the EU's GDPR, the U.S.'s CCPA, and China's data protection laws reflect their distinct priorities?
3. **Innovation and Competitiveness:** Explore how each region balances the need for innovation and technological advancement with regulatory measures. How do governments incentivize or limit innovation in the tech sector?
4. **Cybersecurity and National Security:** Examine the role of government in cybersecurity and national security in these regions. How do governments approach the protection of critical infrastructure and sensitive data?
5. **Global Implications:** How do the tech policies and regulations in these regions impact the global tech landscape, including the activities of multinational tech companies, international trade, and data flows across borders?
6. **Future Trajectories:** Considering the dynamic nature of emerging tech, speculate on how these approaches may evolve in the coming years. What factors could drive changes in tech policy and regulation in the US, EU, and China?

**Session 7:**

**Final Presentations**

Teams formed in Session 1 will present. Pending number of teams, based on student enrollment, time will be evenly distributed for all teams to be able to present and obtain feedback.

**NYU Brightspace**

All announcements, resources, and assignments will be delivered through the NYU Brightspace site. I may modify assignments, due dates, and other aspects of the course as we go through the term with advance notice provided as soon as possible through the course website.

# Academic Integrity

Academic integrity is a vital component of Wagner and NYU. Each student is required to sign and abide by [Wagner’s Academic Code.](https://wagner.nyu.edu/portal/students/policies/code) Plagiarism of any form will not be tolerated since you have all signed an Academic Oath and are bound by the academic code of the school. Every student is expected to maintain academic integrity and is expected to report violations to me. If you are unsure about what is expected of you should *ask*.

# Henry and Lucy Moses Center for Students with Disabilities at NYU

Academic accommodations are available for students with disabilities. Please visit the Moses Center for Students with Disabilities (CSD) website at [www.nyu.edu/csd](http://www.nyu.edu/csd) and click on the Reasonable Accommodations and How to Register tab or call or e-mail CSD at (212-998-4980 or mosescsd@nyu.edu) for information. Students who are requesting academic accommodations are strongly advised to reach out to the Moses Center as early as possible in the semester for assistance.

# NYU’s Calendar Policy on Religious Holidays

[NYU’s Calendar Policy on Religious Holidays](https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/university-calendar-policy-on-religious-holidays.html) states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. Please notify me in advance of religious holidays that might coincide with exams to schedule mutually acceptable alternatives.

# Student Resources

Wagner offers many [quantitative](https://wagner.nyu.edu/portal/students/academics/advisement/quantitative) and [writing](https://wagner.nyu.edu/portal/students/academics/advisement/writing-center) resources as well as [skills workshops.](https://wagner.nyu.edu/education/courses/search?search_api_fulltext=&subject%5B%5D=2343&field_course_semesters_offered=All) The library offers a variety of [data services](http://nyu.libguides.com/dataservices) to students.

**Class Policies**

Due to the short tenure of this course, only one unexcused absence permitted.

# Assignments and Evaluation

This section is a brief overview of the assignments and elements that factor into a student’s final grade. Below is an example:

Class Participation (10% of total grade): Participation is awarded based on attendance (one unexcused absence permitted), punctuality and engagement in class discussions. Missing or being late for two or more classes for the semester will negatively impact your participation grade. Extraordinary circumstances include [religious observance a](https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/university-calendar-policy-on-religious-holidays.html)nd illness but you must give notice via email in advance (religious observance) or as soon as possible (illness).

If you foresee missing a class due to personal obligations, please notify me via email but also note that it will count as your one allotted unexcused absence. All students benefit from high levels of participation, so you are expected to do readings prior to class, attend class, and contribute to the discussion. Attendance is taken at the beginning of every class and I will be making note of those who routinely participate in the discussion.

Mid Semester Outline (30% of total grade): The goal of this assignment is to create an initial outline and framework for the final project and presentation. This project should focus on a specific case study and social impact topic. The final outline can of course change based on new information, ideas and concepts discussed during the remainder of the semester. (2-3 pages, double-spaced, 12 point Times New Roman font, 1-inch margins, submitted through NYU Brightspace.)

If you use Generative AI (e.g. ChatGPT, Bing, etc) to help create your papers, please include, as an appendix, the prompts used and full copies of responses (i.e. cut and paste) at end of paper.

Presentation (20% of total grade): The goal of this assignment is to lead a brief class discussion on the topic identified in the Mid Semester Outline (or another provided you’ve discussed the rationale for change with me in advance) and create short presentation addressing the question: “What are the greatest opportunities for technology in this area? What are the greatest risks?”. (3-5 slides, No more than 5-7 bullets per slide, images and graphics encouraged, submitted through NYU Brightspace.)

Final Paper (40% of total grade): The final deliverable is a 10-page maximum paper that completes the Mid Semester Outline and evaluates a new technology in a selected impact area. (10 pages, double-spaced, 12 point Times New Roman font, 1-inch margins. Due by 11:59 PM, March 11th, 2024, submitted through NYU Brightspace.)

# Grading Scale and Rubric

Students will receive grades according to the following scale:

There is no A+

A = 4.0 points

A- = 3.7 points

B+ = 3.3 points

B = 3.0 points

B- = 2.7 points

C+ = 2.3 points

C = 2.0 points

C- = 1.7 points

There are no D+/D/D-

F (fail) = 0.0 points

*Student grades will be assigned according to the following criteria:*

1. Excellent: Exceptional work for a graduate student. Work at this level is unusually thorough, well-reasoned, creative, methodologically sophisticated, and well written. Work is of exceptional, professional quality.

(A-) Very good: Very strong work for a graduate student. Work at this level shows signs of creativity, is thorough and well-reasoned, indicates strong understanding of appropriate methodological or analytical approaches, and meets professional standards.

(B+) Good: Sound work for a graduate student; well-reasoned and thorough, methodologically sound. This is the graduate student grade that indicates the student has fully accomplished the basic objectives of the course.

1. Adequate: Competent work for a graduate student even though some weaknesses are evident. Demonstrates competency in the key course objectivesbut shows some indication that understanding of some important issues is less than complete. Methodological or analytical approaches used are adequate, but student has not been thorough or has shown other weaknesses or limitations.

(B-) Borderline: Weak work for a graduate student; meets the minimal expectations for a graduate student in the course. Understanding of salient issues is somewhat incomplete. Methodological or analytical work performed in the course is minimally adequate. Overall performance, if consistent in graduate courses, would not suffice to sustain graduate status in “good standing.”

(C/-/+) Deficient: Inadequate work for a graduate student; does not meet the minimal expectations for a graduate student in the course. Work is inadequately developed or flawed by numerous errors and misunderstanding of important issues. Methodological or analytical work performed is weak and fails to demonstrate knowledge or technical competence expected of graduate students.

(F) Fail: Work fails to meet even minimal expectations for course credit for a graduate student. Performance has been consistently weak in methodology and understanding, with serious limits in many areas. Weaknesses or limits are pervasive.