Department of Curriculum and Pedagogy

EDUC 450B 305 (3): **Inquiry Seminar I: Design and Technology Education Winter Session Term 1 2017**

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COURSE DESCRIPTION

Inquiry is understood as a deliberate, sustained and systematic process—beyond the everyday reflection required in teaching. Professionals explore what they do and how they do it; it involves sharing one's inquiries with colleagues. It involves classroom teachers, individually and collectively, in a cycle of action, reflection, sharing and adaptation. Teachers are given opportunities for practice, and to address challenges and issues that arise through discussion and reflection, try out new or revised practices, and evaluate the results. The cycle then begins anew based on the outcomes, responses, and possibilities emerging from the inquiry.

In this course, teacher candidates formalize their engagement in teacher inquiry based on a question/proposal they individually develop and explore.

EDUC 450, 451, 452: Inquiry Seminars I, II, III (Secondary)

The inquiry process across the BEd (Secondary) program consists of:
1. Learning about teacher inquiry; *(EDUC 450 – Inquiry I)*
2. Preparing to explore an inquiry question; *(EDUC 450 – Inquiry I)*
3. Developing and sharing one's inquiry process; *(EDUC 450/451 – Inquiry I & II)*
4. Exploring links to practice; *(EDUC 451 – Inquiry II)*
5. Reflecting on the inquiry process, links to practice, ongoing questions, learning over the year and developing professional learning goals. *(EDUC 452 – Inquiry III)*

LEARNING OUTCOMES

Upon completion of this course, the student will have:
- an understanding of *applied design, skills, and technology (ADST)* teaching as a moral and intellectual activity requiring inquiry, judgment and engagement with complex situations and relationships — with students, parents, colleagues and the scholarly community.
- an appreciation of the importance of research and reflection in understanding *applied design, skills, and technology (ADST)* curriculum, teaching and learning.
- a desire to engage in their own educational inquiries — to become students of teaching.

Required Readings

Required: Petrina, S. (2007). *Advanced teaching methods for the technology classroom*. Hershey, PA: Information Science Publishing. http://bit.ly/2wFsW6x
BC's New Curriculum (Relevant ADST documents): https://curriculum.gov.bc.ca
Resources & Readings: Download at http://blogs.ubc.ca/dandt

TEACHER EDUCATION PROGRAM EXPECTATIONS

This course is guided by the *Teacher Education Program Policies and Guidelines*. Complete policies and guidelines can be accessed from the Teacher Education Office (TEO) online here: http://teach.educ.ubc.ca/students/policies-and-guides/teacher-education-program/

Respectful Learning Environment

The University of British Columbia envisions a climate in which students, faculty and staff are provided with the best possible conditions for learning, researching and working, including an environment that is dedicated to excellence, equity and mutual respect. In addition, the University believes that every student, faculty and staff member has the right to study and work in an environment that is free from discrimination and harassment as a result of age, race, colour, ancestry, place of origin, political belief, religion, marital status, family status, physical or mental ability, sex or sexual orientation. Information about resources for students with disabilities available for UBC students, is located online here: https://students.ubc.ca/about-student-services/access-diversity

Accountability for Learning

Teacher candidates are expected to actively participate during the learning experiences of the program. Almost all courses in the Teacher Education Program are graded as Pass/Fail. In order to pass a course, you will be expected to produce high quality work that meets criteria provided by instructors. You will be advised by your instructors if any aspect of course work does not meet expectations. You may be expected to revise and re-submit an assignment or do a supplemental assignment to demonstrate that you have met expected standards. *If you receive an interim report regarding course concerns and have questions, please speak with your instructor and/or with a program coordinator in the TEO.*

Attendance and Participation

The nature of the Teacher Education Program is highly participatory. Regular attendance of all classes and the timely completion of assignments are <u>essential</u> to success in the Teacher Education Program. It is important that teacher candidates understand and value the time commitments made by faculty and colleagues to their learning given the highly participatory nature of the Teacher Education Program. *Regular attendance in all classes and field experiences is a professional commitment that is expected of all teacher candidates and a requirement of professional practice.* If you must miss a class, <u>notify your instructor</u> and fill out the following Attendance online: http://teach.educ.ubc.ca/students/attendance/.

Academic Regulations

Teacher candidates are expected to: 1) adhere to academic regulations in the UBC calendar; 2) cite references when using information or materials developed by others, including information and materials from the Internet; 3) submit a separate and distinct assignment for each course (A single assignment cannot be used for more than one course, unless prior approval from the instructor is granted); and 4) abide by copyright laws and regulations.

Health & Wellness

Mental health and wellness are important parts of your academic success and everything you do. When you take care of yourself, it's easier to achieve your goals and feel good in life. UBC has a number of resources for you to take advantage of including self-help, peer support, medical services, and mental health support through UBC Counselling Services. https://students.ubc.ca/health-wellness

Financial Distress

If you find yourself in financial distress, there is help available. Speak to an advisor in the TEO and also visit https://students.ubc.ca/enrolment/finances/funding-studies/financial-distress for assistance.

COURSE OUTLINE

Every effort has been made to ensure the alignment of assignments with your other courses however, if there is an issue or a discrepancy please notify your instructor as soon as possible.

Sept 7	Theme: Reimagining learning through an inquiry lens
Topic	*Understanding Inquiry*
Guiding Questions	I. What is this course about? II. What are the values we should be considering, teaching, and practicing? III. What kind of teacher do I want to be? Am I an instructor? A facilitator? A coach? A mentor?

Activities	*Teaching Perspectives Inventory (TPI)*
	• Teaching Perspectives Inventory (TPI) http://www.teachingperspectives.com/tpi/
	• What do you believe about teaching and learning?
	• What do you hope to accomplish in your teaching?
	• What you hope to do when you are teaching?
	
	Part II: Teacher Professionalism
	    a. O'Reilly, T. 2016). *Selling yourself: The art of personal branding*. CBC Radio. http://bit.ly/1dDqguP
	    b. BCTF code of ethics: http://bit.ly/2f0UJXp

Sept 14	Theme: Exploring teacher inquiry
Topic	*The reflective practitioner*
Guiding Questions	I. Why should I become a reflective practitioner? II. What is reflective practice in technology education? III. What is the role of a professional learning network?
Readings	∗ Petrina, S. (in press). From crit to social critique. In M. J. de Vries (Ed.), *International handbook of technology education*. Dordrecht, NL: Springer. http://bit.ly/2wDevBh ∗ Waks, L. J. (1999). Reflective practice in the design studio and teacher education. *Journal of Curriculum Studies, 31*(3), 303-316. http://goo.gl/QC65q2
Activities	• Placemat activity for Petrina Preface • Placemat activity for Waks article & The Reflective Practitioner • Introducing blogs and e-Portfolios (blogs.ubc.ca accounts)
Sept 22	Theme: Engaging in professional learning through inquiry
Topic	*The new BC Curriculum and maker culture*
Guiding Questions	I. What do I believe as a technology teacher? II. What are the relationships between formal K-12 technology education and the informal maker movement?
Readings	∗ Blikstein, P. (2013). Digital fabrication and 'making' in education: The democratization of invention. In J Walter-Hermann & C. Buching (Eds.), *FabLabs: Of Machines, Makers and Inventors*. Bielefeld: Transcript Publishers. http://stanford.io/2oC4qRv
Activities	• SWOT analysis of the Maker Movement. • Philosophy of Teaching Design & Technology TPI cont'd.
Sept 28	Theme: Enlarging perspectives
Topic	*Culture, language, and inclusivity in the classroom*
Guiding Questions	I. How does language contribute to the culture of the design and technology classroom? II. How can we make the design and technology classroom environment and climate accessible and inclusive for all?

Readings	∗	Petrina, S. (2007). Classroom management. *Advanced teaching methods for the technology classroom* (pp. 325-352). http://bit.ly/2wFsW6x

Activities	•
	 •
	 •
		Blogs and e-Portfolios cont'd (blogs.ubc.ca)
		 Inquiry Based Learning (IBL)
		 Socratic Questioning
		   a) Six types of Socratic questions: http://bit.ly/2hS1A8k
		   b) How to do the Socratic Method: https://youtu.be/_CPLu3qCbSU

Oct 5	**Theme: Formulating an Inquiry**	
Topic	*Design and technology presentation applications*	
Guiding Questions	I. II. III.	How does design and slide presentation technologies impact teaching and learning in classrooms? What are the pedagogical and performative elements of giving a presentation? What impact does presentation, or delivery, have on the tone of your classroom?
Readings	∗ ∗	Tufte, E. (n.d.). PowerPoint does rocket science: Assessing the quality and credibility of technical reports. http://bit.ly/19f7eI3 TED talks public speaking playlist: http://bit.ly/1ztm0EU
Activities	•	Design and technology presentation tutorial

Oct 12	**Theme: Generating Observations**	
Topic	*The new BC curriculum for applied design, skills, and technology (ADST)*	
Guiding Questions	I. I. II.	What do BC IRPs emphasize as PLOs for Technology Education K-9? 10-12? How does *my* philosophy align with the PLOs? In what ways is *my* philosophy enabled in the curriculum?

Readings	∗
	 ∗
	 ∗
		BC IRPs http://bit.ly/2wFHX8c
		 BC 21st century learning: http://bit.ly/2vJGhNK
		   o Read section on technological literacy
		 New BC Curriculum for ADST
		   o https://curriculum.gov.bc.ca/

Activities	•	SWOT analysis of BC Applied Design, Skills and Technologies Draft Framework: http://bit.ly/2eE6YbU

Oct 19	**Theme: Generating Questions that Matter**	
Topic	*Revisiting learning and practice through an inquiry lens*	
Guiding Questions	I. II. III.	What issues, challenges, and opportunities have arisen thus far in the program? What are the values we should be considering, teaching, and practicing? What kind of teacher do I want to be? Am I an instructor? A facilitator? A coach? A mentor?
Readings	∗	TBD / As needed
Activities	• •	Based on areas of interest generated by class discussion Brainstorm inquiry project and question ideas

Oct 26	**Theme: Sharing, Exploring and Receiving Feedback**	
Topic	*Practice teaching (Microteaching) and reflection*	
Guiding Questions	I.	Am I prepared? Am I prepared to give and receive sandwich feedback? Am I professional?
Readings	∗	Petrina, S. (2007). Communication and planning for instruction. *Advanced teaching methods for the technology classroom* (pp. 1-24). http://blogs.ubc.ca/dandt/files/2014/07/Petrina2007.pdf
Activities	•	**Microteaching I**

Nov 2	**Theme: Generating Questions for Inquiry – Initiating a Mini-Inquiry**
Topic	*Coding, design, and computational thinking*
Guiding Questions	I. What possibilities are there to explore coding and computational thinking? II. What role can/does inquiry based learning play in this process? III. What cross-curricular possibilities can you envision? How can this be translated into practice?
Readings	∗ TBD
Activities	• Computational thinking activity • Block-based coding activity • Text-based coding activity
Nov 9	**Theme: Proposing an Inquiry**
Topic	*On passion, curiosity, and professional learning*
Guiding Questions	I. What are the stages of inquiry? II. What are some questions I have about ADST and teaching, learning and curriculum? Why are these questions significant, and to whom? III. What are you both curious and passionate about in relation to teaching?
Readings	∗ Babione, C. (Ed.). (2015). Where we begin practitioner teacher inquiry. In *Practitioner teacher inquiry and research*. San Francisco, CA: Jossey-Bass.
Activities	• Work on inquiry topics • Work on e-portfolios

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<tr><td colspan="2" align="center">November 14 – 24
No classes for School-based Orientation Practicum</td></tr>
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Nov 30	**Theme: Sharing, Exploring and Receiving Feedback**
Topic	*Practice teaching (Microteaching) and reflection*
Guiding Questions	I. Based on a microteaching lesson, or a lesson from your practicum, what went well? What would you change? II. Given the opportunity to do it again, what would you improve upon?
Readings	∗ Petrina, S. (2007). Communication and planning for instruction. *Advanced teaching methods for the technology classroom* (pp. 1-24). http://blogs.ubc.ca/dandt/files/2014/07/Petrina2007.pdf
Activities	• **Microteaching II**
Dec 7	**Theme 10: Sharing, Exploring and Receiving Feedback**
Topic	*Term conclusion*
Guiding Questions	I. Were your goals for the term achieved? Why or why not?
Readings	∗ N/A
Activities	• Work on inquiry topics • Work on e-portfolios

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<tr><td colspan="2" align="center">December 8 -- End of Term
ePortfolio Due
Inquiry Proposal Due</td></tr>
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COURSE EVALUATION

Pass / Fail Grading

Courses in the Teacher Education Program use a pass/fail grading system. In a professional faculty, passing a course involves both good academic performance as well as active participation in learning activities. Students are expected to meet all criteria to receive a passing mark. If assignments do not meet expected standards, candidates will have one opportunity to revise and resubmit assignments. In most instances where an assignment is late or does not meet expectations (timeliness or content), the instructor and the Teacher Education Office will issue an interim report.
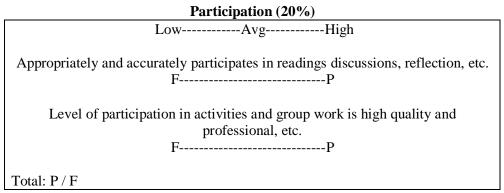
See Assessment Schedule (below) for additional information about assignments in this course.

Assignment Schedule

Assignment	Due Date:	Percentage
1. Class participation (in-class)	Ongoing	20%
2. e-Portfolio / blog	Ongoing	15%
3. Microteaching and feedback		
o Session 1	October 26	15%
o Session 2	November 30	15%
4. Inquiry Proposal	December 8	35%

1. Participation [Due: Ongoing] (20%)

Participation is valued at 20% of your final grade. Participation is interdependent with **preparation** for each class, which involves *reading* (highlighting, pagination post-its, margin notes, comments & questions, etc.), *writing* and *speaking* (discussing, corresponding with peers, chat, etc.), **blogging** and **commenting** on classmates' blogs. *Challenges* also are expected to be completed and participated in on their due dates; presentations and assignments should be polished, **creative**, **unique**, and informative. **(10%)**

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Participation (20%)

Low------------Avg------------High

Appropriately and accurately participates in readings discussions, reflection, etc.
F-----------------------------P

Level of participation in activities and group work is high quality and professional, etc.
F-----------------------------P

Total: P / F

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2. Blog and E-portfolio [Due: Ongoing] (15%)

This assignment involves creating your own website using wordpress on http://blogs.ubc.ca. In this way, you may have a virtual classroom to store your resources (lesson plans, tutorials, CV, etc) that may then be used right away when you are teaching in the classroom environments. The e-portfolio also serves to document your participation in class, your progress and growth as a teacher, technological exemplar to be used for teaching students, and as portfolio to showcase to potential employers. You are expected to build and use the e-portfolio throughout the year. **This first term will serve as the introduction and initial set-up for the e-portfolio**. Your final and completed e-portfolio will be presented in Inquiry III during the summer term. The e-portfolio will include:

Appropriate design framework: You will utilize various wordpress functions to craft a professional e-portfolio that is appropriate for viewing by students, teachers, and potential employers.

Personal Profile page: You will write and post a short biography about your interests and expectations regarding the use of technology. Additionally, you will include a section about your teaching experiences (such as your practicum, or other teaching/learning experiences), resources, and other appropriate links.

Reflective practioners page: Throughout the course you will be responsible for reflecting back on your inquiry experiences and responsibilities. Your task is to analyze your learning during each class and post a small paragraph about what you have learned about yourself, teaching, learning, or technology.

e-Portfolio (15%)

Low------------Avg------------High
Is it Professional ?
Appropriate design – utilize various functions for professional presentation F-----------------------------P
Personal Profile Page – short biography and teaching experiences F-----------------------------P
Reflective practitioners – reflect back on inquiry class experiences; analyze own learning F-----------------------------P
Total: P / F

3. Microteaching and Feedback (6.6 min): Two sessions @ 15%/each = 30%

The intention of this requirement is to help you develop artful and logical approaches to demonstrating and presenting in the classrooms, labs and workshops. This will also provide a tangible way of understanding the importance of small scale planning in curriculum. For each of the microteaching demonstrations that you do, you are required to hand in a lesson plan on the day that you give the demonstration.

Microteaching involves completing a lesson plan or portion of a lesson plan, teaching the lesson or giving a demonstration (or part) to the class and looking at ecological implications, sharing expertise with colleagues, presenting information using appropriate pedagogical approaches and technologies in a Pecha Kucha style, reflecting on the lesson, and providing feedback to peers. Microteaching will be recorded (videotaped). (Please bring your USB flash drive for documenting and self-evaluation).

Topic for Session I	Microteaching lesson on **materials** (clay [natural materials], composites, electronic materials [conducting, glass, silicon, etc.], fabric [smart], metals, plastics, woods, etc.), computing equipment, or maker elements.
October 26	

Topic for Session II	This is a session of your choice. For example, you may have completed a microteaching lesson in one of your curriculum course and wish to revise it; you may have had a lesson on your practicum you wish to revise; or you may have another topic that is of interest to you that you would like practice teaching.
November 30	

Create a Pecha Kucha (20 images x 20 seconds) and present it to the class (see http://pechakucha.org/faq). The rules: create 20 slides that advance every 20 seconds automatically, as you speak along with the slides. Your goal is to deliver a compelling performance to your peers, so please practice, practice, practice!

1. Complete a 6 minutes and 40 seconds minute demonstration in front of the class.
2. Use the Smartboard, Keynote, PowerPoint, or other professional-level educational technologies and applications in a Pecha Kucha style (pre-programmed 20 seconds per slide timing).
3. Prepare to provide and receive feedback from your classmates (details to follow in class).
4. Prepare to have your microteaching and feedback session recorded, so that you may reflect on your teacher experience.
5. Provide reflective summary on your e-portfolio about your experience.

Microteaching Experiences (2 x 15% = 30%)

Low------------Avg------------High
Lesson Planning (comprehensiveness, clarity of objectives, focus)
F-----------------------------P
ADST - Goals and Objectives, Comprehensiveness of Information, Assessment, Questioning, Closure
F-----------------------------P
Effectiveness of Lesson Delivery, Motivational Beginning, Voice, Classroom Presence, Non-Verbal Communication, Pacing
F-----------------------------P
Pecha Kucha Slides & Visuals, supplementary materials and Quality
F-----------------------------P
Total: P / F

4. Inquiry Proposal [Due: December 8, 2016] (35%)

Propose an inquiry project inspired by your own questions, interests, and needs. Examples of projects include inquiry around a theme or method (e.g., Problem & Project-Based Learning, Service Learning), a teaching strategy (e.g., Discipline with Dignity), a particular curriculum emphasis (e.g., new ADST courses), or an educational issue (e.g., teaching job market). The Inquiry generally consists of three parts:

1. Preparing the Inquiry Proposal (EDUC 450)
2. Conducting and Presenting the Inquiry Project (EDUC 451)
3. Completing and Presenting the Final Inquiry Project (EDUC 452)

Inquiry Project Proposal Format (1.5 - 2 pages)
(NOTE: All Inquiry Projects must be approved before the inquiry begins)

Section	**Pages**
Working Title	**NA**
1. Introduction: What are your general and more specific interests in what you want to explore across the Inquiry timeline? This reflects a focus on your practice and the technology education curriculum (e.g., classroom management, gender, safety).	**(1/4 page or less)**
2. Inquiry Question(s) or Problem: What is the question (or are the questions) that ground(s) your inquiry?	**(1/4 page or less)**
3. Inquiry Purpose: Why is this important? Who is the potential audience or participants that will likely gain from your inquiry?	**(1/4 page or less)**
4. Key or Critical Concepts: Identify 2-3 concepts that you intend to explore or focus on in your inquiry. Provide a brief description of these or definitions as related to your interests and inquiry.	**(1/4 page or less)**
5. Ethical Considerations: Identify any ethical considerations that may arise in your inquiry or ethical problems that will have to be resolved before or during the inquiry.	**(1/4 page or less)**
6. References and Apps: Add any references or apps that are important.	**(1/4 page or less)**