SFU OFFICE OF THE VICE-PRESIDENT, ACADEMIC

TEL +1 778 782 3925
FAX +1 778 782 5876
sfu.ca/vpacademic

Simon Fraser University
8888 University Drive
Burnaby BC
Canada V5A 1S6

MEMORANDUM

ATTENTION: Senate | TEL

FROM: Jon Driver, Vice-President, Academic and Provost *pro tem*, and Chair, SCUP

RE: Full Program Proposal for the Minor in Social Data Analytics (SCUP 19-43)

DATE: December 9, 2019 | TIME

At its December 4, 2019 meeting, SCUP reviewed and approved the full program proposal for the Minor in Social Data Analytics in the Departments of Philosophy, Economics, Political Science and Linguistics within the Faculty of Arts and Social Sciences, effective Fall 2020.

Motion:

That Senate approve and recommend to the Board of Governors the full program proposal for the Minor in Social Data Analytics in the Departments of Philosophy, Economics, Political Science and Linguistics within the Faculty of Arts and Social Sciences, effective Fall 2020.

c: S. Weldon
C. Murray

SFU OFFICE OF THE ASSOCIATE VICE-PRESIDENT, ACADEMIC

8888 University Drive,
Burnaby, BC
Canada V5A 1S6

TEL: 778.782.6654
FAX: 778.782.5876

avpacad@sfu.ca
www.sfu.ca/vpacademic

MEMORANDUM

ATTENTION	Senate Committee on University Priorities	DATE	November 8, 2019
FROM	Wade Parkhouse, Chair Senate Committee on Undergraduate Studies	PAGES	1/1
RE:	Faculty of Arts and Social Sciences (SCUS 19-68)		

Action undertaken by the Senate Committee on Undergraduate Studies at its meeting of November 7, 2019, gives rise to the following recommendation:

Motion

That SCUP approve and recommend to Senate the Full Program Proposal for the Minor in Social Data Analytics in the Departments of Philosophy, Economics, Political Science and Linguistics within the Faculty of Arts and Social Sciences.

The relevant documentation for review by SCUP is attached.

SIMON FRASER UNIVERSITY
ENGAGING THE WORLD

Social Data Analytics Minor

Full Program Proposal

October 9, 2019

Economics, Linguistics, Philosophy, and Political Science

SFU Department of Political Science

AQ 6069
8888 University Drive,
Burnaby, BC
Canada V5A 1S6

TEL 778.782.4293
FAX 778.782.4786

www.sfu.ca/politics

MEMORANDUM

ATTENTION Members of Senate Committees on Undergraduate Studies (SCUS) and University Priorities (SCUP)

DATE October 21, 2019

FROM Dr. Steven Weldon, Political Science

PAGES

RE: Response to Feedback for SCUS and SCUP members on Social Data Analytics Minor NOI

Dear Members of SCUS and SCUP:

This memo accompanies the full program proposal to create an interdisciplinary minor in Social Data Analytics. It details how we have addressed the helpful feedback on the Notice of Intent from SCUS (meeting on May 2, 2019) and SCUP (meeting on June 5, 2019). The Social Data Analytics Minor complements and builds on SFU's reputation as a leader in data-intensive teaching and research with such efforts as SFU's Big Data Initiative, several existing programs, and its recently launched Data for Good initiative. We are pleased that members also recognized the value and importance of this program, with the NOI received unanimous support from both committees, and we appreciate the encouragement in creating this innovative program.

Most of the feedback from SCUS and SCUP committee members focused on points of clarification and helpful suggestions to seek out advice and feedback from heads of other interdisciplinary programs at SFU. Here I detail in a point form table how we addressed the specific concerns:

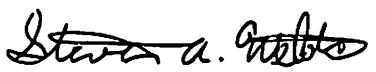
Feedback and Suggestions	**Response**
Engage Cognitive Science in discussion around governance and administration of an interdisciplinary program.	Met with the current (Paul Tupper) and most recent (Mark Blair) directors of the Cognitive Science program. Received helpful feedback and support for the director-advisor committee model of governance and the importance of ensuring there are sufficient administrative resources for the program.
Follow up and consult further with Computing Science regarding the program and its goals.	In the early stages of preparing the NOI, the representatives of the four programs met with Fred Popowich, Scientific Director of SFU's Big

	Data Initiative and Professor, Computing Science. He expressed his support for the program at the time. Once completing the full program proposal draft, we followed up with Fred again vie email as well as Anoop Sarkar, Professor, Computing Science. We understand through verbal communication that they remain supportive of the initiative; we did not receive a formal written response. We remain committed to working with Computing Science to make the SDA Minor a successful program. We also note that one of the initiators of this proposed program, Maite Taboada, is an associate member of Computing Science.
Suggestion to consider approaching and possibly partnering with the Applied Math faculty to improve math fundamentals	This was a consideration from the early stages of the program planning. The four initiators of this program would also like to see students improve their math fluency. Nonetheless, we opted against requiring students to take courses in the Math department for two reasons. First, the minor is already at the upper limit in terms of required units. Second, we anticipate attracting some students to the minor that may otherwise be apprehensive about taking a math course specifically. We want to remain as open and inclusive as possible. Still, we anticipate several students in the minor will take at least "Calculus for the Social Sciences" or equivalent. It is a pre-requisite for Introductory quantitative methods courses from Statistics and Economics, which are two of the three options for the statistical methods requirement. Thus, introductory calculus will be a recommended but not required course for the minor. We also remain open to working with the Applied Math faculty in the future, assuming this is of interest to them.
Include further detail in the FPP around the structure of teaching loads	We have specified and requested funds for the balance of current teaching loads and exactly where new resources will be needed, especially for the core SDA courses, based on the scenarios of a minimum level of demand (30 students per year) and expected growth. We have also indicated that for the electives we expect the low level of demand to be absorbed into existing course offerings that are not currently at the maximum level. In the event that demand for

	specific electives exceeds absorption capacity, we expect departments to request appropriate funding resources through their normal budget allocation request.
Include further detail about the interest of the arts and humanities FASS programs.	The program electives include one course each from English and Gender, Sexuality, and Women's Studies. Support letters from these two departments as well as History also indicate expected interest in the minor from their students.
Include further detail on why we have proposed a minor as opposed to either a certificate program or a major.	We have elaborated further in the FPP on why we believe a minor is the right program and preferred to a certificate or full major.
Distinguish between data "science" and "analytics" and justify better the name choice for the minor program	In the FPP section on appropriate name for the program, we discuss the difference between (social) data science and (social) data analytics, and why we believe the latter is the best name in light of our effort to differentiate it from the existing data science program and our effort to be inclusive of the arts and humanities.
Recommendation to tighten up the learning objectives so that they are more thematic and less like topic listings	We have re-written the learning objectives of the minor for the FPP, following recommended best practices. Specifically, we use an action verb followed by the learning outcome of interest to give them more thematic specificity and direction.
Check the prerequisites for specific courses in the program to ensure there are viable pathways for students to complete the minor in a timely fashion.	We have reviewed all the courses included in the minor. While some courses do have existing pre-requisites outside of the minor, these are limited largely to either a research design course or calculus (but not both) and mainly for statistical or quantitative methods courses. There are multiple viable pathways to completing the minor and we are confident that the pre-requisites are not excessively burdensome. Moreover, in the cases of Statistics and Political Science, we have agreed in principle to waive or treat as equivalent the core lower division SDA courses. This, however, remains a concern and is something we will monitor on an ongoing basis and make adjustments as necessary.
Consider synergies and opportunities with the Faculties of Health Sciences and Education	We believe there are many opportunities to collaborate and connect with research being done in programs outside of the arts and social sciences. Throughout the FPP, we have referenced different possibilities, especially with regards to the capstone seminar project course,

	including better understanding health and education outcomes. More importantly, as an interdisciplinary program spanning three faculties and eight different departments, we see this as an inherent feature and benefit of the SDA Minor.

Thank you for consideration of this proposal!



Steven Weldon

Associate Professor
Department of Political Science
Simon Fraser University

1 Executive Summary

a) An overview of the institution's history, mission, and academic goals:

As Canada's engaged university, Simon Fraser University is defined by its dynamic integration of innovative education, cutting-edge research and far-reaching community engagement. SFU was founded in 1965 with a mission to bring an interdisciplinary approach to learning, embrace bold initiatives, and engage with communities near and far. Today SFU is consistently ranked amongst Canada's top comprehensive universities and is one of the world's leading teaching and research institutions.

As the only degree program of its kind in Canada, the interdisciplinary Social Data Analytics minor builds on SFU's leadership in creating innovative programs that bridge interdisciplinary divides and prepare students for lifelong success in the careers of tomorrow. The minor also fits with SFU's bold vision to strengthen research and teaching in data science and big data, and it contributes to SFU's strategic research clusters and core challenges to promote civil society and technology to enhance the world.

b) Credential to be awarded: Minor in Social Data Analytics

c) Location of program: Burnaby

d) Faculty offering the proposed new program:

Primary Departments
Economics, Linguistics, Philosophy, and Political Science (FASS)

Departments that have agreed to offer elective courses as part of the minor
English (FASS), Gender, Sexuality, and Women's Studies (FASS), Statistics and Actuarial Science (FS), and the School of Communication (FCAT).

e) Anticipated program start date: Fall 2020

f) Anticipated completion time: 2 years

g) Summary of the proposed program

- **Aims, goals, and objectives:**

Background and Overview

The Social Data Analytics (SDA) Minor emerges from a recognition of the growing importance of digital technologies and social data for society, and the increasing demand in today's job market for the skills necessary to collect, analyze, and effectively

communicate findings to a wide variety of audiences. This "big data" revolution is rapidly transforming how businesses target consumers, governments make policy decisions, and our interactions and connections with one another in everyday life. There is seemingly boundless promise to tackle societies' most pressing problems, and little doubt that the field of social data analytics is quickly gaining importance in research, policymaking, and the private sector. The SDA Minor aims to provide students with the skills necessary to be successful in these and related fields.

However, the promise of "big data" has also brought to the forefront ethical concerns about individual privacy, the misuse of data, and risks to vulnerable groups. The news is rampant today with stories of companies and other organizations collecting, using, and exploiting personal data. Concerns also abound of how social media and the rise of disinformation are transforming social and political discourse.

There is growing demand for graduates to couple strong technical and data analysis skills with deep knowledge of the social world, strong communication skills, analytical reasoning, empathy, ethical sensitivity, and the ability to collaborate and effectively work in teams. Indeed, as Brad Smith and Harry Shum of Microsoft argue in their recent book, *The Future Computed*:

> *At one level, [artificial intelligence] will require that even more people specialize in digital skills and data science. But skilling-up for an AI-powered world involves more than science, technology, engineering, and math. As computers behave more like humans, the social sciences and humanities will become even more important. Languages, art, history, economics, ethics, philosophy, psychology and human development courses can teach critical, philosophical and ethics-based skills that will be instrumental in the development and management of AI solutions (p. 18).*[1]

The program speaks to these concerns in two fundamental ways. First, it builds on the foundational arts and social science knowledge that students acquire through their major degree programs with rigorous and systematic training in the emerging area of social data analytics. In this sense, we see social data analytics as a complementary tool intended to facilitate answering questions that are understood and grounded in the knowledge of a student's "home" discipline. Second, the program requires all students to take a core course in Ethics, Data, and Society, which will focus on recognizing and addressing privacy and ethical concerns in the information age.

The SDA minor would be a unique program, the only one of its kind in Canada. Students will benefit from faculty expertise across several departments in three faculties (FASS, FAS, and FCAT) and be able to further develop and apply their knowledge to significant

[1] Smith, Brad and Harry Shum, 2018. *The Future Computed: Artificial Intelligence and its role in society.* Available for download here.

community and social challenges through the minor's capstone seminar. A minor program is particularly valuable to students because it sends a clear signal of their competencies to potential employers. This program would put SFU at the forefront of social data analytics training and contribute to our leadership in data-driven research, teaching, and learning.

- **Contribution to the mandate and strategic plan of the institution:**

See above, section 1a.

- **Linkages between program outcomes and curriculum design:**

Students who complete the SDA minor will develop strong skills in data collection, analysis, and effective data communication with a grounding in the deep knowledge of their home discipline and training in the ethical and privacy challenges in the big data age. The curriculum contributes and builds toward these goals with three required lower division courses: *Computational Social Text Analysis* (SDA 250); *Introductory Statistical Analysis* using R (POL 201, ECON 232, or STAT 270); and *Ethics, Data, and Society* (SDA 270). It also requires completion of a *Capstone Project Seminar* (SDA 490) where students will apply the skills they have gained through the program to a real-world project. To complete at least 27 units required for the minor, students will choose between a range of elective courses from several different departments. This allows them to tailor the program to their individual needs and future career aspirations.

- **Potential areas/sectors of employment for graduates or opportunities for further study:**

Social data analytic skills and general data literacy are gaining importance across a wide range of fields, and students that have these skills will be in a strong position to secure employment and advance their careers in the public and private sectors or go on to complete advanced degrees in the arts and social sciences. According to a 2015 report from the Economic Council of Canada entitled "Closing Canada's Big Data Talent Gap", Canada faces a shortage of between 10,500 and 19,000 professionals with deep data analytical skills and a further gap of 150,000 for professionals, like data analysts and managers, with the "solid data and analytical literacy to make better decisions." Furthermore, they found from a survey of Canadian employers that "it [is] increasingly difficult to recruit, retain, and train Big Data and Analytics professionals" and that the "shortage of talent with the right skills will persist unless existing academic and training curriculum are expanded to better meet employers' needs."

The report also makes it clear that employers are looking for more than just technical analysis skills. The modern data analytics career also requires strong analytical thinking, communication, and project management skills as well as area specific knowledge and familiarity. The SDA minor is oriented to developing this broad range of skills, and we

anticipate our graduates will be in high demand for a variety of employment opportunities.

- **Delivery methods:**

The primary delivery method will be face-to-face. However, the nature of the training in several courses would also likely lend itself well to SFU's plans to introduce the new flex course delivery method (C900 courses).

- **Program strengths:**

This minor will be the only one of its kind in Canada and among a handful of cutting-edge programs in North America to equip arts and social science students specifically with the skills to effectively navigate, analyze, and communicate "big data" related to these fields. The program is unique in grounding technical skill development in the theoretically informed knowledge of the arts and social sciences and drawing on faculty expertise across multiple disciplines.

Students will learn to collect, analyze, and critically evaluate the large volume of digitized, real-world data derived from and related to human behavior to answer important social, economic, political, and cultural questions. They will learn to effectively communicate this knowledge to the public, scholarly community, and policymakers, and they will do so while respecting and upholding the privacy and ethical concerns that have emerged in the big data era. The program will make SFU and FASS a leader across Canada and globally in terms of promoting informed, data-intensive research and data-driven policy leadership.

The Capstone Project Seminar will also be a significant strength. Students will learn to work in teams and potentially partnering with community organizations to apply their skills to a real-world social or policy problem. Topics might include the BC housing crisis, combatting the rise of "fake news" and disinformation in elections, creating more resilient communities in the face of climate change, or improving educational outcomes and opportunities for Canadians or disadvantaged groups.

- **Level of support and recognition:**

We have consulted with a range of faculties and departments at SFU, and indeed, several are committed to supporting the SDA minor by opening their courses to our students. We also know first-hand the value and importance of having strong social data analysis skills as a foundation for conducting independent research and preparing students for the job-market in academia, data-driven policy analysis, and the private sector. Outside of SFU, we have researched (and cite here and in the NOI in several places) how the future job-

market in big data and data analysis is expected to change and the key role that is anticipated for arts, humanities, and social science training.

There are no relevant regulatory or professional bodies to be consulted.

- **Related programs:**

There are currently no programs in Canada broadly oriented toward arts and social science undergraduate students in Canada. SFU offers a Data Science Major through the Faculties of Science, Applied Science, and Beedie School of Business, while UBC-Okanagan offers major and minor programs in Data Science geared primarily toward students in statistics and computer science. Most major universities in North America now offer some sort of data science graduate degree program.

h) Contact information:

Steven Weldon, Associate Professor, Political Science, 778-782-4995, sweldon@sfu.ca
Maite Taboada, Professor, Linguistics, 778-782-5585, mtaboada@sfu.ca
Anke Kessler, Professor, Economics, 778-782-3443, akessler@sfu.ca
Evan Tiffany, Associate Professor and Chair, Philosophy, 778-782-6647, etiffany@sfu.ca

2 Credential Recognition and Nomenclature

2.1 Post-secondary recognition

The SDA minor is specifically oriented toward students and careers in the arts and social sciences and related disciplines. As a minor, it provides recognition and a clear signal to graduate programs and potential employers about the foundational knowledge and skills acquired, which will help set these students apart from other candidates on the job market and in applications to graduate programs. At minimum, the minor requires students to take five courses that specifically teach and emphasize skill development in the collection, analysis, and presentation of big structured and unstructured data. It also requires students to take a foundational course focused on the ethical challenges of living in a big data age and they must complete a group project on a real-world policy or social problem under the guidance of our faculty.

Regarding the program name, there is some question as to whether the entirety of the training might be better described as "social data science" as opposed to "social data analytics". In practice, these terms are often used interchangeably, and there is overlap in the necessary skill sets, especially on the technical and statistical side. There is also a similar program at Pennsylvania State University in the United States titled "social data analytics." Using "social data science" is also likely to be viewed as less inconclusive of the arts and humanities, while being possibly too similar to the Data Science program at SFU. Given all these considerations, we think "Social Data Analytics" is the most appropriate name given our goals and the SFU context.

2.2 Industry/employer recognition

There are no regulatory, licensing, or credentialing bodies related to the skills learned in this program. As indicated above, however, there is strong evidence that comes from employer surveys, academic studies, and high profile tech entrepreneurs that these are precisely the skills that employers will need and want in the future.

3 Curriculum/Program Content

3.1 Program structure

The program is expected to take approximately two years to complete. Students will be able to incorporate the minor into their regular stream of studies and pair it with a major or other degree program. This will be most easily done for students who start their post-secondary studies at SFU; however, the time frame also allows transfer students to complete the program in a standard time frame.

The minor requires the completion of at least 27 units, including four required courses: *Computational Text Analysis* (4 units), *Introductory Social Statistics* with R (3 or 4 units), *Ethics, Data, and Society* (3 units), and a *Capstone Seminar* (5 units).
Students will take at least three additional elective courses where they will learn such skills as advanced data visualization, exploratory data analysis, statistical analysis, causal inference, experiments, or focus on the societal and ethical issues related to big data. At least eight of the units must be from courses that directly develop computational or statistical analysis skills (as defined in the program description initially and in the future from the program director or advisory committee). These courses come from a range of different SFU departments, allowing students to tailor the degree to their specific interests. There are some pathways to completion of the minor that require additional pre-requisites, particularly an introductory calculus course from Mathematics (MATH 150, 151, 154 or 157). We did consider requiring this for the minor as well, but there are pathways that do not require it and we want to keep the minor open to as broad a range of students as possible while limiting the requirements. *See appendix for the included courses.*

Students will be evaluated through course work and their capstone seminar project.

3.2 Core courses

There are four core courses. Three of those are being newly created and we are requesting a new acronym tag ("SDA") for the course calendar.

1. **SDA 250 - Computational Social Text Analysis** (4 units) – Introduces basics of text analysis through Python programming. Core concepts include: data capture

and manipulation; data cleaning and preprocessing; database management; big data; natural language processing; introductory machine learning; text classification. *Prerequisites*: none.

2. **Econ 332, POL 201, or STAT 203D. Introductory Social Statistics with R** (3-4 units) – Covers key concepts of introductory statistics, including data importation, data visualization, probability, and statistical inference through multiple regression. *Prerequisites*: department specific but working on waivers.

3. **SDA 270 - Ethics, Data, and Society** (3 units) - This course introduces students to the ethical, legal, and privacy issues surrounding the collection and use of big data and the implications of these for vulnerable populations. *Prerequisites*: none.

4. **SDA 490 - Capstone Seminar Project** (5 units) - Final capstone group project that applies the skills students have learned in their studies to gain experience tackling real-world policy and social problems and develop a portfolio that they can showcase to prospective employers or graduate programs. Topics vary. *Prerequisites*: 11 lower division units listed above and at least 8 upper division units.

3.3 Existing and new courses

The only required courses are the core courses listed above. Students will be able to choose from a range of electives in Economics, Linguistics, Philosophy, Political Science, English, Gender, Sexuality and Women's Studies, the School of Communication, and Statistics and Actuarial Science.

3.4 Curriculum and program goals

The overarching mission of the Social Data Analytics Minor is for students to develop the social data analytic tools that allow them to understand, critically assess, and conduct data-driven research in the big data age with knowledge of and respect for ethical concerns and vulnerable groups. Big data offers seemingly unlimited promise, but it also presents new challenges. Much of the data is unstructured and its sheer volume and variety require new techniques to collect, prepare, analyze, and communicate findings. The minor emphasizes skill development with the following educational goals:

1. **Collect and preprocess social data.** One of the biggest challenges in dealing with the vast stores of data in today's technological and information age is simply collecting, storing, and processing it in preparation for analysis. It comes from a variety of sources, including historical and political documents, text and speech, and government records as well as social media, cell phones, and other "smart objects" that capture real time information and changes about what people are doing and

thinking. Such data is often unstructured and big in the sense that it exceeds standard computer hard drive space. Upon completion of the Social Data Analytics minor, students will learn how to collect this data using APIs (Application-Programming Interfaces) and other techniques, store it securely and access it remotely while protecting personal privacy and at-risk groups, and process unstructured data, such as text and speech, so that it allows for appropriate analysis.

2. **Analyze social data to improve knowledge about society and social, political, and economic challenges.** Students will develop increased numeracy skills and statistical fluency through exploratory data analysis techniques, including data visualization, clustering, categorization, and machine learning (unsupervised and supervised). They also will have the opportunity to tailor their learning and develop more advanced statistical and computational techniques that are appropriate for big data in the upper division electives, including natural language processing and categorization, network analysis, time-series, topic modeling, causal inference, efficient programming, and parallel computing.

3. **Apply substantive arts and social science knowledge to further improve knowledge and understanding.** Technical skills allow us to handle and analyze social data, but they do not tell us what to look for or whether what we have found is meaningful. For this, we need knowledge of the social context and a strong theoretical foundation. Through the courses, the minor will build knowledge from a home discipline with most instructors coming from the arts and social sciences and often using their own research as examples. This encourages students to think critically about big social data and derive theory driven, testable hypotheses in relation to specific real-world problems and causal processes. It will also encourage students to evaluate and incorporate ethical, legal, and privacy concerns into the analysis of social data, with attention to impacts on at-risk groups.

4. **Communicate data-driven knowledge effectively to the scientific community, policymakers, and the public.** Presenting data to diverse audiences presents many challenges. The program will emphasize and develop a range of static and interactive data visualization techniques, such as html output and dashboards for the internet, which will help students to clearly communicate complex exploratory and statistical analyses. Students will learn how to work effectively in groups with standardized workflows, reproducible and efficient code, and version control systems using Git and Github. These skills will be a key point of emphasis in nearly all courses and especially in their capstone project for the minor.

The curriculum structure facilitates the development of these learning objectives in several ways. First, the program requires three introductory courses: one focused on computational methods, one focused on statistical methods, and one focused on ethics, society, and big data. Second, the electives build on the foundational skills from these courses as well as specific discipline knowledge to further strengthen students' ability to effectively work

with data. Students have the flexibility to choose electives from either their "home" discipline or a related one, which will promote a deeper understanding of the different challenges and theoretical lenses across research areas. They also can choose courses that emphasize different types of technical social data analytic skills, such as data visualization, text analysis, causal inference, and other techniques that have gained prominence with the advent of big, real time data. Finally, these skills and learning objectives are brought together and further developed in a capstone seminar project that focuses on analysis of a major social or policy problem and communication of the findings to various stakeholders.

3.5 Work experience/field/practicum placement

Not directly applicable. However, we plan to build a strong set of co-op connections and opportunities to help students achieve their professional and career goals. Moreover, the Capstone Project Seminar is intended to give students hands-on experience with real world policy and social problems in cooperation with community partners.

4 Program Resources

4.1 Target audience and enrolment plan

The target audience is FASS students and those in related disciplines who are looking to complement the foundational arts and social science knowledge they acquire through their major degree programs with rigorous and systematic training in the emerging area of social data analytics.

We expect demand for this program to be robust, and indeed, we will likely require students to apply to the minor and have to limit enrolment at first to 25-30 students. With the proper resources and support, we anticipate growing to a steady-state enrolment of 80-100 students within 3-4 years. We also expect the program to be of strong interest to domestic and international students alike.

Our evidence for this is as follows:

First, in addition to the four primary departments, several other departments have expressed interest in the minor for their students and agreed to provide teaching capacity. Please see the attached letters of support from the School of Communication, Statistics and Actuarial Science, English, Gender, Sexuality, and Women's Studies, and History.

Second, in spring term 2019, both Economics and Political Science offered special topics courses in data visualization and social data analytics—courses that will become upper division electives. These courses enrolled 15 and 26 students respectively. We anticipate these to increase further once the courses are more institutionalized in the calendar and part of this program.

Finally, in the spring of 2019, we conducted a survey of majors and minors in Economics, Linguistics, Philosophy, and Political Science to gauge their interest in the program. The survey had 155 responses. More detailed results are presented below in the student interest section, but the key takeaway is that over 62% of students reported being "extremely" or "very" interested in the program. That is nearly 100 students expressing interest in the SDA minor *just from the four originating departments*. The full survey results are included as supporting documents for this proposal, including open ended comments, which further demonstrate the keen interest from students.

4.2 Resources

There is keen support for the program from the four departments. We anticipate several resource implications, including new faculty positions, staff support, and computer lab access. We will also require funds to assist with the creation of new courses, co-teaching for the capstone project seminar, and outreach events to publicize the new program. We have good reason to believe that the minor might actually drive new enrolments to SFU and FASS, and if so, this could have further resource implications for classrooms and other support staff.

This program will require the creation of three new courses among the four core courses—Computational Text Analysis, Data and Society, and the Capstone Project Seminar—and the reallocation of existing teaching resources to those courses in the form of instructors and teaching assistants. While an important and valuable part of this proposed program, the Capstone Project Seminar, in particular, will require significant teaching resources akin to an Honours program course. See request for positions below. It also requires the creation of new electives (courses often previously offered as special topics); however, it is not immediately clear how this will affect the need for teaching resources on the medium to long-term. We know that we can absorb many students into existing offerings that will now be part of the minor because not all courses have reached the maximum cap in the past. At the same time, departments or specific courses may become more popular with students and that would likely necessitate a reallocation of teaching resources. The four primary departments are already at the high end of student to faculty ratios in FASS. This leaves less cushion, particularly if student interest in the minor meets or exceeds expectations.

Therefore, we have written a proposed budget that takes account both the short-term resources necessary to launch the minor for up to 30 students per year and begins to account for anticipated growth in the medium-term.

A full budget proposal and request for funds for the first five years of the program is provided in the Appendix (section 8.5). Here, we list those requests and the rationale for each:

1. *Limited Term Assistant Professor for Philosophy.* This is needed to provided teaching capacity in the critical area of ethics, privacy, and society related to big data. Contingent on demonstrated demand for the minor, we request that this is converted to a tenure track position after three years. The reason we are requesting an Assistant Professor position specifically is that data ethics is an area of high demand in the job market and it will be difficult to attract and retain a data ethics specialist below the Assistant Professor level.

2. *Half time Limited Term Lecturer for Linguistics.* This position is needed to free up Dr. Maite Taboada to devote half of her teaching responsibility to the SDA minor. Dr. Taboada specializes in and plans to regularly teach the required course in computational text analysis. She also may offer a more advanced computational text analysis course at the upper division and rotate into the capstone seminar project course. It is important to note that text analysis had the highest level of expressed interest in our student survey, and we expect demand for such courses to be particularly robust inside and outside Linguistics. There may be justification for a permanent Lecturer or Assistant Professor position in the future, depending on enrollments and staffing levels in the department.

3. *Half time Assistant Professor positions in Economics and Political Science.* We are requesting these positions for year two of the program, starting in fall 2021. Economics and Political Science have already agreed to provide substantial teaching to the SDA minor with existing resources. This is feasible in the short-term and fits with both departments' strategic planning. However, on the long-term as the program begins to mature and we add students, both departments will require these positions to further bolster it. Moreover, while a critical component of the program, the Capstone Seminar Project will have limited enrolment, which is a significant cost for departments that regularly enroll much larger numbers in their upper division courses, especially Economics.

4. *Staff – 0.4 Advisor/community coordinator (APSA 7).* A dedicated advisor to the program that would provide support for and communicate to students majoring in a variety of FASS programs is crucial to its success. It would help ensure that interested students can get the necessary information and guidance that is specific to their career goals, which will hopefully widen the scope of interested students outside the four originating departments. This position would also organize outreach to potential external community partners, which is a critical component to the program.

5. *Course releases for program director and instructional development.* One course release per calendar year for the program director to focus attention on making the program a success. Course releases for the creation of the new computational text analysis course and funds to allow full teaching credit to *both* co-instructors of the capstone project seminar in its first three years. The capstone seminar will be a unique

and challenging course to develop and teach, requiring outreach and coordination with faculty across the university and community partners.

6. *Launch, outreach, and recognition events.* We are requesting funds for a launch event in Spring 2021 where we plan to partner with SFU Public Square to get the word out to the community and potential community partners about this exciting new program. We are also requesting funds for regular outreach events and for a student presentation day to showcase research projects emerging from the capstone seminar.

This program is not expected to reduce or eliminate other programs. As noted above, it will be necessary to redirect some teaching resources as indicated above for the four courses and popular elective courses that necessitate more frequent scheduling. If the minor also attracts new students to FASS and the university as a whole, that would necessitate more resources in the future.

5 Program Review and Academic/Administrative Oversight

The program will conduct a mid-term assessment after three years. It could then be externally reviewed on an on-going basis independently as part of the four departments' external reviews every 7 years. However, given the potential challenges of assessing an interdisciplinary minor, we think it best to assess the minor once as an independent program with an external reviewer coming from each of the four originating departments' disciplines in year 7. There are at present no relevant accrediting bodies for this program.

Governance structure

As an interdisciplinary program with multiple stakeholders, the minor necessitates an inclusive governance structure. We propose a two-level governance structure with a directorship and an advisory committee. A committee consisting of one designated representative from each of the originating departments (Economics, Linguistics, Philosophy, and Political Science) will choose the director. The director will usually come from one of the four originating departments on a rotating basis and is elected by a majority every two years by the committee. In case the rotation cannot be followed, or there is a tie in the vote, priority will be given to interested faculty from one of the departments that has gone longest without directorship. The director will be responsible for the everyday running of the minor, including course scheduling, curriculum review, representation on the FASS Curriculum Committee, promoting the minor, and administrative responsibilities.

The academic advisory committee will consist of the Undergraduate Chairs or their designates from each of the teaching departments, including those outside FASS. It will be primarily responsible for advising the director, approving all new courses to be included as

part of the minor, and liaising with and maintaining close connections with the participating teaching departments.

The advisory committee will meet at least twice per year (once in fall and spring terms) to ensure that the program remains current and coordinate curriculum across the teaching departments.

To facilitate efficient administration of the minor, it will be housed in the director's home department and rotate accordingly with that of the director. At the same time, the program will be autonomous and full-time faculty will be appointed only in the host units. In order to strengthen interdisciplinary connections and broaden the appeal of the minor, the program advisor will also regularly hold office hours in each of the four departments contingent on space being made available.

6 Program Consultation

The SDA Minor proposal has involved extensive consultation with departments and programs across the university. It originated from discussions in early 2018 with representatives from the four proposing departments: Steven Weldon (Political Science), Maite Taboada (Linguistics), Anke Kessler (Economics), and Dai Haide (Philosophy), as well as Catherine Murray (FASS Associate Dean for Undergraduate Programs). We and many of our colleagues within our departments and in other FASS departments recognized the need to develop strong training in social data analytics that paid particular attention to the ethical issues and implications of big data for vulnerable communities. We also recognized the challenges of providing such training within individual departments and the advantages of collaborating across disciplines to leverage our strengths.

After settling on a minor, which we believe best fits the needs of arts and social science students and properly signals the skills and training to potential employers and graduate programs, we developed the basic program structure. We sought and received support for the proposal from our respective departments in Fall 2018.

In early 2019, we began circulating the proposal, seeking support from other FASS departments as well as other interested departments across the university. We received unanimous support to proceed with the Notice of Intent for the proposed minor from the FASS Undergraduate Curriculum Committee on February 8, 2019. Over the next several months, we consulted and met with representatives from Statistics and Actuarial Science, English, Digital Humanities, Gender, Sexuality and Women's Studies, History, Geography, David Hik (Associate Dean, Academic Faculty of Science), and Fred Popowich (Computing Science and Scientific Director of SFU's Big Data Initiative).

The NOI was approved unanimously at SCUS on May 2, 2019 and by SCUP on June 5, 2019 with strong expressed principled support. Following feedback from members of SCUP, we also met with the current and most recent directors of the Cognitive Science program to consult and seek advice on the governance structure as an interdisciplinary

program with multiple stakeholders from different academic departments and faculties. We also followed up with all participating departments to solidify support, address any concerns, and finalize the course offerings.

There are no relevant regulatory or professional bodies to be consulted.

7 Evidence of Student Interest and Labour Market Demand

Student Interest:

We expect student demand for this program to be high among both domestic and international students. Our evidence for this is as follows. First, in addition to the four primary departments, several other departments have expressed interest in the minor for their students and in several cases have agreed to provide teaching capacity. Please see the attached letters of support from the School of Communication, Geography, and History.

Second, in spring term 2019, both Economics and Political Science offered special topics in advanced data visualization and social data analytics. These courses enrolled 15 and 26 students respectively. We anticipate these to increase once the courses are more institutionalized in the calendar and part of this program.

Finally, we conducted a survey of majors and minors in Economics, Linguistics, Philosophy, and Political Science to gauge their interest in the program in early April 2019. The survey had 155 responses. The key summary tables below show that the interest in the Social Data Analytics minor is robust with over 62% of students saying they were "extremely" or "very" interested in the program. An additional 23% of respondents said they were "moderately" interested in the program. The other two summary graphs also indicate that students find it strongly appealing that the minor builds on the training in their FASS major degree program and that the program will emphasize the ethical and privacy issues associated with social data analytics. Results are similar between domestic and international students.

The full survey results are included as supporting documents for this proposal, including open ended comments, which further demonstrate the keen interest from students.

Potential to attract new students

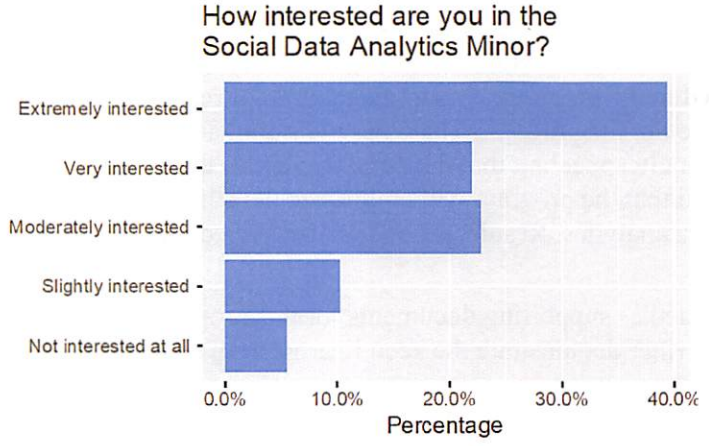
One key question is whether this minor will attract new students and increase enrolments as a whole for SFU or simply lead to a reallocation of existing teaching resources. While providing better educational opportunities and preparation for today's job market for existing students is critical in and of itself and should be central to all universities' key missions, we also have good reason to believe the minor will help attract new students to SFU and boost enrolments.

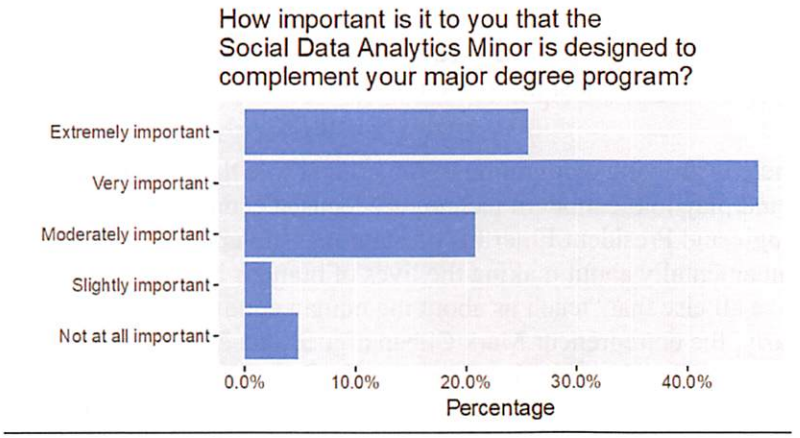
First, we can see from the below figures that interest in the minor is extremely high among current students. While some interest undoubtedly comes from students once they are in the system, it seems likely that a good deal of interest also existed before they started at SFU. We can get a better sense of this by breaking out interest in the minor by students' anticipated graduation date, which we asked in the survey. Interest among cohorts fluctuates between 59-68% saying they are "extremely" or "very" interested in the program. Given the very high level of interest amount our current students, even those who have been at SFU for a brief time, we expect that prospective students would also have high levels of interest in the program.

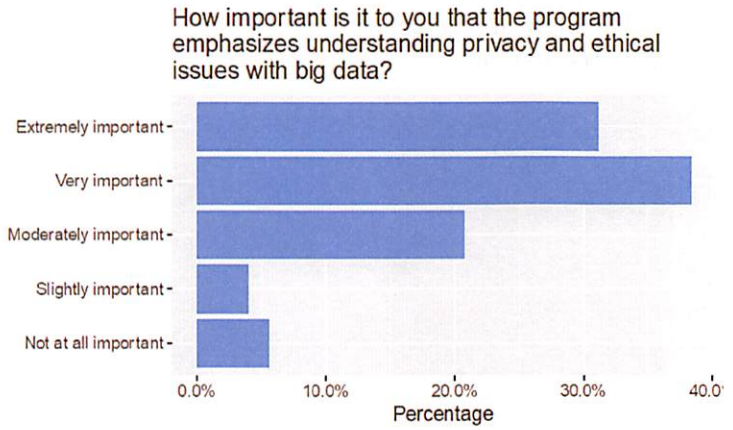
Second, as indicated above, currently there are few competing programs in Canada and North America that specifically target arts and social science undergraduate students. Although it seems likely that similar programs will be developed in the next few years, SFU stands to capitalize on being an early adopter and building on our emerging reputation as a leader in big data.

Finally, demand for informed, culturally sensitive social data analytics and employees who have strong critical thinking and communication skills is sure to increase in the coming years, as evidenced by the discussion in the following section.

All of these trends signal a strong potential that the Social Data Analytics minor will very likely stimulate outside interest and help attract new students to FASS and SFU.







Labour Market Demand:

Social data analytic skills are in high demand across the Canadian labor market and this demand is anticipated to grow sharply in the coming years. According to a 2015 report from the Economic Council of Canada entitled "Closing Canada's Big Data Talent Gap", Canada faces a shortage of between 10,500 and 19,000 professionals with deep data analytical skills and a further gap of 150,000 for professionals, like data analysts and managers, with the "solid data and analytical literacy to make better decisions." Furthermore, they found from a survey of Canadian employers that "it [is] increasingly difficult to recruit, retain, and train Big Data and Analytics professionals" and that the "shortage of talent with the right skills will persist unless existing academic and training curriculum are expanded to better meet employers' needs." The demand for those with big data and analytics skills was particularly acute in the fields of (1) Finance and Insurance, and (2) Professional, Scientific, and Technical Services.

The report makes it clear however that employers are looking for more than just technical analysis skills. The modern data analytics career also requires strong communication, analytical thinking, and project management skills as well as area specific knowledge and familiarity.

Consistent with this idea, there is growing recognition of the critical role that the arts and social sciences will and should play in the modern technology focused economy.[2] As John Hennessy, Chairman of Google and President Emeritus of Stanford University argues, this is because technology is fundamentally about making the lives of humans better—it is the arts and social sciences above all else that "teach us about the human condition and how it might be improved." Similarly, the entrepreneur Mark Cuban argued in a 2017 interview that there would be "greater demand in 10 years for liberal arts majors than for programming majors... because when the data is all being spit out for you... you need a different perspective in order to have a different view of the data. [You need] more of a freer thinker."

Given this, we anticipate our graduates will be in high demand for a range of public, non-profit, and private sector employment opportunities.

[2] See, for example, Scott Hartley (2018), *The Fuzzy and the Techie: Why the Liberal Arts Will Rule the Digital World.* Mariner Books.

8 Appendices

8.1 Calendar entry

A complete proposed Calendar entry must be attached.

8.2 New Courses

Attach new course approval forms, sample course outlines, and library reviews for each course.

8.3 Market analysis – student interest and labour market demand

Include any data, student surveys, and letters of support from industry, employers, or accrediting bodies, that provide evidence of student and labour demand.

8.4 Consultation comments and letters of support

Attach any written endorsements or comments, from both internal and external sources.

8.5 Resources

Include any supportive memos indicating that sufficient space and other resources (such as confirmation from the Dean's Office, library reports, etc.) are available for the program.

8.6 Financial plan (only if additional resources required)

Outline the initial start-up costs, such as curriculum development and online design, as well as anticipated costs in offering the program (instructional salaries and benefits, administrative overhead, student services, and online support).

8.7 Abbreviated curriculum vitae for faculty

(needed only for new programs requiring Ministry of Advanced Education final approval) Include a CV for each faculty member in the program. In the case of cross-disciplinary programs, include a CV for each member of the steering committee and for faculty members likely to be teaching core courses. It is strongly suggested that short (e.g. 2 pages), standardized CVs be submitted, providing brief information on: current position; credentials; research interests; publications, grants and graduate supervision over a defined period (e.g. last seven years).

Social Data Analytics Minor

The Faculty of Arts and Social Sciences, with the Departments of Economics, Linguistics, Philosophy, and Political Science, along with the Departments of English, Gender, Sexuality and Women's Studies, and Statistics and Actuarial Science, and the School of Communication, offers a minor in Social Data Analytics (SDA). This program offers an interdisciplinary study of statistical and computational methods with an emphasis on the privacy, ethical, and societal issues surrounding technology and big data. It is intended to complement and build on the knowledge and deeper understanding of issues that students acquire from their major program of study in the Arts and Social Sciences and related disciplines.

The program is managed by the Faculty of Arts and Social Sciences. An advisory committee consisting of representatives from the above departments serve as a liaison between participating departments and the program director.

Admission Requirements

Program admission is limited. Entry is via a formal minor program application and applications will be considered for both students entering Simon Fraser University and those already enrolled. Students may apply for admission to the minor program at any time. It is strongly recommended that students contact the Social Data Analytics advisor or program director early about admission and scheduling.

Program Requirements

Students must complete at least 27 units as follows:

Complete all of:

SDA 250 – Computational Text Analysis (4)
SDA 270 – Data, Ethics, and Society (3)
SDA 490 – Capstone Project Seminar (5)

Complete one of:

ECON 233 – Introduction to Economic Data and Statistics (4)
POL 201 – Introductory Quantitative Methods in Political Science (4)
STAT 203D – Introduction to Statistics for the Social Sciences (3)

Elective Requirements

Students complete a total of at least 12 elective units, as follows:

No more than four units of which may come from:

CMNS 333 – Digital Policies in a Global Context: Current Issues, Concepts and Analysis (4)
CMNS 353 – Topics in Technology and Society (4)
ENGL 363 – Studies in the Digital Humanities: Theory & Practice (4)
GSWS 399 – Gender, Sex, and Numbers (4)
POL 318 – Fake News and Alt-Facts: Navigating Post-Truth Politics (4)
POL 426W – Political Behaviour (4)

No more than four units of which may come from:

ECON 334 – Data Visualization and Economic Analysis (3)
POL 390 – Data Visualization and Political Analysis (3)
STAT 240 – Introduction to Data Science (3)
STAT 310 and STAT 311 – Introduction to Data Science for the Social Sciences AND Data Science Laboratory for the Social Sciences (4)

Any of:

ECON 329 – Experimental Economics (3)
ECON 335 – Introduction to Causal Inference and Policy Evaluation (3)
ECON 435 – Quantitative Methods (5)
GEOG 255 – Geographical Information Science I (3)
GEOG 355 – Geographical Information Science II (4)
PHIL 315 – Formal Methods in Philosophy (3)
POL 315 – Intermediate Quantitative Methods (4)
POL 488 – Topics in Empirical Research Design and Analysis (4)
STAT 302 – Analysis of Experiment and Observational Data (3)
STAT 360/361 – Advanced R for Data Science (4)
STAT 452 – Statistical Learning and Prediction (3)

With approval of the program director, up to six units of relevant courses from other departments may be counted for the minor.

Faculty of Arts and Social Sciences Degree Requirements

For all bachelor of arts (BA) programs, students complete 120 units, which includes

- at least 60 units that must be completed at Simon Fraser University
- at least 45 upper division units, of which at least 30 upper division units must be completed at Simon Fraser University
- at least 65 units (including 21 upper division units) in Faculty of Arts and Social Sciences courses
- satisfaction of the writing, quantitative, and breadth requirements

- an overall cumulative grade point average (CGPA) and upper division CGPA of at least 2.0, and a program (major, joint major, extended minor, minor) CGPA and upper division CGPA of at least 2.0

For students in other Faculties, please check your Faculty's overall degree requirements: https://www.sfu.ca/students/calendar/faculties-research.html

Writing, Quantitative, and Breadth Requirements

Students admitted to Simon Fraser University beginning in the fall 2006 term must meet writing, quantitative and breadth requirements as part of any degree program they may undertake. See Writing, Quantitative, and Breadth Requirements for university-wide information.

WQB Graduation Requirements

A grade of C- or better is required to earn W, Q or B credit

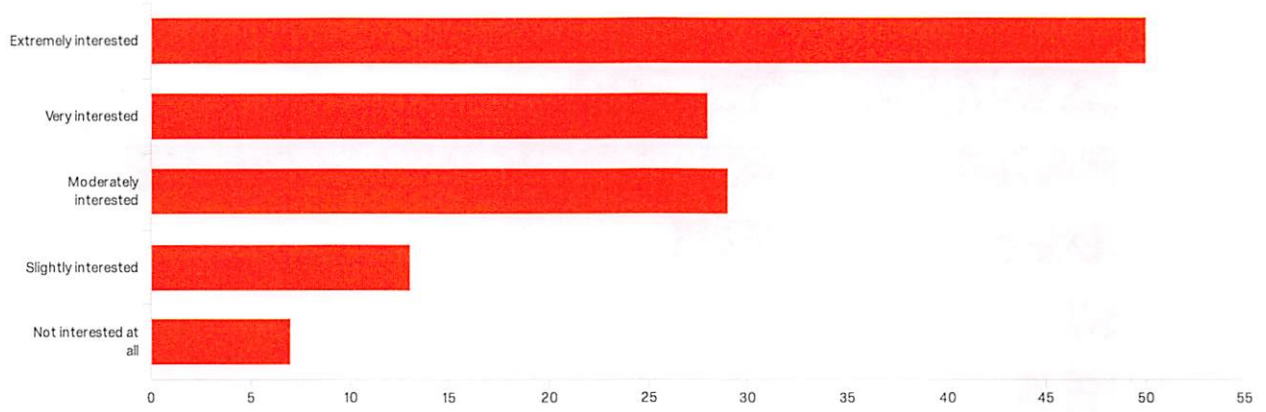
Requirement	Units	Notes	
W - Writing	6	Must include at least one upper division course, taken at Simon Fraser University within the student's major subject	
Q - Quantitative	6	Q courses may be lower or upper division	
B - Breadth	18	Designated Breadth	Must be outside the student's major subject, and may be lower or upper division 6 units Social Sciences: B-Soc 6 units Humanities: B-Hum 6 units Sciences: B-Sci
	6	Additional Breadth	6 units outside the student's major subject (may or may not be B-designated courses, and will likely help fulfil individual degree program requirements) Students choosing to complete a joint major, joint honours, double major, two extended minors, an extended minor and a minor, or two minors may satisfy the breadth requirements (designated or not designated) with courses completed in either one or both program areas.

- No GPA, fixed quotas, or proportional to

Default Report

Social Data Analytics Minor
April 23, 2019 11:04 AM MDT

Q1 - If the Social Data Analytics Minor existed when you started at SFU, how interested would you have been in it?

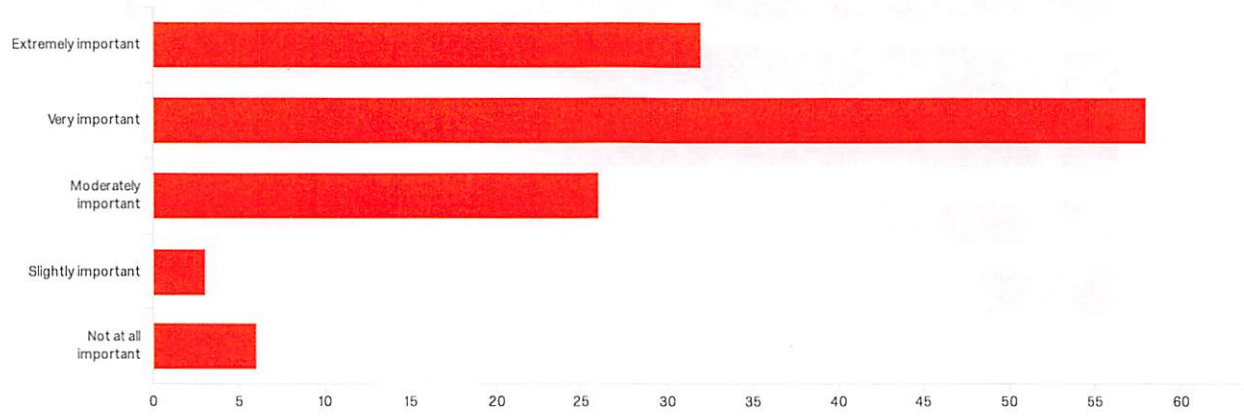


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	If the Social Data Analytics Minor existed when you started at SFU, how interested would you have been in it?	1.00	5.00	2.20	1.22	1.49	127

#	Field		Choice Count
1	Extremely interested	39.37%	50
2	Very interested	22.05%	28
3	Moderately interested	22.83%	29
4	Slightly interested	10.24%	13
5	Not interested at all	5.51%	7
			127

Showing rows 1 - 6 of 6

Q2 - How important is it to you that the Social Data Analytics Minor is designed to complement your major degree program in Arts and Social Sciences (for example, by using examples and concepts from your disciplines to learn the relevant data analytic skills)?

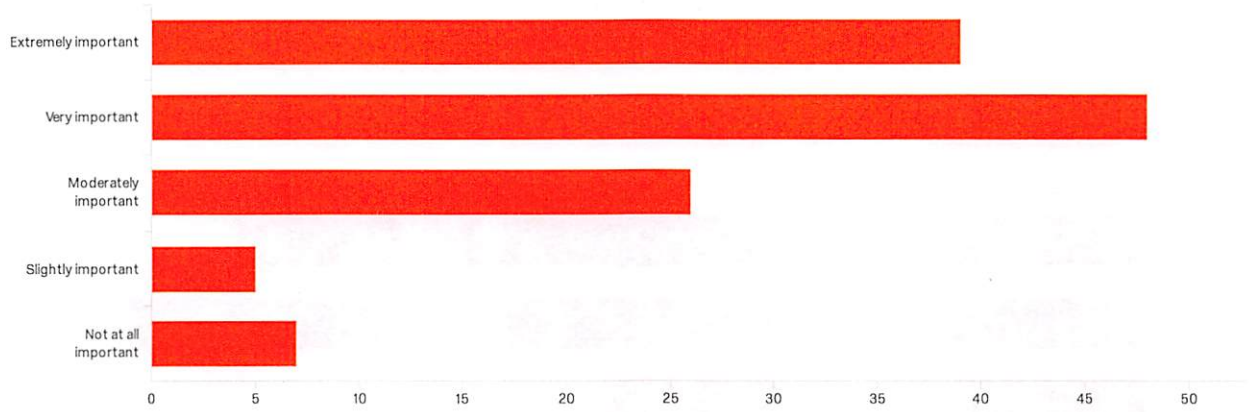


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How important is it to you that the Social Data Analytics Minor is designed to complement your major degree program in Arts and Social Sciences (for example, by using examples and concepts from your disciplines to learn the relevant data analytic skills)?	13.00	17.00	14.14	0.99	0.97	125

#	Field	Choice Count
1	Extremely important	25.60% 32
2	Very important	46.40% 58
3	Moderately important	20.80% 26
4	Slightly important	2.40% 3
5	Not at all important	4.80% 6
		125

Showing rows 1 - 6 of 6

Q4 - How important is to you that training in social data analytics and "big data" includes an emphasis on the privacy and ethical issues associated with such data?

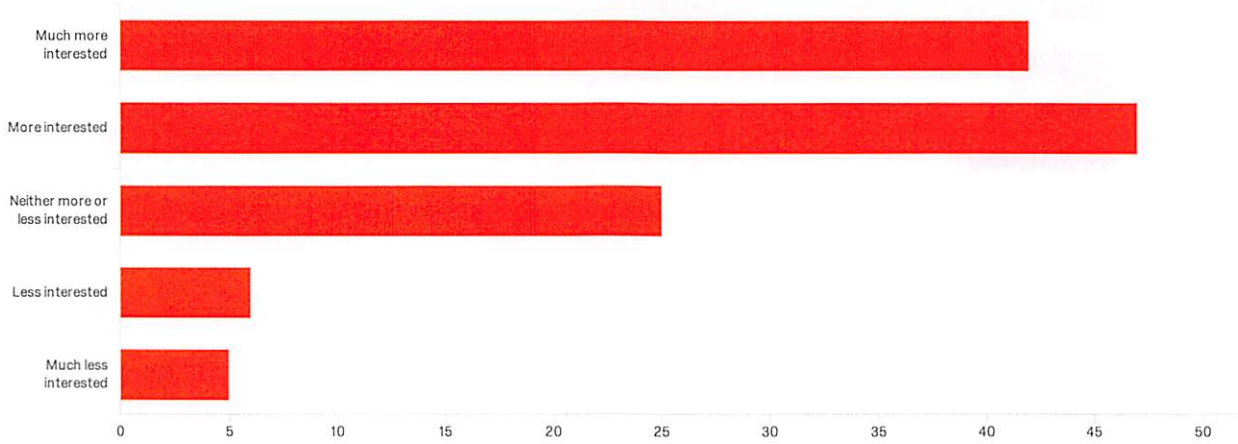


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How important is to you that training in social data analytics and "big data" includes an emphasis on the privacy and ethical issues associated with such data?	13.00	17.00	14.14	1.08	1.16	125

#	Field	Choice Count	
1	Extremely important	31.20%	39
2	Very important	38.40%	48
3	Moderately important	20.80%	26
4	Slightly important	4.00%	5
5	Not at all important	5.60%	7
			125

Showing rows 1 - 6 of 6

Q5 - The minor will include several opportunities for hands-on, real world experience, such as co-op opportunities and a group-based Capstone Project Seminar focusing on a major social problem in our community. Does this make you more or less interested in the program?

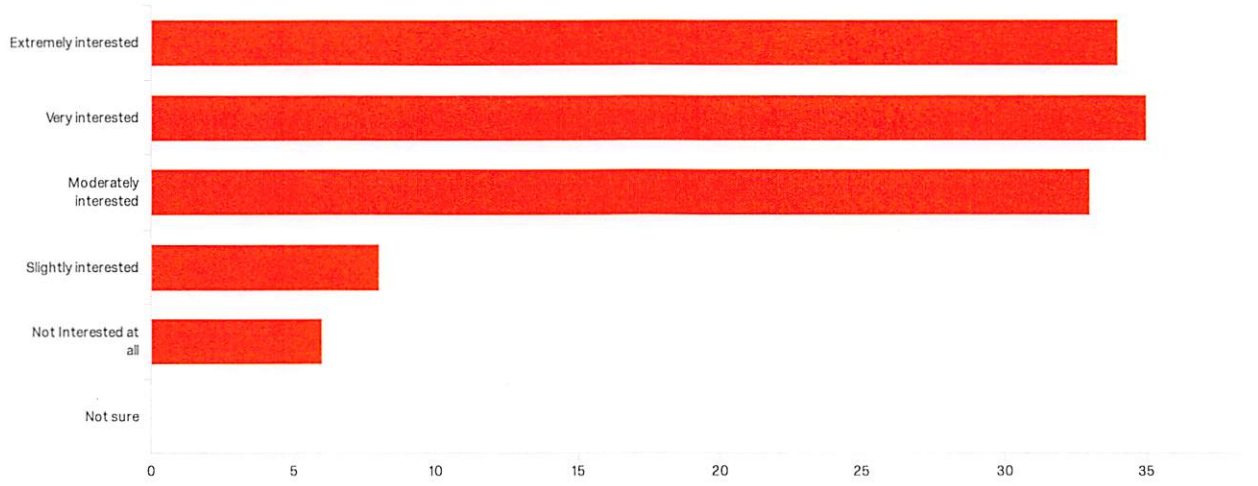


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	The minor will include several opportunities for hands-on, real world experience, such as co-op opportunities and a group-based Capstone Project Seminar focusing on a major social problem in our community. Does this make you more or less interested in the program?	11.00	15.00	12.08	1.04	1.08	125

#	Field		Choice Count
1	Much more interested	33.60%	42
2	More interested	37.60%	47
3	Neither more or less interested	20.00%	25
4	Less interested	4.80%	6
5	Much less interested	4.00%	5
			125

Showing rows 1 - 6 of 6

Q6 - Data Visualization is a key skill in social data analytics, because it allows one to effectively summarize complex relationships and present findings to diverse audiences, such as researchers, practitioners, policy-makers, and the public. This includes maps to visualize geospatial data, interactive graphs to view on the internet, and other advanced data visualization approaches for text and network data and statistical analyses. How interested would you be in taking a course on advanced data visualization?



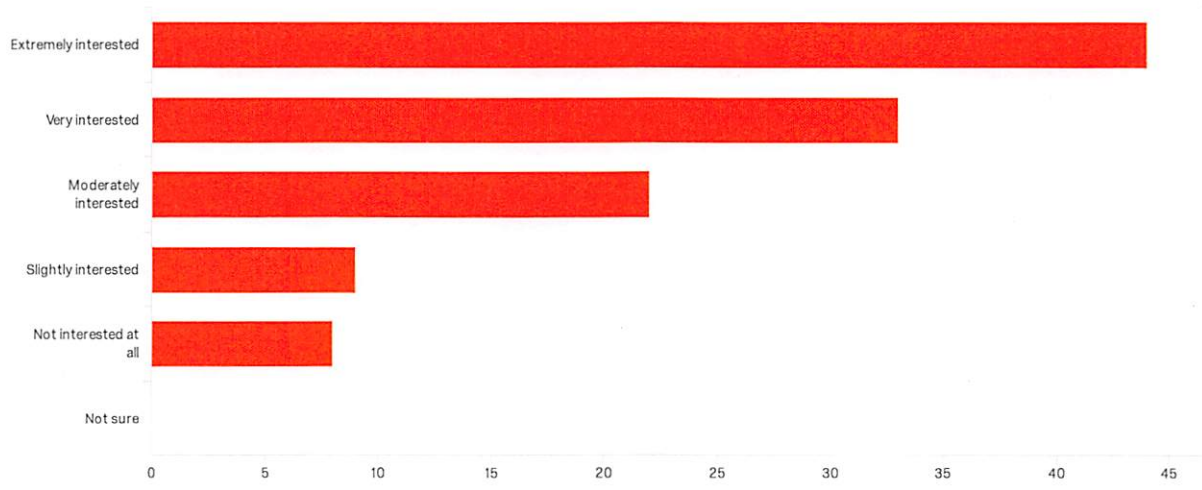
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Data Visualization is a key skill in social data analytics, because it allows one to effectively summarize complex relationships and present findings to diverse audiences, such as researchers, practitioners, policy-makers, and the public. This includes maps to visualize geospatial data, interactive graphs to view on the internet, and other advanced data visualization approaches for text and network data and statistical analyses. How interested would you be in taking a course on advanced data visualization?	1.00	5.00	2.28	1.11	1.24	116

#	Field		Choice Count
1	Extremely interested	29.31%	34

#	Field	Choice Count	
2	Very interested	30.17%	35
3	Moderately interested	28.45%	33
4	Slightly interested	6.90%	8
5	Not Interested at all	5.17%	6
6	Not sure	0.00%	0
			116

Showing rows 1 - 7 of 7

Q7 - Text Mining and Analysis. The availability of text data for analysis is a big part of the social data analytics and the "big data revolution". This data can come from books, articles, print media, social media, online message boards, digitized documents, or digitized speech, It provides us with a way to analyze culture and society on a macro level. It also allows us to examine how individuals and leaders communicate with one another and the public. How interested would you be in taking courses on text mining and analysis? How interested would you be in taking courses on text mining and analysis?

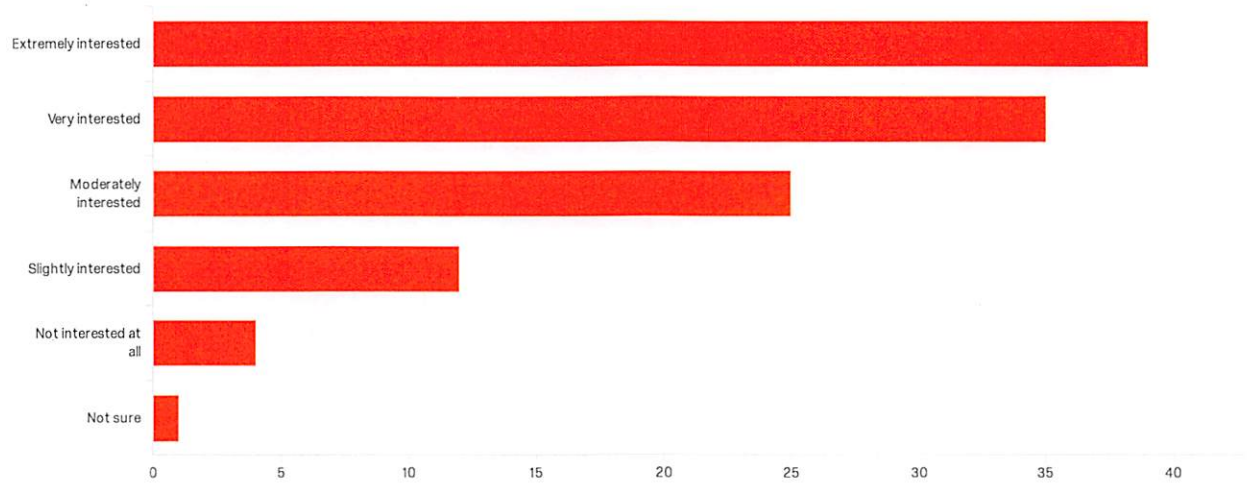


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Text Mining and Analysis. The availability of text data for analysis is a big part of the social data analytics and the "big data revolution". This data can come from books, articles, print media, social media, online message boards, digitized documents, or digitized speech, It provides us with a way to analyze culture and society on a macro level. It also allows us to examine how individuals and leaders communicate with one another and the public. How interested would you be in taking courses on text mining and analysis? How interested would you be in taking courses on text mining and analysis?	13.00	17.00	14.17	1.21	1.47	116

#	Field		Choice Count
1	Extremely interested	37.93%	44
2	Very interested	28.45%	33
3	Moderately interested	18.97%	22
4	Slightly interested	7.76%	9
5	Not interested at all	6.90%	8
6	Not sure	0.00%	0
			116

Showing rows 1 - 7 of 7

Q8 - Network Analysis. Networks are the connections among actors. These can be visualized and analyzed using network analysis. For example, we can examine online and offline friends, business connections, country trade networks, international security alliances, the spread of infectious diseases, or the spread of information and "fake news". How interested would you be in taking course on network analysis?



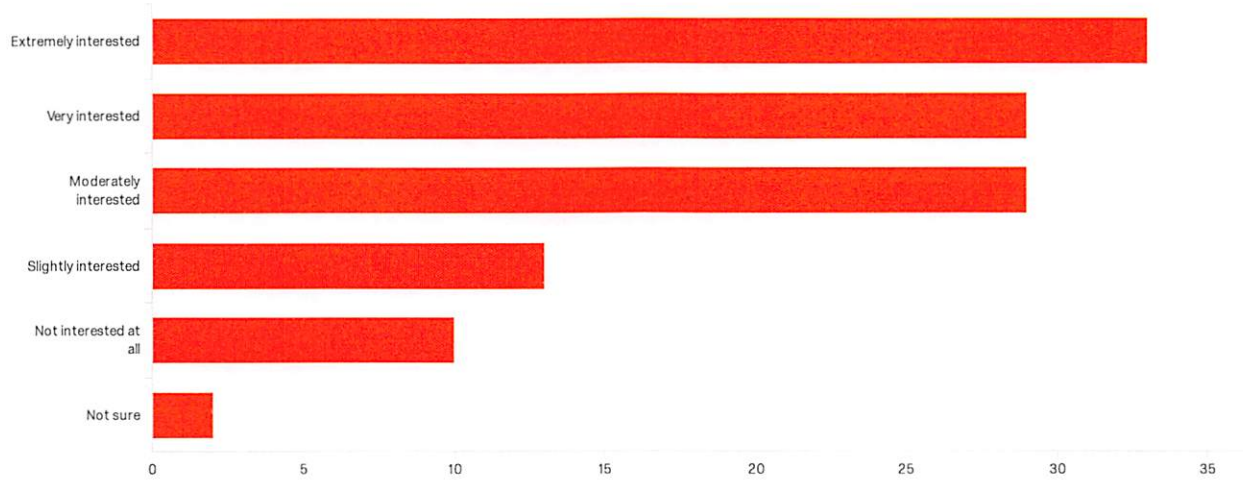
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Network Analysis. Networks are the connections among actors. These can be visualized and analyzed using network analysis. For example, we can examine online and offline friends, business connections, country trade networks, international security alliances, the spread of infectious diseases, or the spread of information and "fake news". How interested would you be in taking course on network analysis?	11.00	16.00	12.22	1.17	1.36	116

#	Field	Choice Count	
1	Extremely interested	33.62%	39
2	Very interested	30.17%	35
3	Moderately interested	21.55%	25
4	Slightly interested	10.34%	12

#	Field	Choice Count
5	Not interested at all	3.45% 4
6	Not sure	0.86% 1
		116

Showing rows 1 - 7 of 7

Q9 - Spatial Analysis. Maps, maps, and more maps. Okay, there is more to it than that, but maps are a particularly powerful data visualization tool that summarizes data and connects it to humans' sense of space and time. Spatial analysis has many applications in the fields of geography, urban planning, economics, political science, and other disciplines. How interested would you be in taking courses on spatial analysis?



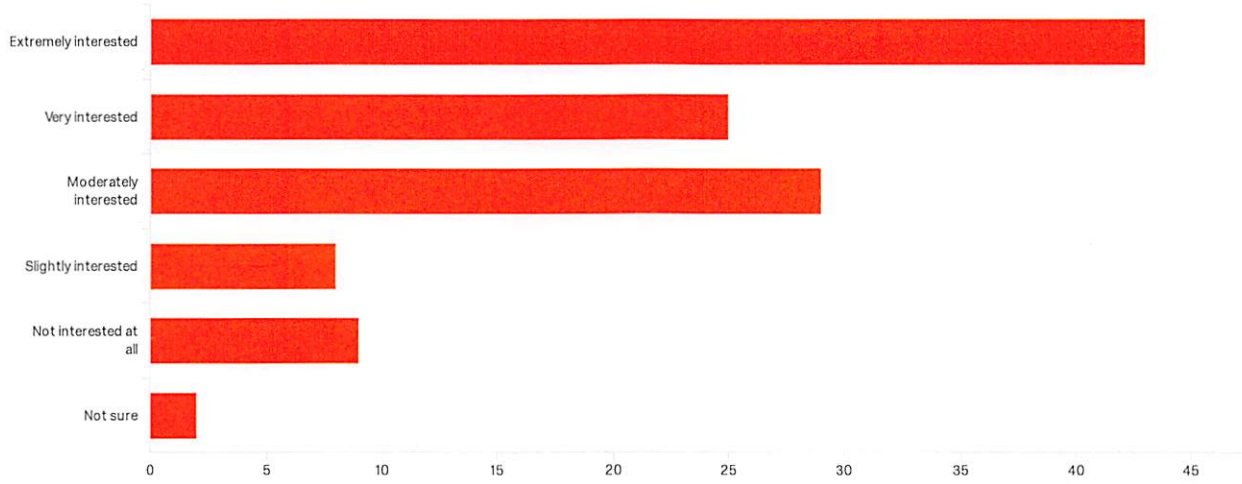
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Spatial Analysis. Maps, maps, and more maps. Okay, there is more to it than that, but maps are a particularly powerful data visualization tool that summarizes data and connects it to humans' sense of space and time. Spatial analysis has many applications in the fields of geography, urban planning, economics, political science, and other disciplines. How interested would you be in taking courses on spatial analysis?	11.00	16.00	12.52	1.33	1.77	116

#	Field		Choice Count
1	Extremely interested	28.45%	33
2	Very interested	25.00%	29
3	Moderately interested	25.00%	29
4	Slightly interested	11.21%	13

#	Field		Choice Count
5	Not interested at all	8.62%	10
6	Not sure	1.72%	2
			116

Showing rows 1 - 7 of 7

Q10 - Machine Learning is the scientific study of algorithms and statistical models to make predictions by "training" computers and statistical models to make better classifications and predictions about the social and physical world. It is used in the development of autonomous driving vehicles, spam detection, Netflix recommendations, and in cognitive neuroimaging. Social scientists are also increasingly taking advantage of these methods to uncover the patterns in other forms of big data and to test and improve predictive model specifications. How interested would you be in taking courses on machine learning?

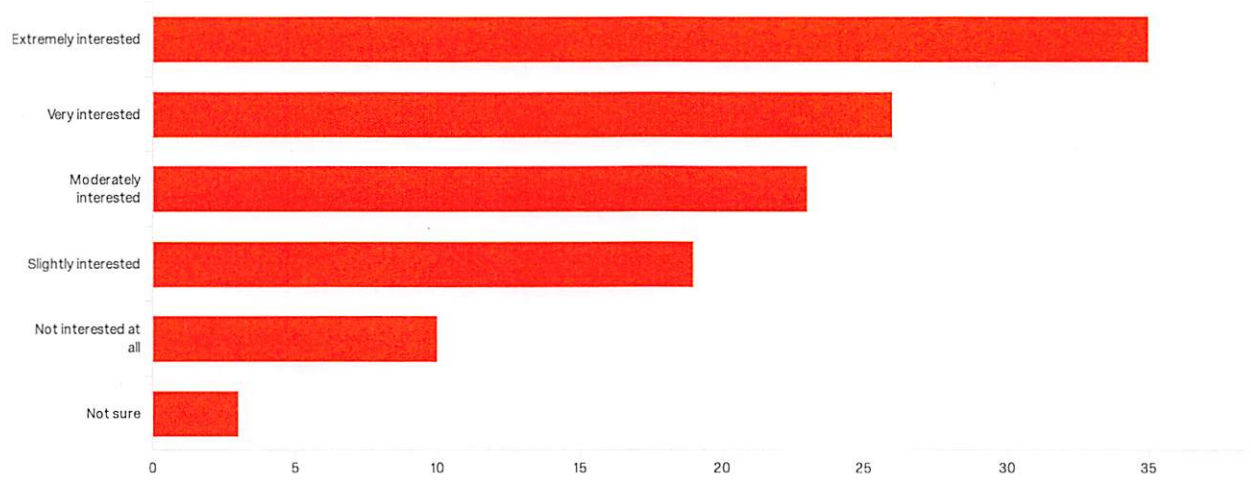


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Machine Learning is the scientific study of algorithms and statistical models to make predictions by "training" computers and statistical models to make better classifications and predictions about the social and physical world. It is used in the development of autonomous driving vehicles, spam detection, Netflix recommendations, and in cognitive neuroimaging. Social scientists are also increasingly taking advantage of these methods to uncover the patterns in other forms of big data and to test and improve predictive model specifications. How interested would you be in taking courses on machine learning?	11.00	16.00	12.32	1.33	1.77	116

#	Field		Choice Count
1	Extremely interested	37.07%	43
2	Very interested	21.55%	25
3	Moderately interested	25.00%	29
4	Slightly interested	6.90%	8
5	Not interested at all	7.76%	9
6	Not sure	1.72%	2
			116

Showing rows 1 - 7 of 7

Q11 - Causal Statistical and Econometrics Analysis. Causal statistical analysis allows us to move beyond describing basic data patterns or associations and begin to differentiate between competing explanations. Because much of today's big data is collected over time, such as stock market data, personal health monitoring, or communication patterns, we are particularly interested in learning how to analyse temporal data in social data analytics. This kind of data allows us to develop a much better understanding of causal processes. How interested would you be in taking courses on advanced statistical and econometrics analysis?

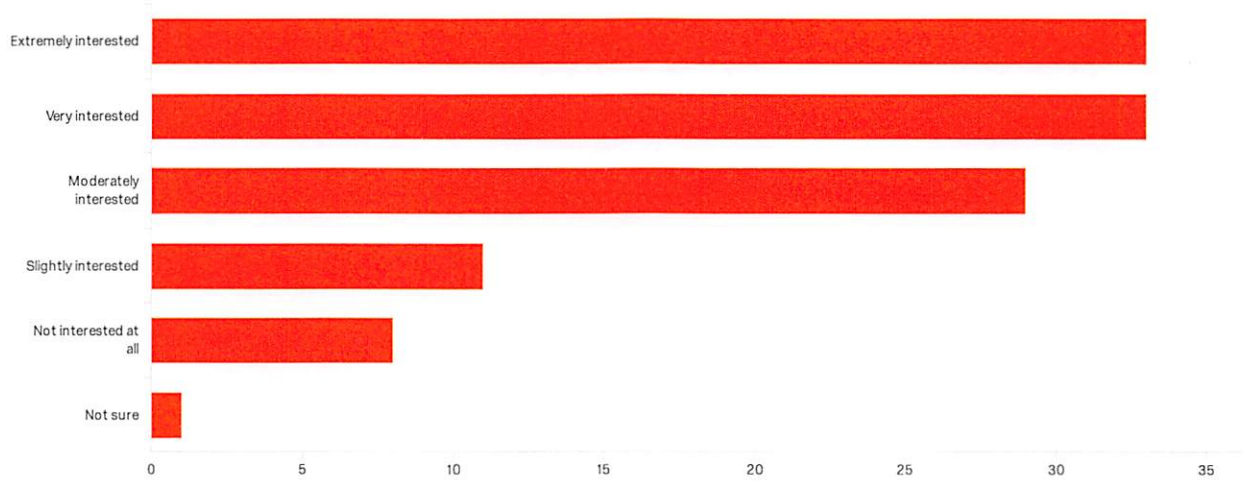


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Causal Statistical and Econometrics Analysis. Causal statistical analysis allows us to move beyond describing basic data patterns or associations and begin to differentiate between competing explanations. Because much of today's big data is collected over time, such as stock market data, personal health monitoring, or communication patterns, we are particularly interested in learning how to analyse temporal data in social data analytics. This kind of data allows us to develop a much better understanding of causal processes. How interested would you be in taking courses on advanced statistical and econometrics analysis?	11.00	16.00	12.59	1.41	2.00	116

#	Field	Choice Count	
1	Extremely interested	30.17%	35
2	Very interested	22.41%	26
3	Moderately interested	19.83%	23
4	Slightly interested	16.38%	19
5	Not interested at all	8.62%	10
6	Not sure	2.59%	3
			116

Showing rows 1 - 7 of 7

Q12 - Experiments are particularly useful for testing and establishing causal relationships. There are several different types of experimental approaches, including lab experiments, field experiments, and survey experiments. These methods are commonly used in the fields of behavioural economics, psychology, political science, medical research, and other disciplines. How interested would you be in taking courses on experimental approaches and analysis?



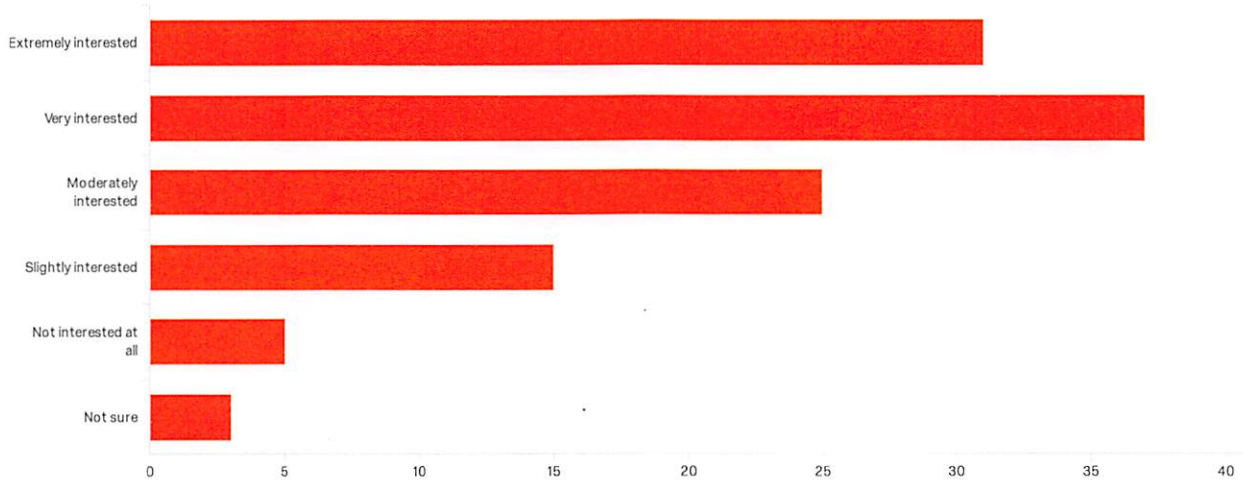
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Experiments are particularly useful for testing and establishing causal relationships. There are several different types of experimental approaches, including lab experiments, field experiments, and survey experiments. These methods are commonly used in the fields of behavioural economics, psychology, political science, medical research, and other disciplines. How interested would you be in taking courses on experimental approaches and analysis?	11.00	16.00	12.40	1.24	1.53	115

#	Field		Choice Count
1	Extremely interested	28.70%	33

#	Field	Choice Count	
2	Very interested	28.70%	33
3	Moderately interested	25.22%	29
4	Slightly interested	9.57%	11
5	Not interested at all	6.96%	8
6	Not sure	0.87%	1
			115

Showing rows 1 - 7 of 7

Q13 - Causal Modelling and Reasoning. While advanced statistical analysis and experiments use an inductive approach to study causality, there are also more deductive, logic focused approaches. These approaches can stand on their own, but they can also be used to inform experimental and statistical analysis approaches. How interested would you be in taking courses on causal modelling, formal methods, and logical reasoning?



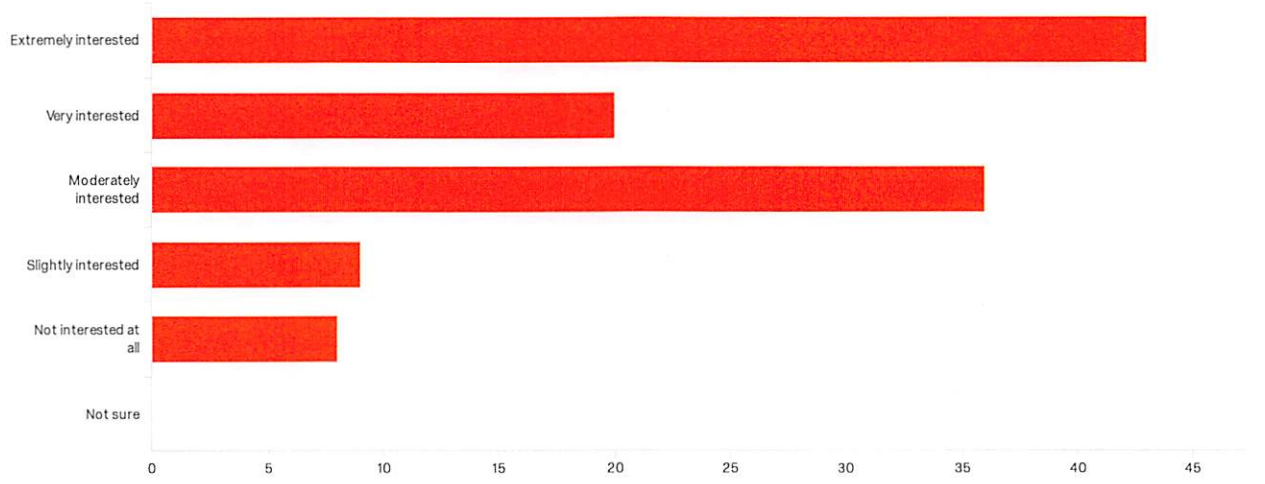
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Causal Modelling and Reasoning. While advanced statistical analysis and experiments use an inductive approach to study causality, there are also more deductive, logic focused approaches. These approaches can stand on their own, but they can also be used to inform experimental and statistical analysis approaches. How interested would you be in taking courses on causal modelling, formal methods, and logical reasoning?	11.00	16.00	12.44	1.27	1.61	116

#	Field		Choice Count
1	Extremely interested	26.72%	31
2	Very interested	31.90%	37
3	Moderately interested	21.55%	25
4	Slightly interested	12.93%	15

#	Field		Choice Count
5	Not interested at all	4.31%	5
6	Not sure	2.59%	3
			116

Showing rows 1 - 7 of 7

Q14 - Privacy and Ethics with Big Data. Social data analytics and 'big data' offer the promise to unlock answers to many of societies' most pressing problems. However, with this promise comes serious risk and ethical concerns about individual privacy, the misuse of data, and risks to vulnerable groups. Indeed, the news today is rampant with stories of companies and other organizations collecting, using, and exploiting personal data. There are also concerns about the negative effects of the technological revolution and social media on social and political discourse, for example, with the rise of "fake news." How interested would you be in taking courses on privacy, ethics, and the challenges for society in the "big data" age?



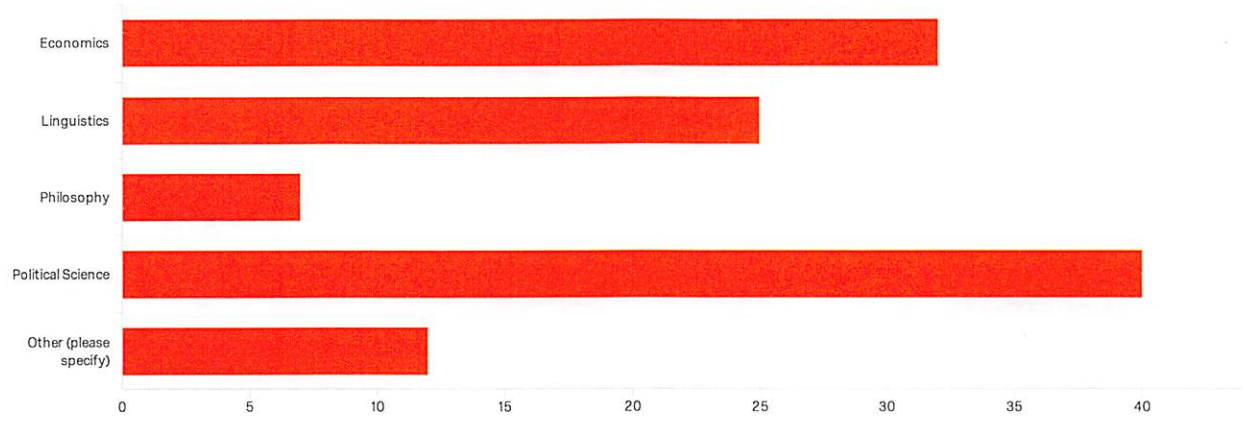
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Privacy and Ethics with Big Data. Social data analytics and 'big data' offer the promise to unlock answers to many of societies' most pressing problems. However, with this promise comes serious risk and ethical concerns about individual privacy, the misuse of data, and risks to vulnerable groups. Indeed, the news today is rampant with stories of companies and other organizations collecting, using, and exploiting personal data. There are also concerns about the negative effects of the technological revolution and social media on social and political discourse, for example, with the rise of "fake news." How interested would you be in taking courses on privacy, ethics, and the challenges for society in the "big data" age?	11.00	15.00	12.30	1.23	1.52	116

#	Field		Choice Count
1	Extremely interested	37.07%	43
2	Very interested	17.24%	20
3	Moderately interested	31.03%	36
4	Slightly interested	7.76%	9
5	Not interested at all	6.90%	8
6	Not sure	0.00%	0
			116

Showing rows 1 - 7 of 7

Q15 - What is your major or intended major of study?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your major or intended major of study? - Selected Choice	1.00	5.00	2.78	1.43	2.03	116

#	Field		Choice Count
1	Economics	27.59%	32
2	Linguistics	21.55%	25
3	Philosophy	6.03%	7
4	Political Science	34.48%	40
5	Other (please specify)	10.34%	12
			116

Showing rows 1 - 6 of 6

Q15_5_TEXT - Other (please specify)

Other (please specify)
Computational Linguistics
Business/Economics joint
Business Administration

Other (please specify)

Finance

Criminology

Economics and Political Science Joint Major

Political Science/Economics

Geography

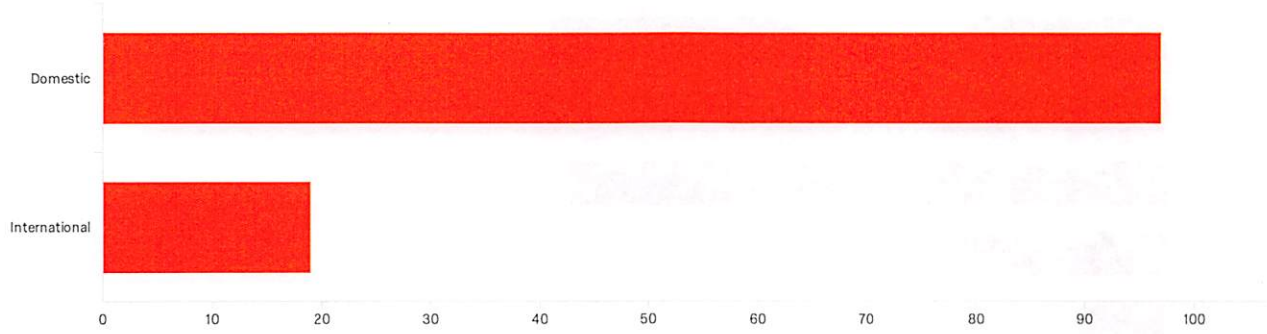
Criminology minor in political science

IAT

anthropology

Psychology

Q17 - Are you a domestic student from Canada or an international student?

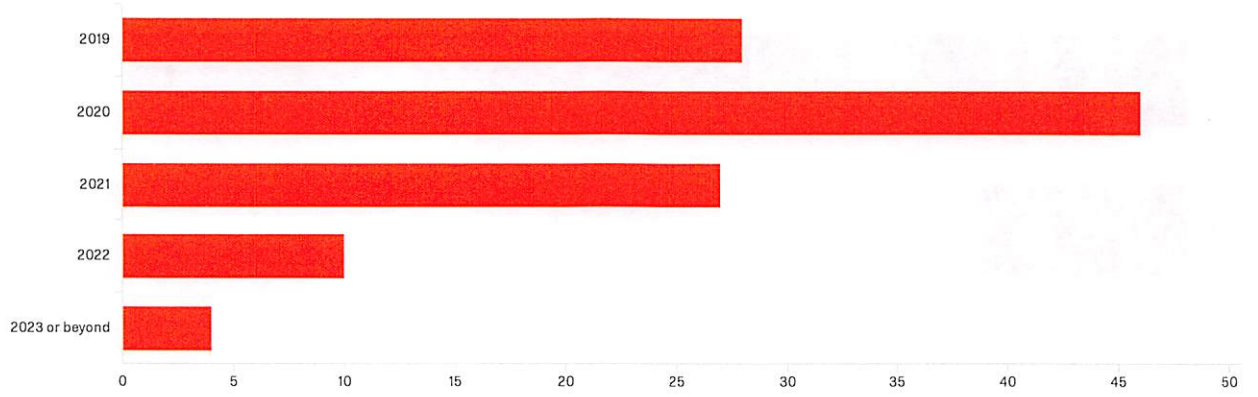


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Are you a domestic student from Canada or an international student?	1.00	2.00	1.16	0.37	0.14	116

#	Field		Choice Count
1	Domestic	83.62%	97
2	International	16.38%	19
			116

Showing rows 1 - 3 of 3

Q18 - When do you expect to complete your undergraduate degree?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	When do you expect to complete your undergraduate degree?	1.00	5.00	2.27	1.03	1.07	115

#	Field		Choice Count
1	2019	24.35%	28
2	2020	40.00%	46
3	2021	23.48%	27
4	2022	8.70%	10
5	2023 or beyond	3.48%	4
			115

Showing rows 1 - 6 of 6

Q19 - Please use this section to provide any feedback or suggestions on the proposed FASS Social Data Analytics Minor or to expand on any of your answers to the above questions.

Please use this section to provide any feedback or suggestions on the propo...

I have no comments. Only rage. I just finished my coursework so I can never take advantage of this.

This is a fantastic idea and you have my strongest support. I would have loved to do this if it started when I was around!

I think the idea is great. I'd be interested to learn about all these topics, but they're quite advanced for a first-year to be interested in from the very start of their degree. It seems to my like more of an upper year, 3xx 4xx style program.

Big Data is a very important trend in the future, so in FASS the better way is to permeate this idea

Until we can offer a comprehensive program in our own discipline, I see little point in sharing the narrow and incomplete perspective of this department with others, apart from as an self-satisfying ego boost

It's a fabulous idea. But I think you might have some trouble convincing FASS students that they're able to do math/stats/programming.

This is an exciting prospect and I would love to minor in it, though I am worried about it becoming available before i graduate in late 2020.

Why wasnt this offered before.

It is too late to take this as an minor. I only have three more term until I graduate

no comment

Should be part of the major not a minor itself

Technology is changing everyday; We must focus also on Artificial Intelligence.

This sounds like a great idea for a minor. I would have been very interested if it was available earlier on in my degree.

This minor should definitely be implemented

Please implement this sooner, it would be of great benefit to all those wanting a job with an arts degree!!

Tech and automation is the oil of 21st industry. With recent train of thought that college degrees are not very valuable in the modern world (especially in arts), a minor like this would be very useful!!!!

I think ethics would be most important.

Can recently graduated students come back simply for this minor? It would have been a huge help to the computational linguistics major, and for those not interested in SLP or teaching. We didn't really have much variety and options or access to stats/math/compsci courses or field study courses...

Please use this section to provide any feedback or suggestions on the propo...

n/a

I have one year to graduate. If u guys wanna to provide this minor with us, plz be quick. Otherwise I have to minor statistic. I love social science

group projects suck, there's always a slacker or two ...

Bring it soon so I can apply for this minor before graduation!

I recommend looking into the Psychology department as well, especally the social psychology department. I believe psychology has a lot to contribute to this minor

I'll be graduating, so it's too late for me to take this minor

Would prepare student for several co-op offerings generally catered towards graduate students or other faculties

The majority of the classes seem very both interesting, and very useful post-graduation. However, math is not my strong suit, and I would be very worried about maintaining my GPA while taking a data analysis minor

Please make it happen

What's the difference between Social Data Analytics and Management information System?

As someone who doesn't have a particular interest or skill in quantitative analysis, the minor doesn't appeal to me from the technical side. What does interest me is the privacy and ethical concerns around big data. The section about co-op was very interesting. As a political science student who has completed co-op, I would advise that you switch co-op to an internship that is guaranteed. Co-op -- at least at SFU -- is very focused on computer science students and I worry that big data students would have few opportunities that are actually related to their educational background.

if it is going to be interdisciplinary, it must be flexible (have lots of options for students to customize), otherwise students may not take it if they are forced into a rigid curriculum that has too many required courses they are not interested in.

End of Report

SFU FACULTY OF COMMUNICATION, ART AND TECHNOLOGY | SCHOOL OF COMMUNICATION

TEL +1 778 782 3687
FAX +1 778 782 4024
sfu.ca/communication

Simon Fraser University
Shrum Science Centre K9671
8888 University Drive
Burnaby BC
Canada V5A 1S6

October 9, 2019

Dr. Catherine Murray
Associate Dean, Undergraduate Academic Programs
Faculty of Arts and Social Sciences
Simon Fraser University

Dear Dr. Murray,

Our undergraduate studies committee (USC) has reviewed and discussed the proposed Minor in Social Data Analytics. We offer strong support for the development of this program and our inclusion in it by offering elective courses.

This minor is commensurate with our educational goals to provide students with demonstrable abilities to apply knowledge to practical communication settings. Our recent external review has identified Social Data Analytics an area of interest and expansion in relation to our students' future occupational aspirations. We are actively developing curriculum in this area so we welcome this initiative and anticipate an ongoing relationship between Communication and FASS departments involved.

Sincerely,

Dr. David Murphy
Undergraduate Chair
Senior Lecturer
School of Communication
Simon Fraser University

SFU DEPARTMENT OF ECONOMICS

TEL +1 778 782 xxxx
FAX +1 778 782 xxxx
sfu.ca/economics

Simon Fraser University
WMC xxxx
8888 University Drive
Burnaby BC
Canada V5A 1S6

October 10, 2019

Catherine Murray
Associate Dean
FASS

Dear Catherine,

I want to indicate to you the strong support of Economics for the Minor in Social Data Analytics that Anke Kessler has been working on alongside with people in Linguistics, Philosophy, Political Science and other departments.

This Minor fits well with the Department's desire to provide our students with practical learning opportunities in an area of rapid growth in terms of job opportunities in the Lower Mainland and elsewhere. Indeed, the Department has just approved several new courses in the general area of data analytics for all our students. The interdisciplinary nature of the Minor adds to the advantage of this program by allowing students to learn about data analytics in a variety of different fields and by allowing faculty members to work together.

We have several people in our department whose expertise will be very helpful for this minor whether to teach or to supervise capstone projects.

This new program of study is exciting and a great opportunity for Economics but we are also conscious of the fact that it will need to be a resounding success in terms of enrollment and quality of students. This is because Economics has no choice but to be extremely mindful of how it is able to balance the allocation of its resources across its programs.

Sincerely,

Nicolas Schmitt
Professor and Acting Chair of Economics

SFU DEPARTMENT OF ENGLISH

CONTACT INFORMATION
Phone: 778-782-3136
Fax: 778-782-5737
Website: www.sfu.ca/english

Academic Quadrangle 6129
Simon Fraser University
8888 University Drive
Burnaby BC Canada V5A 1S6

October 10, 2019

Catherine Murray
Associate Dean, Undergraduate Academic Programs
Faculty of Arts and Social Sciences
Simon Fraser University

Dear Dr. Murray,

I am writing to affirm the English Department's strong support for the Minor in Social Data Analytics (SDA) as proposed by the departments of Economics, Linguistics, Philosophy, and Political Science. One of the English Department's courses, ENGL 363 – Studies in Digital Humanities: Theory and Practice, is slated to be offered as an potential upper-division elective for the minor. We do not see this as a burden on our own enrolments; indeed, we are pleased that the course can be a part of such an innovative and engaging new program.

In particular, the English Department's participation in the SDA Minor comports with our broader departmental goals of developing analytical and directed research proficiencies, as well as remaining open to leading edge analytical and research paradigms. With its focus on the application of theories, methods, and tools in the digital humanities, ENGL 363 addresses questions of how digital literature, digital communication technologies, and computational methods reshape our understanding of literature and other media. English currently has several faculty members who are working in the area of the digital humanities, and their specific areas of expertise are consonant with and enhanced by the aims and theoretical praxis of the SDA minor.

Sincerely,

David K. Coley

David K. Coley
Undergraduate and Associate Chair, Department of English

SFU
FACULTY OF ARTS AND SOCIAL SCIENCES
Department of Gender, Sexuality, and Women's Studies

Academic Quadrangle 5102A
8888 University Drive, Burnaby, BC
Canada V5A 1S6

TEL 778.782.3333
FAX 778.782.5518

gswssec@sfu.ca
www.sfu.ca/gsws

MEMORANDUM

ATTENTION Dr. Catherine Murray, Associate Dean of the Faculty of Arts and Social Sciences

DATE October 9, 2019

FROM Dr. Tiffany Muller Myrdahl

PAGES 1

RE: Support for the FASS Social Data Analytics Minor

The Department of Gender, Sexuality, and Women's Studies is please to support the proposed interdisciplinary FASS Social Data Analytics Minor. GSWS would look forward to playing a role in the implementation of this minor, particularly through the inclusion of GSWS 399: Gender, Sex and Numbers. This course, which is offered annually, would be listed as an elective course in the minor program. It is illustrative of the proposed SDA Minor in that its focus on big data and smart cities emphasizes both strong analytical thinking and technical skill (census data analysis) development.

GSWS' participation in the FASS Social Data Analytics Minor fits within our departmental vision of cultivating innovation and transformative resistance to inequality through interdisciplinary and engaged teaching. GSWS 399 is one example of this, as it grounds traditional quantitative training in theoretically informed knowledge of the arts and social sciences. GSWS faculty are also involved in the development of a network for critical, participatory quantitative researchers; this will both support and benefit from the SDA Minor program.

Dr. Tiffany Muller Myrdahl
Undergraduate Chair
Gender, Sexuality, and Women's Studies

SFU DEPARTMENT OF HISTORY

Andrea Geiger
Associate Professor
Undergraduate Chair

AQ 6014
8888 University Drive
Burnaby BC V5A 1S6

andrea_geiger@sfu.ca
www.sfu.ca/history
T. 778.782.4421

MEMORANDUM

ATTENTION	Steven Weldon, Political Science	**DATE**	October 8, 2019
FROM	Andrea Geiger	**PAGES**	1/1
RE	Social Data Analytics Minor		

Dear Dr. Weldon,

I'm pleased to assure you of the History Department's continued support for the proposed Minor in Social Data Analytics as per the memorandum of my predecessor, Nicolas Kenny, dated April 28, 2019. As Dr. Kenny indicates, this program promises to be of considerable interest to History majors and, indeed, to students in a wide variety of disciplines across the University.

Several colleagues in the History Department are actively engaged in research projects that involve social data analysis in one form or another, including some that use digital humanities pedagogies in the classroom centered around projects that focus on the digitizing, archiving, analysis and presentation of research findings. While we do not currently have any courses that fit within the program, this may well change in the future. We will be glad to let you know when such courses come together.

Kind regards,

Andrea Geiger

Andrea Geiger

Dr. Nancy Hedberg, Chair
DEPARTMENT OF LINGUISTICS
Faculty of Arts and Social Sciences

R. C. Brown Hall 9101
8888 University Drive,
Burnaby, BC
Canada V5A 1S6

TEL 778.782.3554

hedberg@sfu.ca
www.sfu.ca/linguistics

October 7, 2019

Catherine Murray
Associate Dean
Faculty of Arts and Social Sciences

Dear Catherine:

With this letter, I affirm the strong support of the Department of Linguistics for the Minor in Social Data Analytics.

This minor fits very well with the goals we articulated in our recent Five-Year Academic Plan, where we emphasized our desire to increase the technical abilities of our undergraduate students by developing courses in computational linguistics, and seeking routes to accessible credentials that will develop such skills that will improve their preparation for careers.

It will be extremely valuable for our students to be able to learn practical programming skills early in their university studies.

This minor will supplement our current interdisciplinary collaborations in the computational area such as the Joint Major in Linguistics and Computing Science and the Major and Minor in Cognitive Science.

We have already committed resources towards the Minor, by scheduling Dr. Maite Taboada to teach the new LING/SDA 250, Computational Text Analysis, once a year, beginning in Fall 2020. The Department recently unanimously approved that new course.

Sincerely,

Nancy Hedberg

Nancy Hedberg
Professor of Linguistics and Cognitive Science
Chair, Department of Linguistics

SFU FACULTY OF ARTS AND SOCIAL SCIENCES | DEPARTMENT OF PHILOSOPHY

Simon Fraser University
West Mall Centre 4604
8888 University Drive
Burnaby BC
Canada V5A 1S6

Evan Tiffany, Chair
chairphi@sfu.ca
Tel: 778 782 6647
Fax: 778 782 4443
sfu.ca/philosophy

October 8, 2019

Catherine Murray
Associate Dean
Faculty of Arts and Social Sciences

Dear Catherine:

This letter serves to confirm Philosophy's support of the proposed Minor program in Social Data Analytics.

This minor fits well with Philosophy's strategic vision, as articulated in our five-year plan, especially as regards to Philosophy's commitment to interdisciplinarity. In our five-year plan, we talked about pursuing an increased focus in applied ethics while retaining a commitment to the theoretical foundations of moral philosophy. We have for a few years now wanted to be able to offer course(s) in ethics of data and technology, and this program will fit in that vision.

From the initial stages to the Full Program Proposal, this initiative has received the unanimous support of the Philosophy Department.

Sincerely,

Evan Tiffany
Associate Professor and Chair
Department of Philosophy

SFU

Dr. Tsuyoshi Kawasaki, Associate Professor

Acting Chair
Department of Political Science
Simon Fraser University
8888 University Drive
Burnaby, BC Canada
V5A 1S6

Email: chairpol@sfu.ca
Tel: 778-782-3729
Web: www.sfu.ca/politics

Dr. Catherine Murray
Associate Dean
Faculty of Arts and Social Sciences

9 October 2019

Dear Catherine,

I would like to indicate to you the strong support of my department for the Social Data Analytics Minor.

The Minor fits well with the department's research and teaching strengths, as well as with our five-year academic plan. We have a strong interest in cultivating inter-disciplinary collaboration with other academic units, and the Minor is an excellent opportunity for us to pursue that goal. Furthermore, we are seeking innovative programs such as this in which our students can have practical-learning experiences.

In addition to Steven Weldon who has taken a leadership role for designing the Minor, we have a few other faculty members in our department whose expertise will be very helpful for the Minor. Moreover, we are in the process of hiring a tenure-track research Assistant Professor (research faculty) in political communication or media and politics, with an emphasis on big data (starting as early as July 2020). This new appointment, I believe, will be an additional asset to the Minor.

Sincerely,

Tsuyoshi Kawasaki

SFU **SIMON FRASER UNIVERSITY**

MEMORANDUM

Date: October 8, 2019

To: Catherine Murray
Associate Dean, FASS

From: T. Swartz, Chair
Statistics and Actuarial Science

Subject: Support for Social Data Analytics Minor

This memo indicates support from the Department of Statistics and Actuarial Science for the Social Data Analytics Minor proposed within the Faculty of Arts and Social Sciences.

The Department of Statistics and Actuarial Science endorses the practice of good data analysis in an increasingly data-driven world. We believe the proposed program is consistent with this intention.

The proposed program offers the opportunity for FASS students to take particular courses from the Department of Statistics and Actuarial Science. These specialized courses allow FASS students to gain expertise in a number of specific subject areas related to data science. This is in keeping with the vision of the Department of Statistics and Actuarial Science who believe that good statistical practice is important for Simon Fraser University.

SFU SIMON FRASER UNIVERSITY

Faculty of Environment
Department of Geography

MEMO

ATTENTION	Steve Weldon	TEL	778-782-8797
FROM	Tracy Brennand, Professor & Chair, Geography		
RE	Social Data Analytics Minor FPP		
DATE	2 December 2019	PAGES	1

The Department of Geography fully supports the Social Data Analytics minor proposal. At the Sept 24 2019 meeting of Geography's UGSC the committee voted in favour of including GEOG 255 and GEOG 355 as electives in this program to support its data visualization educational goals. This inclusion is in line with our wish to support GIScience education across the disciplines.

FACULTY OF ARTS AND SOCIAL SCIENCES
Office of the Associate Dean

Academic Quadrangle Room 6168
8888 University Drive, Burnaby, BC
Canada V5A 1S6

TEL 778.782.4416
FAX 778.782.3033

murraye@sfu.ca
www.fass.sfu.ca

December 6, 2019

Memorandum To: Dr. Wade Parkhouse, AVPA, Chair of SCUS

CC: Kris Nordgren, Steve Weldon, FASS-UC secretariat

From: Catherine Murray, Associate Dean FASS

Re: Friendly amendment to Motion 19-68 at SCUP December 4,2019 by Dr. Paul Kingsbury

Dear Wade:

I am writing under my Delegated Authority as Chair of the FASS-UCC to approve the addition of GEOG 255 and 355 to the appendix of the Full Program Proposal for the Social Data Analytics Minor.

Thank you for agreeing to expedite consideration retroactively by SCUS using your delegated authority to similarly approve the addition and to enable this positive decision by SCUP to be enacted.

I attach:

- Memo of support from Steve Weldon on behalf of the partner FASS units
- Memo from Chair of Geography
- Revised appendix to the proposal.

Please let me know if this is sufficient.

Sincerely

C. A. Murray

Catherine Murray, PhD,
Professor and Associate Dean
Faculty of Arts and Social Sciences. 778-782-4416 (murraye@sfu.ca)

SFU Department of
Political Science

AQ 6069
8888 University Drive,
Burnaby, BC
Canada V5A 1S6

TEL 778.782.4293
FAX 778.782.4786

www.sfu.ca/politics

MEMORANDUM

ATTENTION	Senate Committee on Undergraduate Studies	**DATE**	December 6, 2019
FROM	Dr. Steven Weldon, Political Science	**PAGES**	
RE:	Course Additions for proposed SDA Minor from Geography		

Request:

Update the course list for the proposed Social Data Analytics Minor to include as electives:

GEOG 255 – Geographical Information Science I
GEOG 355 – Geographical Information Science II

Steven Weldon

Associate Professor
Department of Political Science
Simon Fraser University

enclosed:
Updated Appendix 8.1 – Proposed Calendar Entry

FACULTY OF ARTS AND SOCIAL SCIENCES
Office of the Associate Dean

Academic Quadrangle Room 6168
8888 University Drive, Burnaby, BC
Canada V5A 1S6

TEL 778.782.4416
FAX 778.782.3033

murraye@sfu.ca
www.fass.sfu.ca

November 13,2019

Memorandum to: Dr. Wade Parkhouse, AVPA
Co-Chair, SCUS

CC: Kris Nordgren, Assistant Registrar
Rosa Balletta, Recording Secretary

From: Catherine Murray, Associate Dean, FASS

Re: Oversight of Documentation in Support of SCUS 19-68 at SCUS November 7, 2019, FPP for Minor in Social Data Analytics—SDA Acronym

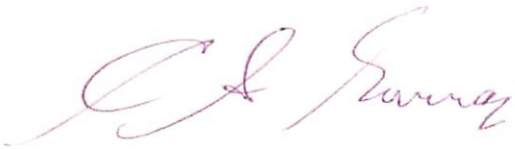
My apologies for not submitting the supporting documentation requesting a new acronym, SDA for the Minor in Social Data Analytics. In the package as submitted, the following New Course Proposals in Motion 19-57 are affected:

- LING/SDA 250-3, Computational Text Analysis (Fall 2020)
- SDA 270-3, Data, Ethics and Society – New Addition (Fall 2020) in Phil
- SDA 490-5, Capstone Project Seminar (Fall 2020)- new addition o POL

All were approved.

Apologies for the inconvenience. I note going forward that the members of the SDA will need to review their practice of cross listing with the home departments to be consistent.

Sincerely



Catherine Murray, Associate Dean, Undergraduate

CAM/cm