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Syllabus JOU4100 - DIGITAL JOURNALISM II

Fall 2019
Tuesday 11:30 - 12:50
Friday 13:00 - 14:20

INSTRUCTOR

Jean-Sébastien Marier, M.J.

OFFICE HOURS

In person, Thursday 11:00 - 14:00, Desmarais 11142
Via Google Hangouts by appointment

TO REACH ME

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613-986-6121 (in case of emergency)
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ABOUT ME

I have been a part-time professor at the University of Ottawa since 2016. When not teaching, I am a multiplatform producer and in-house trainer at CBC/Radio-Canada. I primarily work for the public broadcaster's French-language service but have also filed web, radio and TV stories for the English-language network.

In past years, I also directed short independent documentary films, taught a spring course at a university in Burundi, and worked as a researcher for two TV series aired on TFO. My articles and photos have been published in *La Presse*, *The Montreal Gazette*, *The Ottawa Citizen*, and several student papers.

I hold a Master of Journalism degree from Carleton University and a Graduate Diploma in Public Ethics from Saint Paul University. I live in Ottawa with my wife Samantha.

OFFICIAL COURSE DESCRIPTION

Production of advanced digital contents, introduction to coding, use of geolocation software and computer graphics, design and data visualization.

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COURSE CONTENT

Whereas JOU3100 primarily aimed to help you develop core competencies in news writing and multimedia production, JOU4100 invites you to discover the universe of web development, coding, and data journalism.

The first part of this course will teach you the nuts and bolts of the HyperText Markup Language (HTML) and Cascading Style Sheets (CSS). Those two “languages” are the core building blocks of a website. These skills will be useful for a variety of reasons: building webpages, scraping data, multimedia production, embedding content, etc.

You will then learn how to find, extract, clean, analyze and visualize data. We will talk about Open data portals, access to information laws, XPath queries, Excel and Google Sheets formulas and functions. We will clean and analyze datasets, and then turn them into interactive charts and maps. Fear not, we won't try to solve PhD-level math equations. But you do remember BEDMAS, right?

SPECIFIC COURSE OBJECTIVES

Practical

This course aims to help you perfect the knowledge and core competences acquired in JOU3100. By the end of the term, you should be able to produce advanced and thorough multimedia news stories which meet industry standards. At the end of this course, you should be able to:

1. Modify existing web pages by manipulating their source code;
2. Create a mini website using HTML & CSS;
3. Find data in databases and through access to information requests;
4. Extract data by writing XPath queries;
5. Clean and analyze data in order to identify news stories;
6. Use formulas to automate part of your data analysis in spreadsheet software such as Google Sheets;
7. Use pivot tables;
8. Turn your data into graphics and maps;
9. Produce a 1500-word long article, which will include multimedia elements and stem from a thorough exercise of data analysis and visualization.

Theoretical

As young academics, you ought to be able to take a critical stance towards digital journalism. At the end of this course, you should be able to:

1. Defend your editorial decisions from both an ethical and a technical standpoint;
2. Explain your personal newsgathering process and the steps which led to the production of each of your assignments;
3. Understand and discuss the “theory” behind data journalism, such as the ethical implications of data mining, margins or error, effective data visualization, etc.
4. Develop strategies to cope with some of the issues associated with digital journalism, such as source protection and data perennality.

TEACHING METHODS

I believe in action-based learning. Thus, most of our meetings will consist of a mix of theory and practice. I will give short lectures and we will discuss mandatory readings. We will also do hands-on exercises and case studies. At times, I will try to organize special activities, such as guest lectures by professional journalists or watching videos on issues pertaining to data journalism. Lastly, I will invite you to present your assignment in class (once marked) in order to receive feedback from your peers.

This is an in-person lecture-based course, but I will use Virtual Campus to share class content and additional resources with you. At times, I will also invite you to comment on discussion threads.

REQUIRED TEXTBOOK

We will read *The data journalism handbook: How journalists can use data to improve the news* cover-to-cover. It will be our bible throughout the semester. You can consult the [online version produced by the European Journalism Centre](#) free of charge or buy a hard copy at the campus bookstore. There’s also a copy in the course reserve.

Gray, J., Bounegru, L., & Chambers, L. (2012). *The data journalism handbook: How journalists can use data to improve the news*. Sebastopol, CA: OReilly & Associates.

Be careful, a new, complimentary book titled *The data journalism handbook 2: Towards a critical data practice* is [currently in development](#). That’s not the one we will be using.

OTHER REQUIRED READINGS

We will read chapters from the books below. Some are in the course reserve at the Morisset Library, while others are available online.

Cribb, R., Jobb, D., McKie, D., & Vallance-Jones, F. (Eds.). (2015). *Digging deeper: A Canadian reporter's research guide* (3rd ed.). Don Mills, ON: Oxford University Press.

Availability: Course Reserve

McCarten, J. (Ed.). (2018). *The Canadian Press caps and spelling* (22nd ed.). Toronto, ON: The Canadian Press.

Availability: Course Reserve

McCarten, J. (Ed.). (2018). *The Canadian Press stylebook: A guide for writers and editors* (18th ed.). Toronto, ON: The Canadian Press.

Availability: Course Reserve

Nussbaumer Knaflig, C. (2015). *Storytelling with data: The effective visual communication of information*. Hoboken, NJ: John Wiley & Sons.

Availability: [Online Resource](#)

Shapiro, I. (Ed.). (2009). *The bigger picture: Elements of feature writing*. Toronto, ON: Emond Montgomery Publications.

Availability: Course Reserve

Zion, L., & Craig, D. (Eds.). (2014). *Ethics for digital journalists: Emerging best practices*. New York, NY: Routledge.

Availability: [Online Resource](#) and Course Reserve

Note: I first designed this course as a weekly three-hour lecture. Although we will be meeting twice a week for 80 minutes, I have kept the same reading load. As such, you will notice multiple times the following notice in the class calendar: "No mandatory reading for today. Use this opportunity to catch up." Please do so.

ONLINE TUTORIALS

Throughout the term, you will need to complete online tutorials on sites such as [Cocademy](#) and [W3Schools](#). The lessons you will be assigned are free, but you will need a stable Internet connection.

REQUIRED EQUIPMENT

You must bring a laptop to each of our meetings, since we will be doing practical exercises in class. We will be using Google tools and Virtual Campus, which are already linked to your University of Ottawa account. When possible, I will recommend free and/or open source software.

Make sure to download and install the following software:

- [GitHub Desktop](#)
- [Brackets](#)
- [Chrome](#)
- [OpenRefine 2.8](#)

Also make sure to complete the following steps:

- Create a [GitHub](#) account.
- Follow [my GitHub account \(@jsmarier\)](#).
- Create a [Codecademy](#) account (using your GitHub credentials).
- Make sure to know the username and password of your @uottawa email account.

For your final project, you will also need access to photo, audio and video production equipment. You can borrow voice recorders, microphones, photo cameras, camcorders, and tripods from the Multimedia Distribution Service, which is located in the basement of Morisset Hall.

LANGUAGE OF INSTRUCTION

This course will be taught in English. As per [Academic Regulation I-2 - Bilingualism](#), assignments for journalism courses must be submitted in the course's language of instruction. As such, you must complete your assignments in English.

If you need help writing your assignments, please do not hesitate to visit the [Academic Writing Help Centre](#) (AWHC). I also encourage you to use software such as Antidote (installed on the computers in the Morisset Library) or Grammarly to spell check your work.

ASSIGNMENTS, PARTICIPATION & PROFESSIONALISM

Unless stated otherwise, you must submit each assignment on Virtual Campus and/or Google Drive **before 11:59 p.m. on the due date**. Detailed instructions and marking rubrics will be made available on Virtual Campus at least two weeks ahead of time.

| Description | Due Date | Value |
|---|---------------------|-------|
| Story pitch for the final project | Oct. 8 | 20% |
| Homework 1: Mini website | Oct. 22 | 10% |
| Homework 2: Access to information request | Nov. 5 | 10% |
| Homework 3: Data extraction and analysis | Nov. 19 | 10% |
| Final project: Long-form multimedia story | Dec. 18 | 40% |
| Participation & Professionalism | Throughout the term | 10% |

Story pitch for the final project

We will hold an in-class story meeting during which each of you will make a five-minute pitch for your long-form multimedia story. You must also submit a detailed five-page written proposal. Your story pitch must include:

- A summary of your topic and angle
- Some background/context on the issue
- A description of the data you intend to collect and analyze
- A description of your data visualization and two other multimedia elements
- A list of three potential sources (interviewees), with a short biography

Homework 1: Mini website

Using your new HTML5 & CSS3 coding skills, you must create a three-page mini website, including a homepage, your biography, and a page of your choosing. All three web pages must be linked to the same CSS file. Your website must also follow some accessibility guidelines. Your site must be published on GitHub Pages.

Homework 2: Access to information request

Find a newsworthy issue you would like to explore further thanks to access to information law. For this assignment, you must not only hand in your access to information request, but you must also clearly detail your journalistic process by citing some of the mandatory readings.

Homework 3: Data extraction and analysis

For this assignment, you must extract data from a website or database. You must then clean and analyze the data, and find a potential story idea. Your assignment must clearly detail your journalistic process.

Final project: Long-form multimedia story

The final project is a 1500-word article, which must include at least one data visualization item (interactive map, graphic, etc.) and two other multimedia elements (photo-essay, audio item, video, etc.). You must choose a topic in the Ottawa-Gatineau area. Also, your story must stem from a thorough exercise of data analysis and visualization.

Participation & Professionalism

I believe that your participation and professionalism mark should not be based solely on attendance. As such, you must actively contribute to both your own learning and the learning of your peers. Among other things, I expect you to complete mandatory readings and to participate in our in-class discussions. Here are some of the criteria on which you will be evaluated:

- Frequency and relevance of in-class comments
- Professional behaviour and respect
- Attendance, punctuality, and proactive communication with the instructor
- Individual meeting during my office hours

I will post a detailed evaluation rubric on Virtual Campus. Please send me a self-evaluation (about 250 words) before the end of the exam period.

REMINDER: WHAT IS A NEWS STORY?

Do not forget that a good news story goes beyond writing the “minutes” of an event or meeting. A university-type essay on a social problem/issue is not, in itself, a news story either. Journalistic pieces must be fact-based storytelling endeavours tackling an issue of interest to your target audience. You must captivate your readers, listeners or viewers by telling them a story. Remember our senses: hearing, sight, smell, taste, and touch. Make us “experience” your story. Also, don’t forget to answer the following questions: Who? What? Where? When? Why? and How? And since we will be dealing with data journalism this term, we will add a seventh question: How much/many?

FORMATTING & STYLE OF ASSIGNMENTS

Your assignments must follow the instructions published on Virtual Campus. They must also be formatted according to the guidelines highlighted in *The Canadian Press stylebook: A guide for writers and editors* and *The Canadian Press caps and spelling*.

OFFICIAL GRADING SYSTEM

Grades are assigned using the official University of Ottawa grade scale.

| Letter | % | Letter | % | Letter | % |
|--------|----------|--------|-------|--------|-------|
| A+ | 90-100 % | B | 70-74 | D | 50-54 |
| A | 85-89 | C+ | 65-69 | E | 40-49 |
| A- | 80-84 | C | 60-64 | F | 0-39 |
| B+ | 75-79 | D+ | 55-59 | | |

| List of Symbols | |
|-----------------|--|
| ABS | Absent |
| EIN | Failure/Incomplete |
| NNR | Grade not available or not submitted because of an ongoing investigation over alleged academic fraud |

See also [Academic regulation I-10 - Grading system](#).

LATE PENALTY

As future journalists, you must learn the utmost importance of deadlines. As such, assignments must be handed in by the deadline specified in this syllabus. If you do not hand in your assignment by the due date, I will deduct 5% from your grade for said assignment per day, unless you can produce the proper justification, as outlined in Article 9.5 of [Academic regulation I-9 - Evaluation of student learning](#).

ACADEMIC FRAUD

Although academics and journalists don't always see eye to eye, we do have one thing in common: we do not tolerate plagiarism. This includes using sentences, quotes, and ideas that are not yours without properly attributing them. In short: don't pass someone else's work off as your own.

In journalism more specifically, it would be fraudulent to invent quotes or statistics, to pretend that you witnessed a situation when you did not, to use images and sound captured by another person without giving them proper credit.

Asking a friend to copy edit your work for grammar and spelling is fair game. But hiring a third party to heavily edit or write an assignment on your behalf is unacceptable. I want to evaluate your writing, not theirs. When in doubt, come talk to me.

It is also prohibited to plagiarise yourself. Don't hand in an assignment that was already submitted in another course, for an internship application, for your job, etc. When in doubt, ask me first.

Myself and the University of Ottawa take this matter extremely seriously. If you plagiarize, you expose yourself to sanctions ranging from a written warning to expulsion. Please read [Academic regulation I-14 - Academic fraud](#) very carefully.

ATTENDANCE AND PUNCTUALITY POLICY

Whether there is a power outage, a flood or a winter blizzard, journalists ought to show up for work to keep the public informed. As such, I am expecting you to be in class on time.

Also, you would not stay home without telling your editor. Thus, send me an email before class if you will be late or unable to attend. I will take this into account when marking your participation and professionalism mark.

I designed the assignments so that they closely match the content seen in class. I will also be giving detailed instructions for them during our weekly meetings. Suffice to say, if you miss a lecture, it is your responsibility to make sure to catch up.

OTHER CONCERNS, ACCOMMODATIONS, MENTAL HEALTH, ETC.

This syllabus is already quite long and it is impossible to include guidelines for every single potential situation. As a reminder, the University of Ottawa has policies on [I-15 - Religious accommodations](#) and [I-16 - Academic Accommodations](#).

University can sometimes be a particularly stressful environment. Should you or someone you know require assistance — or just need to speak to someone — don't hesitate to ask for help. A list of on- and off-campus resources is available on the university's [Mental Health and Wellness](#) page.

Please feel free to get in touch with me as soon as possible should you have any concerns or questions. Your well-being and success are my priorities. I promise to do everything humanly possible to help you.

CLASS CALENDAR

| Date | Topics, Mandatory Readings, Due Dates |
|----------------------------|--|
| Class 1 Sept. 6 | First class <ul style="list-style-type: none"> • What is data journalism? • A quick example based on a class survey • Presentation of the syllabus • Required texts and equipment • Your learning objectives • Q & A session |
| Class 2 Sept. 10 | The nuts and bolts of data journalism – Part A <ul style="list-style-type: none"> • Is data journalism a form of investigative reporting? • What's the difference between data journalism and computer-assisted reporting (CAR)? • Examples of good data-driven stories • The steps towards a data-driven story To read before class <ul style="list-style-type: none"> • <i>The data journalism handbook</i>, chap. 1 "Introduction" • <i>The data journalism handbook</i>, chap. 2 "In the newsroom" |
| Class 3 Sept. 13 | The nuts and bolts of data journalism – Part B <ul style="list-style-type: none"> • Case studies • The limitations of data-driven journalism • Ethical considerations To do before class <p>Please find a news story which relies at least in part on data. Bring it to class or post the link in the relevant thread on Virtual Campus. We will do a short show-and-tell session in class.</p> |

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| Class 4 Sept. 17 | Coding in HTML & CSS – Part A <ul style="list-style-type: none"> • The “structure” of a webpage • HTML elements and tags • HTML attributes • Coding with Brackets To do before class <p>Complete the first two modules of the Learn HTML course offered by Codecademy. Complete only the free interactive lessons, not the paid-for projects and quizzes labelled “PRO.”</p> |
| Class 5 Sept. 20 | Coding in HTML & CSS – Part B <ul style="list-style-type: none"> • Creating a menu and linking pages • Folder structure • In-class coding To do before class <p>Start the first five modules of the Learn CSS course offered by Codecademy. Once again, complete only the free interactive lessons, not the paid-for projects and quizzes labelled “PRO.”</p> |
| Class 6 Sept. 24 | Coding in HTML & CSS – Part C <ul style="list-style-type: none"> • Styling a website with CSS • In-class coding To do before class <p>Complete the first five modules of Learn CSS.</p> |

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| Class 7 Sept. 27 | Coding in HTML & CSS – Part D <ul style="list-style-type: none"> • Accessibility standards • Uploading content to GitHub • Publishing a website with GitHub Pages Complementary resource <p>Codecademy's Make a Website course offers a good recap of everything we've seen so far. I invite you to complete the following modules if some HTML & CSS concepts are still unclear to you:</p> <ul style="list-style-type: none"> • Site Structure • A Closer Look at CSS • Boundaries and Space |
| Class 8 Oct. 1 | Story meeting (presentation of your story ideas for the final project) <p>Please take note that although the story meeting is today, you have until 11:59 p.m. next Tuesday to submit your written proposal.</p> Complimentary readings to help prepare your story pitch <p>The chapters below will help you find a story idea and craft your pitch. The first two offer you a glimpse into the art and craft of feature writing, while the others offer you tips and tricks to kick-start an investigation.</p> <ul style="list-style-type: none"> • <i>The bigger picture</i>, chap. 1 "A world of ideas..." • <i>The bigger picture</i>, chap. 2 "Perfect pitch..." • <i>Digging deeper</i>, chap. 1 "An introduction to investigative..." • <i>Digging deeper</i>, chap. 2 "The nuts and bolts of investigations" |

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| Class 9 Oct. 4 | Getting data: Public records <ul style="list-style-type: none"> • Government databases • Public tenders • Open data portals • Other non-governmental sources • Geographic, Statistical and Government Information Centre at the University of Ottawa <p>Important reminder: I will be in Winnipeg, Manitoba, in order to lead training workshops for Radio-Canada. Instead of an in-class meeting, you will need to complete an online training module.</p> <p>To read before class</p> <ul style="list-style-type: none"> • <i>The data journalism handbook</i>, chap. 4 “Getting data” • <i>Digging deeper</i>, chap. 4 “Using public records” |
| Class 10 Oct. 8 | Getting data: Access to information laws – Part A <ul style="list-style-type: none"> • Federal, provincial and municipal access to information laws • Previously released documents • How to formulate a request <p>To read before class</p> <ul style="list-style-type: none"> • <i>Digging deeper</i>, chap. 10 “Getting behind closed doors...” <p>Due tonight: Story pitch for the final project</p> |
| Class 11 Oct. 11 | Getting data: Access to information laws – Part B <ul style="list-style-type: none"> • How to follow up • What to do once you get documents • Appeal processes <p>To read before class</p> <p>No mandatory reading for today. Use this opportunity to catch up.</p> |
| <p>----- Oct. 13 to 19 – Reading Week -----</p> | |

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| Class 12 Oct. 22 | Getting data: Web scraping with XPath – Part A <ul style="list-style-type: none"> • Understanding how data is structured on a webpage • Using the Chrome Inspector Tool • Importing data into Google Sheets with XPath • In-class data-extraction workshop <p>To do before class</p> <p>Please take a quick look at all six sections of the XPath Tutorial offered by W3Schools:</p> <ul style="list-style-type: none"> • XPath Introduction • XPath Nodes • XPath Syntax • XPath Axes • XPath Operators • XPath Examples <p>Due tonight: Homework 1: Mini website</p> |
| Class 13 Oct. 25 | Getting data: Web scraping with XPath – Part B <ul style="list-style-type: none"> • In-class data-extraction workshop <p>To read before class</p> <p>No mandatory reading for today. Use this opportunity to catch up.</p> |
| Class 14 Oct. 29 | Getting data: Web scraping with XPath – Part C <ul style="list-style-type: none"> • In-class data-extraction workshop <p>To read before class</p> <p>No mandatory reading for today. Use this opportunity to catch up.</p> |

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| Class 15 Nov. 1 | Getting data: Web scraping with XPath – Part D <ul style="list-style-type: none"> • A quick note on APIs • The ethics of data mining • In-class data-extraction workshop To read before class <ul style="list-style-type: none"> • <i>Ethics for digital journalists</i>, chap. 15 “Data journalism” |
| Class 16 Nov. 5 | Understanding data: Cleaning and reformatting a dataset <ul style="list-style-type: none"> • Cleaning data with OpenRefine • Formatting data into columns in Google Sheets • Using formulas such as SPLIT and CONCATENATE To read before class <ul style="list-style-type: none"> • <i>The data journalism handbook</i>, chap. 5 “Understanding data” • Explore the Google Sheets function list Due tonight: Homework 2: Access to information request |
| Class 17 Nov. 8 | Understanding data: Exploring data to find a story – Part A <ul style="list-style-type: none"> • Identifying the “limitations” of a dataset • Correlation vs causation • Absolute numbers vs ratios • Using formulas such as SUM, AVERAGE, etc. • Pivot tables To read before class <ul style="list-style-type: none"> • <i>Digging deeper</i>, chap. 9 “Following the money...” • <i>The Canadian Press stylebook</i>, “Statistics” • <i>The Canadian Press stylebook</i>, “Polls” |
| Class 18 Nov. 12 | Understanding data: Exploring data to find a story – Part B <ul style="list-style-type: none"> • In-class data analysis workshop To read before class <p>No mandatory reading for today. Use this opportunity to catch up.</p> |

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| Class 19 Nov. 15 | Delivering data: Charts and graphs – Part A <ul style="list-style-type: none"> • Choosing which numbers and elements to showcase • Types of data visualization • Creating charts and graphs with DataWrapper To read before class: <ul style="list-style-type: none"> • <i>The data journalism handbook</i>, chap. 6 “Delivering data” • <i>Storytelling with data</i>, chap. 2 “Choosing an effective visual” |
| Class 20 Nov. 19 | Delivering data: Charts and graphics – Part B <ul style="list-style-type: none"> • In-class visualization workshop To read before class <p>No mandatory reading for today. Use this opportunity to catch up.</p> <p>Due tonight: Homework 3: Data extraction and analysis</p> |
| Class 21 Nov. 22 | Delivering data: Maps – Part A <ul style="list-style-type: none"> • Formatting geolocation data • Creating maps with Google My Maps To read before class <ul style="list-style-type: none"> • <i>Storytelling with data</i>, chap. 3 “Clutter is your enemy!” |
| Class 22 Nov. 26 | Delivering data: Maps – Part B <ul style="list-style-type: none"> • In-class visualization workshop To read before class <p>No mandatory reading for today. Use this opportunity to catch up.</p> |

| | |
|----------------------------|---|
| Class 23 Nov. 29 | Using data to understand your audience <ul style="list-style-type: none">• Measuring the effectiveness of your storytelling• Page views vs retention time• Overview of measuring tools (Chartbeat, Adobe Analytics, etc.) To read before class <p>No mandatory reading for today. Use this opportunity to catch up.</p> |
| Class 24 Dec. 3 | Last class <ul style="list-style-type: none">• Wrap-up of the term• What have we learned?• What comes next?• Questions about the final project? |

**Final assignment due
by 23:59 on Dec. 18**