

# INSTRUCTOR SYLLABUS/ COURSE OUTLINE



<b>Instructor:</b>	Eric Darsow	<b>Semester/Session:</b>	Fall 2019
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<b>Instructor:</b>	Coral Sheldon-Hess	<b>Semester/Session:</b>	Fall 2019
<b>Telephone:</b> (This is a bad way to reach me.)	412-369-4123	<b>Office Hours:</b> Mondays, 12pm-1pm, West Hills Center S1304 Tuesdays/Thursdays, 12pm-2pm, North 2036  By appointment, online or in person – email or Slack, and we'll set something up.	
<b>Email Address:</b> (This is a good way to reach me.)	<a href="mailto:csheldon-hess@ccac.edu">csheldon-hess@ccac.edu</a> (Checked every weekday 10am-6pm.)		
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## Class Section(s) Time & Location:

Section	Date	Days	Time	Room
DAT-201-NC71	9/3-12/9/2019	Tuesdays	06:00PM - 09:10PM	North Campus, Room 1136

## Additional Instructor Information:

Eric's schedule and contact information are available online: <http://www.technologyrediscovery.net/#contact>

Mail can be left for either or both of us in the faculty mailroom in North 2007.

**Course Number:** DAT-201

**Course Title:** Data Analytics 1

**Course Credits:** 3

Lecture hours: 3    Lab hours:                      Clinical:                      Studio:                      Practicum:

**Prerequisite(s):** DAT-102

**Corequisite(s):** (none)

## Course Description:

Building upon the principles set forth in Introduction to Data Analytics (DAT-102), students will begin to develop a comprehensive approach to the application of data analytics in the solving of business problems. In this course, students will evaluate the tools and resources available in terms of their appropriateness to complex business scenarios. This course will highlight the collaborative nature of data analytics projects and the necessity for coordination across projects. Students will conduct an initial data analytics project and create a collaborative report of their findings.

## Learning Outcomes:

Upon successful completion of the course, the student will: 1. Examine decision analysis techniques and tools. 2. Identify appropriate database software to solve specific problems. 3. Implement data analytics to formulate and solve business problems. 4. Collaborate to solve business problems using data. 5. Use data visualization to address given scenarios.

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## Materials and Resources:

Required Text(s):	None
Required Materials:	Libre Office or Excel
Recommended Text(s):	In general, we'll prioritize resources that are available for no charge on via the internet, all of which will be linked via our session pages linked on the course schedule.

## Teaching Methods:

This course will include a combination of lecture, case study, group discussion, and group project work. There may be outside speakers and, time allowing, off-campus visitations.

Students should set aside several hours per week for readings and other homeworks required to be successful in this class.

## Evaluation Plan:

Students will be asked to propose a letter grade according to the grade letter mappings below. Individual work products will be evaluated using supplied rubrics throughout the course.

## Assessment Philosophy

As a lab-like course built around using data analytics tools to solve non-trivial, business-related problems, course assessments in DAT-201 are based on fully-baked student work products. In relation to the course learning model diagrammed above, student work projects emerge at the end of each module and at the conclusion of the component's culminating project.

The instructor provides incremental feedback to students during the course of the module's individual project work time--often called formative assessment. Small misunderstandings or trouble spots that emerge inside a module can be ironed out before they impede the larger learning goals of the component. After all modules are mastered and a final project completed the instructor offers additional, formal feedback concerning the project's alignment to its design specifications is provided.

Students complete the following steps in advance of their presentation and feedback session for their culminating project:

- Project design specifications
- Project flow diagram adjusted to reflect actual implementation
- Thoughtful responses to "heart-of-the-matter" questions

### ***Using design criteria alignment in place of rubrics***

The best assessment tools are those with which the students directly engage in creating and using. This can take the form of a class-generated project rubric, for example. As students create assessment criteria prior to implementing a project, the resulting work is both more likely to align to the assessment criteria and meaningfully assist students in completing their work. When that rubric is then used by the students to assess their own work, valuable mental processes are underway which tend to naturally improve skill and confidence.

Rubrics are widespread and useful tools for many types of student work outside of the technical design realm. In a technical class, such as this data course, the process of assessing student code against initial design requirements organically takes the place of rubric-based assessment without displacing its generic value as a teaching tool.

### ***Mapping project performance to course letter grades***

The following table serves as a possible correlation guide between module and component project assessment and the formal course letter grades instructors assign to each student at the conclusion of the semester:

<b>Course Letter grade</b>	<b>Student performance criteria</b>
A	Independent practice for <b>each model is completed and documented</b> . Culminating projects for each component meet all specified design criteria. Component reflections show <b>evidence of synthesis</b> with other technical learning domains.
B	Independent practice for each module has been <b>attempted but not consistently documented</b> to reveal command of the code. Culminating projects for each component meets some but not all design criteria. Component reflections show <b>moderate thought, limited to current learning topics</b> .
C	Independent practice for <b>1/2 to 2/3 of modules has been attempted</b> but not consistently documented. Culminating projects for each component <b>meets some but not all</b> design criteria. Component reflections show <b>low levels of thought</b> relative to A and B work.
D	Independent practice for <b>less than 1/2 of modules</b> has been attempted but not consistently documented. Culminating projects for each component meets few, if any design criteria. Component <b>reflections are incomplete</b> .
F	Independent practice for 1/4th or fewer of modules has been attempted and not consistently documented. <b>Culminating projects were not meaningfully attempted</b> . Component reflections were not attempted.

### **Documenting work done outside of class**

Each student is expected to document the time they spend on their studies outside of classroom time. This documentation should serve as a self-assessment tool, but may potentially contribute to peer- and instructor-assessment, as well. The format of the documentation is left up to the individual student, though a spreadsheet with the following categories would be a good starting point:

1. Background reading, including documentation and tutorials
2. Project work (hands on keyboard)
3. Design & pondering, sketching out solutions
4. Collaboration

### **Software installations:**

Data analytics is a tool-heavy endeavor, with comprehensive projects involving the use of up to a dozen or more software packages for gathering, cleaning, analyzing, presenting, and sharing the data. While the software we focus on during this course is all zero-cost, open source software, its installation and configuration can be tricky and require many hours to undertake. *Students are expected to arrive to class with installed software on the required days of class. It is the responsibility of the students to seek out help from teachers or peers during the software install process as needed and BEFORE the required session.*

### **Group work:**

When projects are completed as a group, each individual will be expected to contribute and to be able to document their own contributions. Teachers may ask students to evaluate the contributions of their peers.

### **Emergency Notifications**

In order to receive up-to-date information on CCAC closings/delays, severe weather and other emergency situations, please download the free [Rave Guardian app](#) from your phone's app store and follow the steps to login and select your campus location. Please also make sure your mobile number is correct in [MyCCAC](#).

## **Addendum to Syllabus/Course Outline: Updated Title IX Notifications**

**Accommodations for Individuals with Disabilities:** The college recognizes its responsibility to provide academic and nonacademic services and programs equally to individuals with and without disabilities. To this end, the college provides reasonable accommodations for qualified students and employees with documented disabilities consistent with the requirements of the Americans with Disabilities Act, sections 503 & 504 of the Rehabilitation Act and other federal, state and local laws and regulations. The college maintains an Office of Supportive Services at each campus location to receive, review and evaluate requests from students who require an accommodation with respect to their educational program. **Students' requesting reasonable accommodations due to a documented disability must first register with their campus' Supportive Services Office and obtain an official letter identifying approved accommodations to be distributed to their faculty members.**

**Attendance Procedure for Pregnancy & Pregnancy Related Conditions:** In accordance with Title IX of the Education Amendments of 1972, absences due to pregnancy or related conditions, including recovery from childbirth, shall be excused for as long as the absences are determined to be medically necessary. Students will be provided with the opportunity to make up any work missed as a result of such absences, if possible. For more information or requests for accommodations, students should inform their instructor(s) and/or contact the Civil Rights Compliance Officer/Title IX Coordinator, at 412.237.4535 or [smisra@ccac.edu](mailto:smisra@ccac.edu).

**Attendance Procedure for Religious Observance:** The college will make reasonable efforts to accommodate students who must be absent from classes or miss scheduled exams in order to observe a religious holiday or participate in some other form of religious observance. Students shall be provided, whenever possible, reasonable opportunity to make up academic assignments missed due to such absences, unless doing so would create or impose an undue burden on other students or the College. It shall be the students' responsibility to provide written notice via the

*Request for Accommodation for Religious Observances Form* (accessible at <https://www.ccac.edu/nondiscrimination/>) to every instructor for each course in which an accommodation is being requested. For more information contact the Civil Rights Compliance Officer/Title IX Coordinator, at 412.237.4535 or [smisra@ccac.edu](mailto:smisra@ccac.edu).

**Chosen First Name Procedure for Students:** Many individuals use names other than their legal first name to identify themselves for a variety of personal and/or cultural reasons. The college seeks to provide an inclusive and non-discriminatory environment by making it possible for students to use a chosen first name on college records when a legal name is not required. Chosen first names may not be applicable in certain programs due to the requirements of accreditation organizations and clinical sites. For more information, please see the Student Handbook (accessible at <https://www.ccac.edu/Academics/Academic-Rules-and-Regulations/CCAC-Student-Handbook/>).

**Drop/ Add/ Withdrawal:** Notifying the instructor of your intention to drop or withdraw does NOT count as an official withdrawal from a course. Procedures for drop/add/withdrawal can be found at [www.ccac.edu/registration-services/](http://www.ccac.edu/registration-services/).

Students receiving financial assistance through grants, loans, and veterans benefits should consult with the Financial Aid or Military and Veterans Service Center before dropping, adding, or withdrawing from class. Students' aid may be impacted by a change to the total number of credits in which the student is enrolled, or by receiving a W grade in one or more classes.

Consult the Academic Calendar on MyCCAC portal for these important deadline dates. Note that courses that do not meet within the standard 16- and 14-week terms have unique drop/withdrawal deadlines. Failure to process these forms with the Registration office by the published deadline may result in F grades and have financial consequences.

**Students with Disabilities:** The Community College of Allegheny County makes every effort to provide reasonable accommodations for students with disabilities. Questions about services and procedures for students with disabilities should be directed to the Office of Supportive Services at your campus.

**Title IX Notification:** Know your rights as a student. Title IX, the Clery Act and the SaVE Act prohibits sexual harassment, sexual misconduct and acts of sexual violence, including sexual assault, domestic violence, dating violence, and stalking. See the complete policy and how to report at <https://www.ccac.edu/nondiscrimination/>.

**MyCCAC Portal and Academic Email:** The MyCCAC portal provides access to all course, grade and administrative information at <https://my.ccac.edu>. All email correspondence regarding your academic work is to be conducted to and from your CCAC academic email account.

**Access your course information, email, Student Handbook, incident reporting and college services at: <https://my.ccac.edu>**

**Course Outline/Schedule:**

Available online at [https://technologyrediscovery.net/data/damasterSequence.html#dat201\\_table](https://technologyrediscovery.net/data/damasterSequence.html#dat201_table)