INTA/CS 4745/6745
Information and Communication Technologies and Global Development (ICTD)
Fall 2020

Tuesday/Thursday 5-6.30pm (Remote)
http://gatech.bluejeans.com/nkumar86

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Remote office hours: Thursdays 4pm-5pm and by appointment
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Course Description

This course that sits at the intersection of disciplines introduces students across degree programs and stages to topics that connect technology design and global development. The first half of the course briefly introduces students to the history of global development and the role technology has played through the decades, as well as the history of technological development and how it has impacted populations on the margins across the world (of which the US is also a part). The second half digs deeper to take a critical look at specific application areas (e.g., health, education, sustainability) and connect technology design and adoption in these areas with lenses such as assets-based design, feminist Human-Computer Interaction (HCI), postcolonial computing, participatory action research, and others. Authors we read include Arturo Escobar, Chandra Mohanty, Donna Haraway, Langdon Winner, Shaowen Bardzell, and several researchers working at the intersection of ICTs and Development (ICTD). This course fulfills requirements for the Global Development minor, the People thread in Computer Science, and the design focus in MS-HCI.

There are no prerequisites for this course.

Learning Outcomes

- Students will learn to unpack terms like “development” and “poverty”, and the role that technology has played in both, starting with the post-second world war era through the present.

- Students will learn how specific technologies have played out in key domains of global development, such as education, health, etc.
- Students will learn to identify and critically examine approaches to the design of technology in the context of global development.
- Students will learn to put the approaches they learn into practice, and/or learn to analyze how other initiatives do the same.

Fall 2020

In Fall 2020, this course will be offered remotely. Students are required to attend every class, unless they have a compelling reason not to do so, which they should ideally inform the teaching team about one day earlier. Health and wellbeing come first! If internet bandwidth becomes an issue, students can turn their video off. Being camera-shy is also a perfectly good reason to keep the videos off. Please see policies below on missing class.

As for technologies, we will mainly use Blue Jeans (for class and office hours) and Slack (for communications in between classes). Grades will be made available only on Canvas.

Course Schedule

Date	Topic	Readings	Due
Week 1	**Introductions**		
8/18	Introductions	About the course, the subject, the instructor, the teaching assistants	
8/20	"Madness"	About the students	Google Slides
Week 2	**Development**		Reflection #1
8/25	"Good Change"	Truman's Speech; The World is Flat (skim); Meanings and Views; Encountering Development	

8/27	"Big-D" vs. "little-d"	Development Critiques (skim); What is Global Development?; Small is Beautiful (skim)	
Week 3	**Poverty**		Reflection #2
9/1	Poverty as Measured	Poor Economics; Voices of the Poor; The Digital Provide	
9/3	Assets-Based Approaches	Assets-Based Community Development; RefugeTech; Culture in Action	
Week 4	**Technology**		Reflection #3
9/8	Technological Determinism	Akosombo Dam (skim); Being Digital (skim); Unintended Consequences	
9/10	Social Construction of Technology	Do Artifacts have Politics?; Of Bicycles	
Week 5	**Designing for Development**		Reflection #4
9/15	What is ICTD/ HCI4D? How do we do it?	Case for Technology (skim); What Constitutes Good ICTD Research?; The Ins and Outs of HCI for Development; Ethical Standards; ICTD Ethics (skim)	
9/17	Learning from Experience	Guest Speaker Dr. Tapan Parikh: "Microfinance and ICTD, a Personal History of Complicity"	
Week 6	**Presentations**		
9/22	Pitches for Papers/Projects	No Readings	Pitches due (Google Slides)
9/24	Pitches for Papers/Projects	No Readings	

Week 7	**Access & Postcolonialism**		Reflection #5
9/29	Modes of Access	Access Beyond Developmentalism; El Paquete ; Intermediated Access	
10/1	Postcolonial/ Decolonial Thought	Postcolonial Computing;Decolonizing HCI Education	Show & Tell #1
Week 8	**Entertainment & Play**		Reflection #6
10/6	Entertainment and Technology Adoption	Where There's a Will; Digital Leisure for Development; Community Voices	Proposals due (Canvas)
10/8	Ludic Approaches to Design	Play and Power; Sangeet Swara; Same-Language Subtitles (skim)	Show & Tell #2
Week 9	**Health & Feminisms**		Reflection #7
10/13	Feminist Approaches to Design	Feminist HCI; Situated Knowledges; Under Western Eyes	
10/15	Understanding Community Health	Barriers to Information Access; Bridging Disconnected Knowledges; Community Health Workers in India	Show & Tell #3
Week 10	**Education & Care**		Reflection #8
10/20	Care as a Framework	Care as a Resource; Ethics of Care; Care in Education	
10/22	Education	Designing for Intersections	Show & Tell #4

Week 11	**Sustainability & Capitalism**		Reflection #9
10/27	Sustainable Development	Ecofeminism; This Changes Everything	
10/29	The Context of Capitalism	The Fetish of Technology; Wealth of Nations + Theory of Moral Sentiments (skim)	Show & Tell #5
Week 12	**Project Work**		No Reflections
11/3	Group Work	No Readings	
11/5	Peer Feedback	No Readings	
Week 13	**Deep Dive: COVID-19**		Reflection #10
11/10	Top-Down Perspectives	<To be updated in October with more current readings>	
11/12	COVID-19 as experienced	<To be updated in October with more current readings>	Show & Tell #6
Week 14	**Presentations**		
11/17	Final Presentations	No Readings	Google Slides
11/19	Final Presentations	No Readings	Google Slides
Week 15	**Final Week**		No Reflections
11/24	Course Review	No Readings	

Assignments

1. Reflections — 20% (20 points)
2. Midterm Essay (for graduate students) — 10% (20 points)
3. Show & Tell — 20% (20 points)
4. Final Papers/Projects (for undergraduate/graduate students) — 40%/30% (50 points)

5. Class Exercises — 10% (10 points)
6. Class Participation — 10% (10 points)

A grade that is 90% or higher counts as an A, 80%-90% as a B, 70%-80% as a C, 60%-70% as a D, and below 60% as an F.

1. Reflections

2 points

1 point for submitting a 200-300 word reflection on Slack

1 point for engaging with 1-3 other reflections on Slack by writing at least a sentence in response

These are lightweight assignments, meant only to serve as a way for students to engage with weekly readings, and express their thoughts in writing, since not everyone will have the chance to share their thoughts in class.

2. Midterm Essay

5 points each for:

Choice — relevance of person/book chosen

Connection — citing themes (>= 3) from class

Clarity — presenting clearly and concisely

Cogency — of narrative

There are two options. Read below.

One: Grad students in the class can choose to do an interview online with someone who has done work in global development, or just any topics related to what we will cover. They will then write a reflection on how the interview related to ideas touched upon in the class, showcasing their ability to connect concepts learned in class with the "outside world". Students will need to immediately establish the connections between the person and the class. Students are then expected to delve deeper into the main ideas that surfaced in the interview, and reflect on them based on their lessons learned in class. The writing and presentation must be free of grammar/typographical errors, following a clear logical outline. The cogency of the argument/narrative should be evident.

Two: Grad students in the class can choose to do a review of a book that is included in the required or optional readings above. They will then write a reflection on how the book related to

ideas touched upon in the class, showcasing their ability to connect concepts learned in class with the "outside world". Students will need to immediately establish the connections between the book and the class. Students are then expected to delve deeper into the main ideas that surfaced in the book, and reflect on them based on their lessons learned in class. The writing and presentation must be free of grammar/typographical errors, following a clear logical outline. The cogency of the argument/narrative should be evident.

3. Show & Tell

5 points each for:
Connection — staying true to course materials
Clarity — presenting clearly and concisely
Creativity — engaging the audience
Cognition — answering questions well
Overall, students are expected to align with but go beyond course materials on the topic being covered. They must be crisp and concise in their presentation, with high quality slides. They must try to engage the audience by making their presentations interactive in some form. Finally, different students should be able to answer the questions that come up in the Q&A. Students will have no more than 15+5 minutes for presenting.

4. Final Papers/Projects

50 points for:
Pitch — a 1-3 minute presentation of an intended final deliverable (5 points)
Proposal — 1 page + refs; 11 pt font; 1.5 line spacing (10 points)
Peer Feedback — teams will give each other feedback during class (5 points)
Presentation — 5-8 (TBD) mins presentation in class (10 points)
Report — final deliverable (20 points)

The project is meant to bring together everything that the students learn in class with the real world. This is the main deliverable for the class and it is meant to challenge and encourage students to step out of their comfort zone/their normal ways of thinking about the world in some depth. The pitch will entail a succinct description of what the project team wishes to study (and why). In the proposal, these ideas will be more fleshed out. During peer feedback, teams will give

each other constructive feedback on what they could do more of, or do differently. In the presentations, which will take place at the end of the semester, students will summarize their lessons learned for the term. Finally, the report at the end of the term will be a project report or a paper. Detailed instructions for each of the above will be provided in class.

There are four options. Read below.

One: Students can choose to do a case study, analyzing a particular tech intervention based on research conducted online, and deep engagement with the theoretical texts assigned for reading during the semester. Should involve 1 member, max 2.

Two: Students can choose to do a design project, taking up a "problem" they would like to "solve". They would need to identify experts in the area that they can talk to in the process. They will need to also test their ideas/prototypes with experts/target users. Should involve 2 members, max 3.

Three: Students can do a research paper, taking up a topic they would like to investigate via an interview study or a detailed survey. They would need to identify the participants for this. Findings would need to be analyzed from the perspective of the course. Should involve 1-2 members.

Four: Students can design curriculum for a module focused on a particular domain area, such as AI and Global Health, or COVID-19 and remote learning. Should involve 1-2 members.

5. Class Exercises

10 points for:
Class debates
Group discussions
etc.
Students will frequently be encouraged to do exercises during class. Assessment in these cases will be determined based on participation in the exercise.

6. Class Participation

10 points for:
Maintaining attendance (no policing)

Giving 24-hr notice for absences (please)
Not missing more than 2 classes (no policing)
Getting to class on time (please)
Not using personal devices unless asked (no policing)
Submitting assignments on time (can use two late days)
Staying engaged (through audio/video/chat on BlueJeans or Slack)
Doing the readings (every week)

Almost everything in class is learned from engaging with the readings and showing up. This set of points is for the latter. Students will be encouraged to share their thoughts in class and on Slack, and participate actively in group work, health permitting. Attending office hours is encouraged. If at any point during the semester students are uncertain about what their grade for this might look like, they are encouraged to ask.

Course Policies

Statement on Inclusiveness

We support the Georgia Institute of Technology's commitment to creating a campus free of discrimination on the basis of race, color, religion, sex, national origin, age, disability, sexual orientation, gender identity, or veteran status. We further affirm the importance of cultivating an intellectual climate that allows us to better understand the similarities and differences of those who constitute the Georgia Tech community, as well as the necessity of working against inequalities that may also manifest here as they do in the broader society.

Safe Spaces

Many of the topics covered in class may be sensitive and students are encouraged to maintain a safe space that allows others to freely and safely express their views without judgment.

Lateness

Students will be allowed two extensions (of 24 hours each) through the semester. If there are additional extenuating circumstances, they should let the teaching team know at the earliest.

Excused Absence

We will follow the guidelines listed here to determine what counts as an excused absence: http://www.catalog.gatech.edu/rules/4/.

Communication

Whenever the need arises, students are encouraged to send direct messages to the teaching team on Slack. Students are requested to use email only when essential. Students are also requested to give at least one full business day for a response.

Academic Integrity and the Honor Code

While students are encouraged to work together and collaborate, they should clearly differentiate their work from that of others, including peers and bibliographical sources. Complete and accurate representation of all direct quotations and paraphrased material is required. Plagiarizing will be addressed in accordance with the Georgia Tech Honor Code (http://honor.gatech.edu/plugins/content/index.php?id=9).

Accessibility

The Georgia Institute of Technology is committed to providing both physical accessibility and access to information resources and technologies to individuals with disabilities. Please see this website for further information - http://www.gatech.edu/accessibility.

Additional Considerations

- If students are concerned about how they will be evaluated, we encourage them to ask as early as possible. This applies to class participation credit in particular.
- Students are encouraged to attend office hours when possible, even if they have nothing in particular to ask or discuss. Especially in the case of remote teaching, this helps us get to know each other a little better.
- Students are encouraged to stay up to date on Slack activity. If they are unfamiliar with the platform, the teaching team can walk them through it. We will not use Slack for grades, which will be available on Canvas.
- There may be minor changes to the syllabus through the semester and they will be announced in class as well as on Slack. Students should stay up to date by getting in touch

with a friend or the teaching team. Major announcements will be posted on Canvas. If we forget, please remind us.

- This course draws its name and framing from a course I taught at UC Berkeley in 2012 and 2013 titled “Technology and Poverty”, originally taught by Dr. Jenna Burrell.