

IAT804 – TIMELINE

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Fall 2018 Course Schedule

The following schedule is subject to change.

Week 1

Thurs Sept 6, 2018

Room: SUR 5360

Introduction

We will go over the course outline, web syllabus, texts/readings, expectations about preparation and workload, assessment, academic honesty policy.

We will talk about research approaches as a combination of worldview, research designs and methodologies.

Key terms: paradigm (worldview), epistemology, ontology, axiology, rhetoric, methodology, research design, and measuring humans, concepts, factors, constructs and variables (independent, dependent, random, controlled) .

Over the course of the term, you should learn what all of the words in this Terminology Document (http://antle.iat.sfu.ca/wp-content/uploads/2018/08/804_Terminology.docx) mean. You should add definitions/descriptions to each term as the course progresses.

Activity

Discuss research topic areas of interest in small groups and the perspectives/backgrounds people come from. Discuss as a large group.

Note: A research topic in SIAT typically is in the area of human-centred design of interactive technology. As such it often involves the investigation, creation/design and/or evaluation of a phenomena comprised of four elements: 1) a

Required Reading

Creswell, J.W. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (2013, 4th edition):
Chapter 1 – The Selection of a Research Design (20 pages)

Optional:

Steve Harrison, Phoebe Sengers, and Deborah Tatar. 2011. Making epistemological trouble: Third-paradigm HCI as successor science (<http://antle.iat.sfu.ca/wp-content/uploads/2018/08/HarrisonThirdParadigm.pdf>). Interact. Comput. 23, 5 (September 2011), 385-392. DOI=10.1016/j.intcom.2011.03.005

specific subgroup of people 2) doing an activity (typically with some goal) 3) in a context/environment(s) 4) using a form of interactive technology.

Lecture Slides I will provide slides for only the first lecture.

Note taking helps you learn!

Slides PDF (http://antle.iat.sfu.ca/wp-content/uploads/IAT804_LEC1_Antle_Sept2018_PDFversion.pdf)

Week 2

Thurs Sept 13, 2018

Room: SUR 5360

Strategies of Inquiry I

We will explore how to write a research question from different perspectives, including quantitative, qualitative, and mixed methods approaches.

We will cover an overview of quantitative methods with some details on the scientific method. These details are elaborated on in subsequent weeks when we cover controlled experiments.

Research Ethics

Special guest presentation from SFU's Office of Research Ethics (ORE), Dr. Dina Shafey (10:30am for 60-90 minutes).

ORE Slides PDF (<http://antle.iat.sfu.ca/wp-content/uploads/IAT-804-ORE-Lecture-September-2018.pdf>).

The Government of Canada TCPS 2 online tutorial (<https://tcps2core.ca/welcome>) on research ethics is to be done outside of class time.

Required Reading

Creswell, J.W. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (2013, 4th edition):

Chapter 7 – Research Questions and Hypotheses (24 pages)

Chapter 8 – Quantitative Methods (26 pages)

Field, A. & Hole, G.J. How to Design and Report Experiments (2003):

Chapter 1 (1.1-1.3)- Before you Begin (26 pages)

Chapter 2 (2.1-2.3) – Planning an Experiment (19 pages)

Week 3

Thurs Sept 20, 2018

Room: SUR 5360

Strategies of Inquiry II

We will work more on how to write a research question, adding to the types of questions we can ask from a quantitative, qualitative or mixed methods approach.

We will cover an overview of qualitative and mixed-methods methodologies. These details are elaborated on in subsequent weeks when we cover observational studies, interviews, qualitative surveys, and design ethnography.

Activity – Writing a Research Question:

1. individually, identify a research topic in the form of a phenomena with four elements: people, activity, context, interactive technology as well as identifying factors (IV) and constructs (DV) of interest as appropriate
2. write a research question about this topic on the board. be minimalistic and be specific

Required Reading

Creswell, J.W. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (2013, 4th edition):

Chapter 9 – Qualitative Methods (30 pages)

Chapter 10 – Mixed Methods (23 pages)

3. have partner critique it. can it be answered? is it clear what the four elements are? constructs of interest are?
4. decide how would you answer the research question, what data would you collect using what method, etc.

Due today

TCPS 2 Ethics Tutorial is due. Show your ethics certificate in class.

Submit the Ethics assignment

(<http://antle.iat.sfu.ca/teaching/iat804coursework/#assignment>)
class.

Week 4

Thurs Sept 27, 2018

Room: SUR 5360

Three Lenses for Research at SIAT

We will explore an overview of three main ways that research occurs at SIAT, including:

- effective** – experimental
- experience** – observational
- creation** – artifact/design-based approaches

For each approach, we will articulate and analyze:

1. general practices
2. the epistemological commitments
3. areas of use
4. strengths of the approach
5. weaknesses of the approach
6. Uses of Theory We will explore the ways that theory can be used as a part of research. (Creswell Research Design – Ch 3)

Uses of Theory: We will explore the ways that theory can be used as a part of research. (Creswell Research Design – Ch 3)

Activity

We will split into small groups to discuss the papers for your Short Paper

(<http://antle.iat.sfu.ca/teaching/iat804coursework/#assignment>)
assignment. You need to have read one of these papers BEFORE class. After you discuss them in small groups, you will informally present your groups' main findings to the class.

Required Reading

Dix, A., Finlay, J., Abowd, G., Beale, R. Human-Computer Interaction, Third Edition. Prentice Hall, 2004:
Chapter 9 – Design Evaluation (http://antle.iat.sfu.ca/wp-content/uploads/2018/08/Dix_HumanComputerInteraction_.p)
(44 pages)

Creswell, J.W. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (2013, 4th edition):

Chapter 3 – The Use of Theory (25 pages)

Read one of the papers for your Short Paper

(<http://antle.iat.sfu.ca/teaching/iat804coursework/#assignment>)
assignment. You should choose the tradition that you know the least about.

Week 5

Thurs Oct 4, 2018

Room: SUR 5360

Effective: Experiments

We will introduce the scientific method, hypothesis generation, controls, independent variables, dependent variables, etc. We will talk about between and within subject

Required Reading

Field, A. & Hole, G.J. How to Design and Report Experiments (2003):

Chapter 3 (3.1-3.5) – Experimental Design (48 pages)

Chapter 4 (4.1-4.5) – Descriptive Statistics

Chapter 5 (5.1 – 5.2) – Inferential Statistics

designs, recruitment and sampling procedures, validity threats (internal, external), descriptive statistics, and basic inferential statistics.

Assignments

Talk about Methodological Traditions assignment for Effective
(<http://antle.iat.sfu.ca/teaching/iat804coursework/#assignment>)
[Skim this in advance of class].

Activity

Small group experiment on mice.

Outside of Class Workshops: TA will hold workshops outside of class time to demo how to run statistical testing in SPSS, which you will need for Effective Assignment . You should attend if you are not familiar with inferential analysis using SPSS. Workshop Demo Resources
(https://drive.google.com/drive/folders/0B4fsPE4L0_GldXd3Tz)

Due Today

Submit your Short Paper
(<http://antle.iat.sfu.ca/teaching/iat804coursework/#assignment>)

Chapter 6 (6.1-6.5, 6.10) – Parametric Statistics

Workshop

Attend SPSS workshop with TA!

Week 6

Thurs Oct 11, 2018
Room: SUR 5360

Experience: Observation

We will explore observational techniques and ethnography. This includes ethnography from a design perspective building on a mixture of sociological and anthropological traditions. We will cover immersion, culture, social beliefs, and how to collect data on culture through what people say, do, and make/use. We will discuss realist ethnography and critical ethnography as two possible types of ethnography. We will discuss the challenges with conducting ethnography and ways to write up ethnographic records/reports.

We will explore observational studies in a laboratory setting where participants use a prototype or design as a part of tasks or situations. This will involve methods to capture data such as logged data, observational data, think-aloud data, etc. We will talk about the challenges in conducting lab-based observational studies and how to work around them.

Assignments

Talk about Methodological Traditions assignment for Experience.
(<http://antle.iat.sfu.ca/teaching/iat804coursework/#assignment>)
this in advance of class].

Activity

In small groups, go and observe the interactions and activities that people do in one of three areas: a coffee shop, walking to/from classrooms, or walking in a mall. Come back

Required Reading

Creswell, J.W. Qualitative Inquiry and Research Design: Choosing Among Five Approaches (SAGE Publication, 3rd edition, 2013):

Chapter 4 – Five Qualitative Approaches to Inquiry

Chapter 5 – Five Different Qualitative Studies

Chapter 9 – Writing a Qualitative Study
(for the above chapters, just read sections about *Ethnographic* studies)

Howell, Signe, Two or Three Things I Love About Ethnography (<http://antle.iat.sfu.ca/wp-content/uploads/2018/08/HowellEthnography.pdf>), Journal of Ethnographic Theory, 7(1), 15-20. (6 pages)

Evans, A., & Rooney, B. "Methods in Psychological Research" (Sage Publications, 2013):

Chapter 11 – Data Collection Methods

(<http://antle.iat.sfu.ca/wp-content/uploads/2018/08/Chapter11Evans.pdf>) (read only sections on observations)

to the class and discuss the main points that you observed.

Due Today

Methodological Traditions assignment for Effective
(<http://antle.iat.sfu.ca/teaching/iat804coursework/#assignment>)
due in class.

Week 7

Thurs Oct 18, 2018
Room: SUR 5360

Query Methods: Interviews and Surveys

We will explore query methods such as surveys, interviews, and questionnaires, using both qualitative and quantitative data collection. We will discuss the role of surveys, typical length of surveys, types of questions, and analysis procedures. We will then explore the role of interviews and varying types of interviews including open-ended, closed-ended, and semi-structured. We will talk about ways to get detailed interview responses and analysis procedures.

Activity

In a small group of three people, create a list of interview questions about coming to grad school and past university experiences. Conduct the interview where one person acts as the interviewer, one as the interviewee, and one as the "critiquer." After the interview, the critiquer gives feedback on the interview based on the principles and ideas found in the readings. Students then rotate between groups and perform the interview again.

Due Today

Methodological Traditions assignment for Experience
(<http://antle.iat.sfu.ca/teaching/iat804coursework/#assignment>)
due in class.

Required Reading

Weiss, R. Learning From Strangers: The Art and Method of Qualitative Interview Studies, The Free Press (1994):
Chapter 1: Introduction (<http://antle.iat.sfu.ca/wp-content/uploads/2018/08/WeissChapter1and2.pdf>) (15 pages)
Chapter 4: Interviewing (<http://antle.iat.sfu.ca/wp-content/uploads/2018/08/Chapter4Interviewing.pdf>) (58 pages, but they are short pages)

Olson, J. and Kellogg, W. Ways of Knowing in HCI, Springer, 2014.
Chapter 10 – Survey Research in HCI (available online at SFU library) (38 pages)

Optional:

Weiss, R. Learning From Strangers: The Art and Method of Qualitative Interview Studies, The Free Press (1994).
Chapter 2: Respondents: Choosing Them and Recruiting Them (24 pages)

Evans, A., & Rooney, B. "Methods in Psychological Research" (Sage Publications, 2013)
Chapter 11 – Data Collection Methods
(<http://antle.iat.sfu.ca/wp-content/uploads/2018/08/Chapter11Evans.pdf>) (read only sections on surveys and questionnaires)

Week 8

Thurs Oct 25, 2018
Room: SUR 5360

Creation: Art/Artifact/Design-Based Approaches

We will cover research practices that occur through the making of art or an artifact where the learning comes through the making process as well as the setup and self-usage of the technology. In many cases, this type of research does not have user research studies as a part of it. We will explore ideas around sketching, design portfolios, brainstorming, research through design, design scenarios, speculative design, and video prototyping. We will talk about artistic research vs. artistic practice, research into art, research through art, and research for art.

Required Reading

Ilpo Koskinen, John Zimmerman, Thomas Binder, Johan Redstrom, and Stephan Wensveen. Constructive Design Research-1. (2012). In Design Research Through Practice (pp. 1-13). Available online at the SFU Library

Daniel Fallman. 2003. Design-oriented human-computer interaction. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '03). ACM, New

Activity

In a small group, think of objects that reflect notions of time to you. Describe ways of incorporating notions of time within them. Think about what “time” means. Sketch out design ideas. Come up with one design idea to share with the group.

Examples of art-based research:

Fukushima Audio Census (CHI 2017 Art Program): (video (<https://www.youtube.com/watch?v=Dr7hfLdBzYQ>)), (PDF (<https://dl.acm-org.proxy.lib.sfu.ca/citation.cfm?id=3052546&CFID=996028823&CFTOKEN=75132955>))

Never Alone: a Video Agents Based Generative Video-Sound Installation (CHI 2017 Art Program): (video (<https://www.youtube.com/watch?v=HhyqjrU2WEo>)), (PDF (<https://dl.acm-org.proxy.lib.sfu.ca/citation.cfm?id=3054949&CFID=996028823&CFTOKEN=75132955>))

Vote with Your Feet (CHI 2017 Art Program): (video (<https://www.youtube.com/watch?v=3EkLIYe81IY>)), (PDF (<https://dl.acm-org.proxy.lib.sfu.ca/citation.cfm?id=3052549&CFID=996028823&CFTOKEN=75132955>))

MediaScape:

Artists’ Statement (<http://www.sfu.ca/mediascape>)
descriptive (audio helps interpret the picture track) (<https://www.youtube.com/watch?v=CRuokOsoBH4>)
Metaphorical (audio complements the picture) (<https://www.youtube.com/watch?v=wUfsZMeMn2I>)
Contrapuntal (audio runs counter to the aesthetics or pictures) (<https://www.youtube.com/watch?v=rKDSfF973uo>)

Assignments

Talk about Methodological Traditions assignment for Creation
(<http://antle.iat.sfu.ca/teaching/iat804coursework/#assignment1>)

York, NY, USA, 225-

232. DOI=<http://dx.doi.org.proxy.lib.sfu.ca/10.1145/642611.642652> (<http://dx.doi.org.proxy.lib.sfu.ca/10.1145/642611.642652>)

Frayling, C. (1993). Research in art and design (<http://antle.iat.sfu.ca/wp-content/uploads/2018/08/Frayling.pdf>). Royal Coll. of Art, London (United Kingdom).

Borgdorff, H. Chapter 3: The Production of Knowledge in Artistic Research, (<http://antle.iat.sfu.ca/wp-content/uploads/2018/08/RoutledgeCompanion.pdf>) in Biggs, M., & Karlsson, H. (Eds.). (2010). The Routledge companion to research in the arts. Routledge.

Week 9

Thurs Nov 1, 2018

Room: SUR 5360

Grounded Theory

We will cover an overview of Grounded Theory looking at the use of literature and theory, participant recruitment and sampling, analysis procedures through open, axial, and selective coding, and writing up a Grounded Theory study. We will also talk about the different theoretical perspectives on Grounded Theory.

Case Studies

We will cover an overview of single and multiple case studies, within-site and multi-site, intrinsic case, instrumental case, and collective case. We will explore both holistic and embedded analysis, study write-up, and the challenges with case studies.

Required Reading

Creswell, “Qualitative Inquiry and Research Design: Choosing Among Five Approaches” (SAGE Publication, 3rd edition, 2013).

Chapter 4 – Five Qualitative Approaches to Inquiry

Chapter 5 – Five Different Qualitative Studies

Chapter 9 – Writing a Qualitative Study

Chapter 10 – Standards of Validation and Evaluation

In the above chapters, just read the sections on *Grounded Theory* and *Case Studies*

We will do a research design activity on grounded theory and case studies. (<http://antle.iat.sfu.ca/iat804-class-activity-on-grounded-theory/>)

Final paper

We will discuss your final paper assignment and talk about structures and examples.

Assignments

Talk about In-Class Presentation
(<http://antle.iat.sfu.ca/teaching/iat804coursework/#assignment>)
assignment.

Due Today

Methodological Traditions assignment for Creation
(<http://antle.iat.sfu.ca/teaching/iat804coursework/#assignment>)
due in class.

Week 10

Thurs Nov 8, 2018

Room: SUR 5360

Guest Presentations from Grad Students

TBD

Historical, Biographical and Narrative Approaches

We will cover biographical accounts, autoethnography, life histories, and oral histories. We will detail ways to write-up narrative studies focused on one or more individuals historical accounts and the challenges in conducting narrative studies.

Phenomenology

We will cover the focal points of a phenomenological study, the philosophical underpinnings of the approach, epoche, hermeneutical phenomenology, transcendental phenomenology, and horizontalization as an analysis procedure. We will also explore the challenges with phenomenology and how to write-up phenomenological studies.

Activity

Alex will lead an activity on phenomenology where you will analyze a passage of text individually, then you will discuss your analysis with the class.

Required Reading

Creswell, "Qualitative Inquiry and Research Design: Choosing Among Five Approaches" (SAGE Publication, 3rd edition, 2013):

Chapter 4 – Five Qualitative Approaches to Inquiry

Chapter 5 – Five Different Qualitative Studies

Chapter 9 – Writing a Qualitative Study

Chapter 10 – Standards of Validation and Evaluation

In the above chapters, just read the sections on *Narrative Research* and *Phenomenology*

Week 11

Thurs Nov 15 2017

Room: SUR 5360

Activity: Workshop Final Papers

We will use the first half of class to informally present and receive feedback on part of the research questions for your final paper. You should come to class with your research questions written and printed on paper. You will then split

Required Reading

NA

into three groups: Group 1 will break into pairs and read/comment on the research questions of their partners; Group 2 will do 'speed dating' and read/comment on research questions with partners; Group 3 will write one research question on the whiteboard and discuss it with the instructor and TA. After X minutes, each group will rotate.

Activity: Workshop for Assignment 4

We will do in-class activities as part of Assignment 4. You will break into small groups and do informal presentations of your presentation to the small group. You will use this time to discuss how to combine your presentations as part of the presentations due next week.

Due Today

Submit your own presentation as part of the In-Class Presentation
(<http://antle.iat.sfu.ca/teaching/iat804coursework/#assignment4>)

Week 12

Presentations for Assignment 4

Required Reading

Thurs Nov 22, 2018

Activity:

NA

Room: SUR 5360

Creative Assignment We will watch the videos that people have created for the creative assignment.

Due Today:

Submit your group's presentation as part of the In-Class Presentation
(<http://antle.iat.sfu.ca/teaching/iat804coursework/#assignment4>)
Also submit your 1 page critique of your group members' slides.

Week 13

Activity: Workshop for Final Paper

Required Reading

Thurs Nov 29, 2018

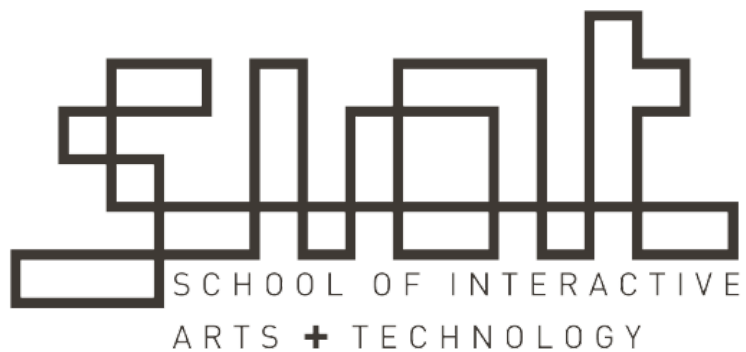
We will conduct in-class activities to critique and prepare final papers. You need to come to class with a full draft of your final paper. You will break into small groups and share your drafts with each other, read, and discuss.

NA

Room: SUR 5360

Due Today

You must submit a draft of your paper into EasyChair here before class: <https://easychair.org/conferences/?conf=siatgrm2017> (<https://easychair.org/conferences/?conf=siatgrm2017>)
Peer review critique is due by 11:59pm (midnight), December 3 2018.
Final paper is due by 11:59pm (midnight), December 9 2018.



(<http://www.sfu.ca/siat.html>)

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