DSO 599 Digital Analytics Strategy

Syllabus link: https://tinyurl.com/uscdigitalanalytics18

Syllabus – Fall 2018 – Session 415
Wednesdays, 6:30-9:30 p.m. August 22 - October 10, 2017
JFF 322

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Course Description

This course will give you a foundation in digital analytics in tandem with digital strategy and solutions. You will glean concepts and principles of praxis central to current applications of digital analytics and digital strategy across industries. You will acquire the critical and creative skills to articulate the value of digital analytics within a variety of business settings.

This course will introduce you to a multi-method (both quantitative and qualitative) approach to working with digital analytics, and a multimodal understanding of the analytics tools for websites, mobile, and social media. Learning the lexicon of available standardized and custom metrics, you will practice strategic problem-solving while applying digital analytics. Through design thinking, you will gain practical experiences with analytic measurement modeling while mapping project and organizational outcomes to Key Performance Indicator (KPI) metrics.

This overview course is appropriate for students interested in working in digital analytics, digital strategy, product development, marketing, business analytics, user experience, design research, and information architecture.

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# Learning Objectives

<table>
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<tr>
<th>Step</th>
<th>What You Need to Know</th>
<th>Grading Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Define a strategically meaningful question about an opportunity or a problem.</td>
<td>Is the question specific and measurable?</td>
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<tr>
<td></td>
<td>An organization's mission and strategy, or what it's trying to do and how it's trying to do it.</td>
<td>Are the target audiences/users well-defined?</td>
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<td></td>
<td>Financial and business analytics reporting period and reporting order within an organization.</td>
<td>Is question essential to the org's mission and strategy?</td>
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<tr>
<td>2</td>
<td>Design a strategic solution with an analytic model with data or metrics* that will help answer the question.</td>
<td>Do these metrics and ways of segmenting the data cohere?</td>
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<td></td>
<td>How data can be segmented or grouped, forming a cohesive model based on the strategic outcome.</td>
<td>Are the selected metrics relevant to the question and the org's desired strategic outcome?</td>
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<tr>
<td></td>
<td>How site traffic data is gathered, what metrics exist, what a specific metric does or doesn't indicate.</td>
<td>Do these metrics as a whole address the strategic outcome?</td>
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<td></td>
<td>How the analytic model furthers the intended strategic outcome?</td>
<td></td>
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<tr>
<td>3</td>
<td>Acquire the data from Google Analytics and related sources.</td>
<td>Were the correct data and segmentation used?</td>
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<tr>
<td></td>
<td>Where to find the metrics you need.</td>
<td>Were the reporting periods (e.g., daily, weekly, monthly, quarterly, and annually) relevant to the org's strategy and the question?</td>
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<td></td>
<td>What default data is available, how to further customize data gathering methods within existing tools, and how to complement data from other tools.</td>
<td></td>
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<tr>
<td>4</td>
<td>Clean and prepare the data for analysis.</td>
<td>Are the column and row labels formatted with clearly defined terms?</td>
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<td></td>
<td>Basic database design, or how data should be put in a spreadsheet so it can be machine-readable and coded systematically and consistently</td>
<td>Is the coding methodology</td>
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<td></td>
<td>with categories relevant to the org and the question.</td>
<td>consistent and transparent, i.e., is it clear why a piece of data got one code and not the other? Is there a data dictionary?</td>
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<td>5</td>
<td>Analyze the data using Google Analytics, Excel, or other visualization and analysis programs.</td>
<td>The quantitative calculations and qualitative assessments needed to compare, contrast and put the data into context. The difference between correlation and causation. How to use tables, charts and graphs to analyze trends, identify outliers, compare differences, etc. Knowledge of workflow patterns and external events, e.g., holidays, relevant to an organization that might affect interpretation and analysis.</td>
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<tr>
<td>6</td>
<td>Present relevant, data-informed findings and strategic recommendations in compelling formats to inform decision-makers.</td>
<td>How your findings relate to the question and the organizational and strategic mission. What data is missing that affects the strength and validity of your argument; what data is immaterial and thus not included. What tables, charts, graphs, Infographics, dashboards and other formats present the data correctly and effectively.</td>
</tr>
<tr>
<td>Terms the organization uses. grammar, punctuation, spelling.</td>
<td>Are any limitations or problems with the data identified? Are the recommendations based on the findings rather than personal opinion? Are the data in tables, charts, graphs, or dashboards designed properly and cleanly with clear visual logic, and free of confusing sentences, visual tricks, or distracting colors and visual tricks that could affect your credibility as an analyst?</td>
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* Students will be able to describe and compare the conceptual purpose, technical definitions, limitations and assumptions of various types of behavioral metrics, including:

- Basic content consumption metrics and segments: Visits (or sessions); visits from new vs. returning visitors (or users); visits by geographic region.
- Visitor acquisition metrics: Visits by traffic source (direct, search, referring sites, social media, campaigns); keywords.
- Visitor behavior metrics: Bounce rates; landing pages; pages per visit; events; frequency and recency
- Outcome metrics: Macro- vs. micro-outcomes or conversions. Funnels.
- Social media metrics: breadth/reach metrics including likes; depth metrics such as comments.

**Required and Suggested Materials**

The required readings include one book that you will need to purchase and materials I’ll post on Blackboard. The readings will come from the books and pamphlets below and from whitepapers, blogs and analytics vendor sites from both media and e-commerce.
Required Materials

- Purchase on your own: *Web Analytics 2.0*, by Avinash Kaushik, Sybex/Wiley Publishing, 475 pages
- Short explanatory videos (linked from this syllabus)

Suggested Materials

- *Google Analytics: From Zero to Business Impact*, by Feras Alhlou, Shiraz Asif, and Eric Fettman, Wiley, 596 pages
- *Design Thinking Methodology Book*, by Emrah Yayici, ArtBizTech, 116 pages

Classroom and Course Policies

Laptop Policy

Please bring a laptop that has Excel, PowerPoint, and Internet access to each class. The assignments and the final project must be in PDF, Excel and PowerPoint, or their Google App equivalents which are industry standards. Analysts collaborate across departments and organizations and always have to hand off their files. If you use Numbers, Keynote, Prezi or other software, you’ll need to convert your files and fix any formatting problems that happen during the conversion process.

Prerequisites and/or Recommended Preparation

Students must be proficient in Excel, PowerPoint, and Google Drive and apps.

Privacy and Confidentiality Policies

Throughout the semester you will have direct access, when possible, to the Google Analytics accounts for one or more organizations to complete your homework assignments. This is internal, proprietary data. All data, presentations and discussions in class with your fellow students and with the organizations are confidential. You can show prospective employers your assignments and projects only if you strip out all identifying information.
Grading Policies

Breakdown of Grade

- Homework assignments (Assignment #1, 2, 3, 4) 30%
- Google Analytics demo 10%
- Metrics quiz 10%
- In-class participation 10%
- Final project - group 30%
- Final project - individual reflection 10%

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Total 100%

The assignments will assess your ability to formulate questions relevant to an organization, your knowledge of metrics, your proficiency with the software tools, your ability to analyze data and put it into context for decision-makers.

The final will be a group project that consists of a measurement model, a prototype dashboard or reporting template that demonstrates how the Key Performance Indicators (KPI) could look and function, and an analysis of the KPI data that justifies your recommendations on the baselines and targets for each of the KPIs. Recommendations for product, service, or website improvement are highly encouraged.

Grading Scale

A 95-100
A- 90-94
B+ 87-89
B 83-86
B- 80-82
C+ 77-79
C 73-76
C- 70-72
D+ 67-69
D 63-66
D- 60-62
F 59 and below
Grading Standards

A
The analysis is relevant, uses the correct data and is concise and complete. It identifies any assumptions that were used, data integrity issues, and issues that need to be further addressed (if any) before a manager can make a decision.

The analysis is targeted to a managerial audience, is clearly written and is free of spelling and grammatical errors. It includes relevant charts and graphs with explanatory text. There are no 3D or other types of graphs in formats that obscure the trends or data points. It uses the correct colors, data labels and font size, and has a plain white or otherwise unobtrusive background. The analyses are in a hard copy format suitable for discussion at a meeting.

B
The analysis is relevant, uses the correct data and is complete. It identifies assumptions that were used, data integrity issues, and issues that need to be further addressed (if any) before a manager can make a decision. The report and presentation have most, but not all, of the attributes of an “A” assignment.

C
The analysis is relevant and uses the correct data, but isn’t complete; it’s a recitation of facts rather than an analysis. It can be used for decision-making if a manager could deduce some of the issues on his/her own. The report and presentation have some of the attributes of an “A” assignment.

D
The analysis is relevant, but doesn’t use the correct data and isn’t complete. It needs further work before it can be used for decision-making. The report and presentation have only a few of the attributes of an “A” assignment.

F
The analysis isn’t relevant, doesn’t use the correct data and isn’t complete. The report and presentation doesn’t have any of the attributes of an “A” assignment.

Assignment Submission Policy

Assignment files are due in Blackboard by 10AM on the same day as the class meeting. You can also email them to me and the grader if you have trouble posting them on Blackboard. All grades will be posted on Blackboard. You are also responsible for informing me within one week if you believe there's an error in an assignment grade that's been posted on Blackboard. You should check Blackboard regularly for announcements and new materials. In the event of an
emergency, the ability to access Blackboard will be crucial. USC's Blackboard learning management system and support information is available at https://blackboard.usc.edu

Late and/or incomplete assignments
Due to the short duration of the semester, late assignments will not be accepted. Partial credit will be given for incomplete assignments.

Course Schedule

Week 1: 8/22/2018
Introducing Digital Analytics Strategy
What is digital analytics strategy?

Design Workshop #1: Scenario-based strategy

Google Analytics Demo: Introductions and group assignment

Assignment #1: Planet Money business scenario analysis
Mapping scenario and visualizing digital strategy

Readings and Media:
- "Chapter 1: The bold new world of web analytics 2.0" from Web Analytics 2.0
- "Chapter 3: The awesome world of clickstream analysis: metrics" from Web Analytics 2.0
- Video: view all the ideo Mindset videos on human-centered design
- Video: Google Analytics Platform Principles - Lesson 1.3 - The data model
- Video: Google Analytics Platform Principles - Lesson 2.2 - Website data collection
- Video: Google Analytics Academy - Lesson 3.2 - Key metrics and dimensions defined

Week 2: 8/29/2018
Meanings and Design as Strategy
Meanings of numbers: data, value, and context

Guest Speaker: Helene Imperiale, Propper Daley, Director of New Media Strategy

Google Analytics Demo: Behavior

Design Workshop #2: Reverse engineer a vision of success
Assignment #2: Mapping digital metrics to objectives

Read and Watch:

- “Chapter 5: The Key to Glory: Measuring Success” from Web Analytics 2.0
- “Making sense of numbers: A journey of spreading the analytics culture at Tate”, by Tijana Tasich and Elena Villaespesa, Museums and the Web 2012
- Chapter 2: Change from Design
- Video: Google Analytics Academy - Lesson 2.2 - Core analytics techniques
- Video: Google Analytics Academy - Lesson 5.5 - Behavior reports
- Video: Google Analytics Academy - Lesson 5.1 - Reporting overview

Week 3: 9/5/2018

People, User Experience, Usability

Users and User Experience in the Attention Economy

Google Analytics Demo: Audience

Final Project Introductions: Meet the Client - LACMA (or 8/29)

Design Workshop #3: Concretizing the challenges - How Might We (HMW) questions

Assignment #3: Museum User Research Methodology + Refine Project Charter

Read and Watch:

- UX Strategy: select chapter
- “Finding the motivation behind a click: Definition and implementation of a website audience segmentation”, by John Stack and Elena Villaespesa, Museums and the Web 2015.
- “Tate Website Audience Segmentation Research Report” by Elena Villaespesa, John Stack, Sabine Doolin, Morris Hargreaves McIntyre.
- Video: Google Analytics Academy - Lesson 5.3 - Acquisition metrics
- "Excellent analytics tip #18: make love to your direct traffic," by Avinash Kaushik

Week 4: 9/12/2018

Machine Learning

Digging into the Data: Data Ethics (code of ethics for data scientists)

Guest Speaker: Hunter Owens, City of Los Angeles, Data Scientist
Google Analytics Demo: Acquisition

Design workshop #4: Machine learning design

Assignment #4: Data Ethics and Machine Learning Speculation

Read:
- “Ethical OS Toolkit: A Guide to Anticipating the Future Impact of Today’s Technology” by Institute for the Future

Week 5: 9/19/2018

Beyond the Numbers: Qualitative Research Methods
A cultural perspective on analytics

Google Analytics Demo: Conversion

Guest Speaker: Ben Wiedmaier, Dscout, product evangelist

Design Workshop #5: Mapping user journey and acquisition

Assignment #5: Conversion Model and User Development

Read and Watch:
- Video: Google Analytics Academy - Lesson 4.4 - Setting up goals and ecommerce
- "The Google Analytics conversion funnel survival guide," by KISSmetrics
- Video: Keyword Not Provided in Google Analytics - Part 2: Landing Page Report & Geo Summary Report, by KISSmetrics
- "Advanced user segmentation guide", by Seb Chan

Week 6: 9/26/2018

The Content Economy and SEO
Thinking between categories: the content economy

Guest Speaker: Sean Miura, Buzzfeed, Strategic Plan Manager
Design Workshop #6: TBA

Mid-Term Metrics Quiz

Read and Watch:
- “Understanding people’s motivation to visit the Tate Online collection”, by Elena Villaespesa, Museum-iD magazine
- “How to measure SEO success for your museum website”, by Elena Villaespesa
- Optional: Keyword Not Provided in Google Analytics by KISSmetrics
- Optional: "Tags don’t cut it" and "Topics, themes, subjects," by Stijn Debrouwere

Week 7: 10/3/2018
Strategy and Prototyping
Final Project Workshop: Lo-fi Prototyping

Final Project Workshop
- Analyzing the data
- Setting KPI, baselines, and targets

Week 8: 10/10/2018
Final Project Presentations
Final Project: presentations and submissions

Related Information

Add/Drop Process

This course follows the add/drop deadlines for a seven-week course. Students who want to add the course after the first week will need special approval from the instructor. Students who miss the first class will be asked to drop the course.

Academic Integrity and Conduct

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one’s own academic work from misuse by others as well as
to avoid using another’s work as one’s own (plagiarism). Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. All students are expected to understand and abide by the principles discussed in the SCampus, the Student Guidebook (www.usc.edu/scampus or http://scampus.usc.edu). A discussion of plagiarism appears in the University Student Conduct Code (section 11.00 and Appendix A).

Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: http://www.usc.edu/student-affairs/SJACS/. Failure to adhere to the academic conduct standards set forth by these guidelines and our programs will not be tolerated by the USC Marshall community and can lead to dismissal.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the Office of Equity and Diversity http://equity.usc.edu/ or to the Department of Public Safety http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us. This is important for the safety of the whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report or can initiate the report on behalf of another person. The Center for Women and Men http://engemannshc.usc.edu/cwm/ provides 24/7 confidential support, and the sexual assault resource center webpage https://sarc.usc.edu/reporting-options/ describes reporting options and other resources.

Support Systems

Students whose primary language is not English should check with the American Language Institute http://dornsife.usc.edu/ali, which sponsors courses and workshops specifically for international graduate students. The Office of Disability Services and Programs (www.usc.edu/disability) provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, USC Emergency Information (http://emergency.usc.edu/) will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.