

University of Waterloo

Stratford School of Interaction Design and Business

GBDA 402 – Cross-cultural Digital Business 2 (ver.9.4) Winter 2021,

	TUESDAY	WEDNESDAY	THURSDAY
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Teaching Assistant (all sections)	TBD		

Course Description:

In this course, students will analyze markets, customers and consumers, in order to design and create digital products or services, to suit specific cultures or communities, within the context of creating their own product.

This is the capstone course of the GBDA program. As such, it is designed to bring together all the knowledge, skills, and experiences that have been learned by students since they started the program. This will include, among other things, analyzing a market and the customers and consumers within it as well as conceptualizing a product and rationalizing the iterative nature of its development, designing prototypes, testing with end-consumers, and finally developing the commercial viability of the business.

This course will demand significant student time; dedication, and critical thought both individually and as part of a team, with well-planned decisions throughout. The experience is designed to test the student's total knowledge and academic commitment, by replicating as much as possible what can be anticipated when they enter the workforce upon graduation. Not only will the extent of student knowledge be tested, the merging and integration of the program as a whole, will demand that the full scope of one's learning be utilized, and be applied intelligently, practically and seamlessly throughout the journey.

Required Material and Text:

- Students may need to have pens, pencils, whiteboard markers in various colors, post-it notes, and blank paper available and access to a reliable Internet connection daily.
- Additional articles, documents & information will be required throughout the term and where possible will be posted on LEARN. Students are responsible for registering and/or purchasing required materials (individually) where needed.

Learning Outcomes:

Upon completion of this course, students should be able to:

A. Plan and launch a viable business by:

- Assessing and analyzing the business environment where a product or service will compete;
- Generating and evaluating alternative business models using secondary market research;
- Making justifiable decisions about the value of a digital product or service that the student will design;
- Understanding the needs of clients and relevant stakeholders;

Determine resources and skills needed to execute the selected project;
Manage the project effectively, productively, efficiently, and within the expected deadlines;
Set and monitor success factors and report on progress;

- B. Plan a product or service that meets the needs of consumers and customers by:
 - Conducting relevant secondary user research and usability testing;
 - Conduct relevant and appropriate primary investigation assessments;
 - Address specific customer and consumer needs;
 - Conceive designs that are supported by user and market analysis;

- C. Analyze, test, and iterate on designs and prototypes effectively by:
 - Actively listening to and assessing feedback;
 - Pivoting realistically on and integrating feedback in meaningful prototype revisions;
 - Rapidly responding to critique in a professional manner;
 - Conceive designs that can be well articulated in writing and oral presentation;
 - Creating prototypes that are adaptable to variable platforms (low- and high-fidelity);
 - Creating prototypes that are adaptable to variable user demands (including variable abilities);
 - Creating prototypes that effectively address design needs and communicate the students' ideas effectively;

- D. Communicate Effectively:
 - Create a presentation that will meet the needs of clients;
 - Effectively communicate design ideas in oral presentations;
 - Communicating a polished oral pitch, supplemented by visual media;
 - Demonstrate your ability to articulately and clearly express complex ideas in a written format;
 - Produce high quality and grammatically correct writing assignments.

Organization:

This course is the equivalent of four university-level courses delivered over four days. To meet university guidelines, 12 contact hours per week have been assigned, translating into three hours over three consecutive days with a fourth day assigned to project deliverables. All students are expected to be available for online classes and online team meetings over all four days consistently and reliably. Students unable to meet the four-day commitment expectation may be removed from their team and required to do the project independently without any revised rubrics.

Students will receive weekly outlines on Learn every Monday morning (Waterloo time). Instructors have segmented these into sections into daily tasks that are expected to be completed on the assigned day.

Instruction will take several forms, from formal lectures, online assignments, to one-on-one sessions and team meetings. Given the nature of the core assignments your professors will concentrate on the following core areas:

1. Dominguez instruction will be focused on the customers and the business market opportunity within the problem space given, and how to translate the market opportunity into a viable product/service idea using iterative project management approaches
2. Schmidlin instruction will be focused on the consumer and customer experience such that the touch points regarding the use and exposure to the end product/service is understood in order to design the appropriate deliverable for the market
3. Drainville instruction will be focused on visual design of the prototypes, user interface (UI), and interaction design (IXD) for the purpose of creating a prototype that will effectively meet the needs of the consumers and customers while working within the commercial constraints of the company.

Assessment:

		%	DUE
Contribution <ul style="list-style-type: none"> Determined by weekly engagement reports from Learn outlining when the student has logged in and what / how the material was accessed and used) 	Individual	30	Throughout the course. Grades reported monthly.
Digital Project - Proposal <ul style="list-style-type: none"> (Selfie video on Bongo assessed via pass/fail – any instructor “failing” the proposal results in the student having the option of redoing the proposal up to a maximum of two times) 	Individual (pass/fail based on accepted or not)	5	Must have all three profs approve your proposal to move forward
Digital Product - Project			
Prototype 1 and Report <ul style="list-style-type: none"> First iteration of one of the team members accepted proposals including user testing 	Team	15	Week 4
Prototype 2 and Report <ul style="list-style-type: none"> Second iteration of the SAME proposal incorporating feedback gained from the first user testing round 	Team	15	Week 7
Prototype 3 and Report Third iteration of the SAME proposal incorporating feedback gained from the second user testing round	Team	15	Week 10
Role Reflection <ul style="list-style-type: none"> Students must hold different roles for each prototype round and submit a summary reflection on the role they held for each one 	Individual	10	Week 11
Final Presentations <ul style="list-style-type: none"> Includes results from all testing periods, shows evolution from start to finish and plans for future development 	Team	10	Week 12
Debrief and Celebration			Week 12

NOTE: If a student shows up on the inactivity report three times on Learn showing a student’s lack of engagement with the course material, without instructors’ previous approval, they will automatically be pulled from the team and continue the project as an individual study. Any analysis or other work done up to that date by the team can be used by the individual student, who will from here on work alone. The same deliverables as stated above are expected. Any student faced with this situation will not be able to participate in peer reviews and may forfeit grades at the discretion of the instructors.

Assessment Criteria:

Contribution (Individual): : 30%

Engagement AND completion of online tasks and material comprehension are mandatory and expected to pass the course. All students are expected, individually, to do all tasks as outlined on Learn. No exceptions.

To quantify the contribution marks there may be a variety of online class discussions, exercises, handouts to complete, mini-assignments, surveys, pop-quizzes etc. for students to engage in daily. Students will be expected to meaningfully engage, individually, and contribute insights and value to classroom learning to receive a grade. Students, who do not engage fully and completely will forfeit the mark. Grades are collected from all expected interactions, NOT just handed in items on the dropbox. Grades are posted monthly. Each instructor submits 10 marks to a total of 30 marks for monthly contribution grades. Marks cannot be made up and are at the discretion of the instructor.

NOTE: Let us be very clear. Lack of meaningful engagement with weekly instructor directions, INDIVIDUALLY, will be met with failing grades that CAN NOT be made up.

Digital Product: Proposal (Individual):

Students individually will make a brief video (2 minutes) about a project proposal based on the problem topic given at the start of the term on “Quality Education”. The idea does NOT need to be supported with market research at this point. Rubric is posted on Learn. Proposals will be used to create teams for the term project.

- This includes a 30-second self-interview recording describing the goal of the project followed by a 1:30-minute recording of the project in action (i.e. an insight into the environment where your project could be adopted and/or a short journey with a user that is struggling in your target market and/or a future focused ideal where your project is already adopted etc.)
- For example if you envision a “soapy marker” that children could use to write on their own skin, you may decide to show a video with children from a developing economy practicing word problems, and demonstrate how a soapy marker could improve learning by copying words from an app and writing on their own skin, and when done, children can wash off their soapy writing.
- Since we keep the videos short, future students will be able to watch all/most videos and get an overview of what capstone projects look like.

Instructors will evaluate the video and assign either an ‘accept’ or ‘reject’ mark. The concepts that are accepted can form the basis of a team for prototyping. Those that were rejected can be reconfigured and resubmitted for evaluation. By week four, teams will be formed. Students self select teams but must have at least two accepted proposals per team. Ideally, teams should have two or three accepted concepts to allow debate as to which specific one all members want to pursue. Teams will then use this consensus concept to analyze, confirm assumptions, and revise the concept as the project evolves. The contents will vary slightly depending on each student’s business idea, but the objective will be the same: to convince a customer and/or investor of the merits of the concept much like a introductory meeting for a pitch.

Things to consider:

- The focus of this video is to frame the student’s approach to their project. In doing so, there should be a common understanding regarding:
 - “**who**” the project will be helping,
 - “**why**” they are in need of help,
 - “**where**” the target user and customers would be located, or “where” the project would be deployed, and ultimately
 - “**what**” will be built to create the ideal future outcome.

NOTE: Once “approval” is received, teams will be self-selecting based on the constraint that every team MUST have at least two approved proposals on every team.

Digital Product: Project (Team): 45% total

Students at times will be expected to submit deliverables individually to receive a grade such as with their role reflections, and at other times as submission in teams of 5-6 people such as with their prototypes. Individuals and teams must submit all deliverables to pass the course or will receive an incomplete for their final grade. Penalties for lateness are significant at 10% per day overdue for the first two days, thereafter it will not be accepted and receive a zero. Assignments are normally due on Friday by 4 p.m. If they are not received by Sunday at 4 p.m., they will not be accepted and result in a mark of zero.

NOTE: The GBDA402 Digital Project is meant to build on learning from GBDA401 where concepts such as personas, journey maps, business model canvas etc. have already been learned. Students should consider the tools learned in prior courses as evidence that can be used to make the best case for their prototypes. That is not to say that they are not graded and therefore not necessary. On the contrary, teams that select the strongest methodology to prove their case will be able to justify the decisions made on their prototype better than those teams that do not.

This course is designed for students to demonstrate team decision-making, where showing their ability to select models, methodologies and frameworks, that will add to the value of their prototype is critical for success. For example, if a student discusses a target audience but has no relevant evidence to support a known persona, then the case made will likely be weaker than a team that is well informed on their target audience needs.

Students should expect to draw on knowledge gained, and methodologies previously covered, to feed into their team's development process but it is up to the student teams to determine which tools to adopt that will best inform their prototype outcome.

TOPIC: For this capstone course, one of the UN sustainability initiatives has been selected as the basis for all the projects. The instructors have selected 'Quality Education'. This is a broad topic and will not obviously lend itself to the clear development of a digital product that your team can launch a business with. Over a semester, as analysis about the consumer, customer, market, and competitors in the problem space and market locale is learned, a digital product offering is to be conceived and made the basis for a future start-up company.

Digital products should be developed to be relevant to some aspect of 'quality education' but also to the specific market that the team chooses to launch the product, be it for the for-profit or not-for-profit sector. For example, teams may choose to focus on executive education, teachers, educational assistants, university educators, or products to help learning in third world countries. The video proposals will narrow down the target and focus of the project.

Products should be created using industry standard technologies, design standards, and by the end of the term, be justified as a commercially viable solution to the problem. Teams may need to extend secondary research of comparable solutions from across cultures to provide insights on existing Canadian-based secondary research. Teams will need to develop a final prototype to demonstrate the product their business will be selling. From this perspective, the final digital business (and this capstone course) will require student teams to be market analysts, business decisions makers, creative designers and producers, user and customer experts, and innovative technology developers, in order to have the business agility needed to be successful.

TEAMS: Students will receive approvals from their video proposals and once received are able to self-select teams of 5-6 people per team as long as there are at least two people per team that received an approval on their proposal video. Teams can then choose which "approved proposal" they will develop for their prototype.

This term, student will be taught to follow an agile, iterative, development process used frequently in technology companies in "the real world". This means that course moves beyond what was taught in GBDA401 such that teams will submit a prototype for the purpose of having something tangible for testing and based on real feedback, teams will reiterate to improve the outcome over three cycles. Armed with real tangible feedback, teams will be able to improve their prototypes moving forward through the term and produce a final prototype that has been tested at several points. The purpose is to gain real feedback from real users and customers to feed into the follow up development process.

Prototype 1 with Report (Team): 15%

Teams will need to submit a low-fidelity prototype focusing on black and white wireframes. Pen and paper or wireframe software is recommended. Focus should be put on user flow, layout, placement of interface components and clear calls to action. The first prototype may be simple but must be "testable", so that teams can gain feedback and work toward building a solid project by the end of the term. The accompanying report should connect the prototype goal with the business objective.

Prototype 2 with Report (Team): 15%

Students will need to submit a high fidelity prototype supported and justified by testing, reiterating, customer and user learning and your business needs. Prototype should include preliminary branding for your startup business. Prototype 2 will be a higher fidelity design that will need to incorporate findings and decisions made in the business model and/or from feedback from Prototype 1. Teams may need to supplement learning from secondary research to inform the further refinement of Prototype 2. Teams should be looking at refining the design at this

point and should not have pivoted significantly from Prototype 1. All designs will be openly posted for feedback from all other teams to be provided. All teams providing feedback to others should be constructive based on information-based observations, for the purpose of assisting the class a whole, learn from each other.

Mini Pitches and Presentation Materials (Team):

Mini pitches are meant to provide an opportunity for teams to practice presenting their story of their product and discuss the methodology that has informed and refined the development process over two prototypes. The purpose of the mini-pitch is to present a concise delivery, much like an entrepreneurial elevator pitch to a potential investor for your business. The class TA will be holding Skype mini-pitches and teams will schedule via email as per the weekly schedule.

Teams must also separately submit their final presentation materials on Learn and these can be slides, visuals, or any creative material that the team intends to use for their final presentation. This can be in a draft format but must have the full structure and high level content that will be included. Due dates are on the weekly schedule.

Prototype 3 and Report (Team):

Teams will be required to deliver a fully-interactive and high-fidelity prototype that has considered the feedback received from the testing done from the first two prototypes. The final product could be a mobile app, a website, InVision or Figma project, a cross-platform proof-of-concept or similar designed product of equivalent calibre. Attention to detail, consistency in UI design, and a seamless user flow are of crucial importance to meeting the needs of the target audiences. The final prototype should show significant number of screens and detailed digital development to demonstrate significant progress worthy of a capstone course that incorporates all elements learned in the program. Teams are expected to consider feedback gained from Prototype 2 testing for this final design. The final prototype should be about polishing and showing a professional commercially viable product.

Final Presentation (Team): 15%

At the end of the term, the team will present the business concept with the final designed prototype as it has evolved over the term. Teams are expected to be able to demonstrate their business idea in the form of a clear outline of the user of the product as well as the customer that will purchase the prototype. The strongest presentations will be able to show clear interactions of the business, AND a well-designed product for the target groups based on those touch points. Presentation elements should be reflective and validated with relevant analysis and/or testing summaries to justify the design and business decisions.

Role Reflection Report (Individual): 15%

This capstone course is meant to bring together all of the three pillars of the GBDA program including Design, Technology and Business. As such all students will be expected to take on “roles/jobs” in each area of “Business Analyst”, “Visual Designer” and “UX designer” for each prototype. Student individually will need to submit a “role reflection report” based on their contribution for that prototype submission. Students cannot submit a role reflection on the same role more than once.

Students will submit an individual report to reflect on their contributions (from their role) and to demonstrate the critical thinking required to evaluate the learning’s gained from each “role/job” during the prototype development process. The purpose of this report is to show (individually), how the student views the outcome of each prototype from their prospective roles and explain the learning gained from the iterative testing process specifically, from their “roles” perspective, and any insights and recommendations for future development. A separate rubric will be posted on Learn.

Peer Evaluation (Individual):

At the same time as the prototypes are due, a peer evaluation is mandatory from each student to feed into contribution grades. Mandatory peer evaluations for Prototype teamwork are to assess team members in an

objective way. A form is on Learn and a dropbox submission is required for each member of the team. Failure to submit means a zero on that evaluation; students who do not comply are not assumed to be in agreement with what other group members have submitted. If no one on the team submits a completed peer evaluation form, all receive a zero for that assignment. Instructors will use these peer evaluations as input into determining the level of contribution of each member. Final grades are at the discretion of the instructors.

Assessment Format:

Rubrics will be provided for each assignment. In general, assignments will consider the following points:

Content – Have the core issues of the assignment been addressed? Have they been addressed in a logical fashion? Is there sufficient evidence or support to those points to make them potentially persuasive?

Academic Standards – Have external sources been employed and integrated with consistent referencing? If outside analysis was employed, did it conform to ethical norms, objective standards and was it interpreted impartially?

Professionalism – Was creativity exhibited in the assignments and, if so, how well was it expressed relative to its intent? Were communication skills of a suitable level informative as well as influential? Were the final submissions physically pleasing and indicative of effort shown?

All team members are expected to participate equally in these assignments. Extenuating circumstances, such as a medical or personal emergency, will be considered on a case-by-case basis by the instructors and faculty reserve the right to decide on the availability of an alternative, even with credible documentation.

The instructors reserve full authority to assign a group mark for each team assignment. If an individual team member has not carried a proportional workload or has not made themselves available for team work or submitted work of an inferior quality such that other team members felt compelled to substantively re-do the work, instructors reserve the right to assign a grade that is proportionate to that individual's contribution to the team. To substantiate any claims, a group member should provide evidence of unacceptable work or the need to "re-do" contributions by a team member. Contributing your fair share to the team assignments will yield benefits beyond a better individual grade as fully functioning teams are much more likely to submit better work and be rewarded accordingly.

Additional Recommended Readings:

Readings will be assigned as per the weekly schedule however given the structure of the project-based course, additional materials may be introduced as necessary and adjusted as the deliverables progress.

Institutional-required statements for undergraduate course outlines approved by Senate Undergraduate Council, April 14, 2009:

Academic Integrity

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. See the [UWaterloo Academic Integrity Webpage \(https://uwaterloo.ca/academic-integrity/\)](https://uwaterloo.ca/academic-integrity/) and the [Arts Academic Integrity Office Webpage \(http://arts.uwaterloo.ca/current-undergraduates/academic-responsibility\)](http://arts.uwaterloo.ca/current-undergraduates/academic-responsibility) for more information.

Grievance

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read [Policy 70, Student Petitions and Grievances, Section 4 \(https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70\)](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70). When in doubt please be certain to contact the department's administrative assistant who will provide further assistance.

Discipline

A student is expected to know what constitutes academic integrity to avoid committing academic offenses and to

take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the undergraduate associate dean. For information on categories of offenses and types of penalties, students should refer to [Policy 71, Student Discipline](http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm) (<http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>). For typical penalties check [Guidelines for the Assessment of Penalties](http://www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm) (<http://www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm>).

Appeals

A decision made, or penalty imposed under Policy 70, Student Petitions and Grievances (other than a petition) or Policy 71, Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to [Policy 72, Student Appeals](http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm) (<http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm>).

Note for Students with Disabilities:

The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.

Information on Plagiarism Detection:

Students and faculty at the University of Waterloo share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterised by honesty, fairness, and mutual respect for the aim and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

The instructors reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that by taking this course all assignments are subject to submission for textual similarity review by software (e.g., Turnitin.com or Grammarly). Assignments submitted to Turnitin.com will be included as source documents in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents for five academic years. The instructors may require students to submit their assignments electronically to Turnitin.com or the instructor may submit questionable text on behalf of a student