# 2232-LAPS-5388-001/-002/-900 Advanced Methods in Educational Data Management

Spring 2023

## Instructor Information

### Instructor(s)

Dr. Vitomir Kovanovic

Dr. Srecko Joksimovic

### Email Address

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### Faculty Profile

You will be able to find information about the course instructors at  
<https://mentis.uta.edu/explore/browse>

### Office Hours

Given the global nature of our program, instructors will meet with students as needed via Microsoft Teams. Students can schedule a time with faculty via email.

## Course Information

### Section Information

**2232-LAPS-5388-001/-002/-900**

### Time and Place of Class Meetings

This course will take place online only. While most of the course will be completed asynchronously, we plan to host a synchronous Zoom discussion session each week – **Tuesday at 7pm US CT**. We encourage you to attend, but we understand that it might not be possible. All Zoom sessions will be recorded, and we will be available to answer any questions that you might have. The format will be structured around four (4) modules, where each module will be studies for three (3) weeks. However, we will be providing weekly updates, including our weekly meetings. It is intended that each module can be studied independently of other modules.

### Description of Course Content

In this course, students will learn about the advanced methods of conducting educational data analysis and learning analytics.

### Student Learning Outcomes

* Students will be able to describe advanced learning analytics methods, including approaches used for at-risk prediction, formative assessment, personalization, analysis of video, text and multimodal data, and improvement of instructional design.
* Students will demonstrate a broad understanding of the fundamental and advanced elements of conducting educational data analysis.
* Students will demonstrate understanding of how advanced data analytics techniques can be used to support their own learning and teaching context, and how they can be effectively adopted in practice.

### Required Textbooks and Other Course Materials

The course will use the following textbook:

Charles Lang, George Siemens, Alyssa Wise, Dragan Gašević (Eds.) (2017). *The Handbook of Learning Analytics* (1st ed). Society for Learning Analytics Research. https://www.solaresearch.org/publications/hla-17/

Charles Lang, George Siemens, Alyssa Wise, Dragan Gašević, Agathe Merceron (Eds.) (2022). *The Handbook of Learning Analytics* (2nd ed). Society for Learning Analytics Research. https://www.solaresearch.org/publications/hla-22/

### Descriptions of major assignments and examinations

Assignments 70%

The course includes **TWO** (2) major assignments. For Assignment 1 (35%, due Mar 1) you will be able to choose one of the four learning analytics approaches covered in the course and provide in-depth analysis of the particular approach and its benefits, challenges and opportunities for improving teaching and learning. Assignment 2 (35%, due May 1) will build on the first assignment and will focus on contextualizing the selected learning analytics approach for your particular teaching and learning context, looking at specific ways it can be adopted in practice.

Continuous Assessment 30%

Two quizzes will be included in each of the four modules (8 quizzes in total), where each quiz will include 4-5 short questions. Students will have **unlimited time** and **multiple attempts** to complete a quiz. Quizzes will be available until the end of the last week of the course (May 10, 2023).

### Technology Requirements

Canvas and Teams. Depending on the preference, students will also need R and RStudio or Python environment installed. Based on students’ interest, we will be providing necessary installation instructions.

### Other Requirements

Given the distributed and global nature of the course, interaction with course instructors will be held online, using email and Canvas. Students are welcome to create local groups, as needed and appropriate.

Each assignment will be built on the previous one. That means that you are expected to address feedback that will be provided. For example, with a mark for your Assignment 1, you will get feedback on what are the main issues you should address in Assignment 2. In that sense, it is important to follow deadlines. Of course, you can always ask for an extension. Late submissions **WILL NOT HAVE AN IMPACT** on your mark.

## Grading Information

### Grading

We will post grades on Canvas following each assignment, whereas weekly quizzes will be automatically graded. The grade scale is as follows:

|  |  |
| --- | --- |
| 90-100 points | A |
| 80-89 points | B |
| 70-79 points | C |
| 60-69 points | D |
| < 60 | F |

Assignments: 70% (35% each – 2 total)

Continuous Assessment: 30% (3.75% each – 8 total)

**There is no extra credit.** The best predictor of a good grade is regular attendance in class and reading of the assigned material.

### Expectations for Out-of-Class Study

Beyond the time required to attend each class meeting, students in this course should expect to spend at least an additional 5-6 hours per week of their own time in course-related activities, including reading required materials, completing assignments, or preparing for exams, to name a few.

### Grade Grievances

Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current University Catalog.

## Course Schedule

As the instructors for this course, we reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Week** | **Dates** | **Topic** | **Continuous Assessment** | **Assessment Details** | **Comment** |
| W0 | Jan 9 – Aug 15 | Orientation |  |  |  |
| W1-W3 | Jan 16 – Feb 5 | Predictive analytics and interventions | Quiz 1 & 2 |  | Jan 16 Martin Luther King Jr. Holiday |
| W4-W6 | Feb 6 – Feb 26 | Text and Video Analytics | Quiz 3 & 4 |  |  |
| W7-W9 | Feb 27 – Mar 26 | Multimodal learning analytics | Quiz 5 & 6 | Assignment 2 Due (Mar 1) | Mar 13 – Mar 17 Spring Vacation (no classes) |
| W10-W12 | Mar 27 – Apr 16 | Learning analytics for instructional design | Quiz 7 & 8 |  |  |
| W13-W15 | Apr 17 – May 7 | Conclusion & wrap up |  | Assignment 2 Due (May 1) |  |

## Institutional Information

UTA students are encouraged to review the following institutional policies and informational sections and reach out to the specific office with any questions. To view this institutional information, please visit the [Institutional Information](https://resources.uta.edu/provost/course-related-info/institutional-policies.php) page (<https://resources.uta.edu/provost/course-related-info/institutional-policies.php>) which includes the following policies among others:

* Drop Policy
* Disability Accommodations
* Title IX Policy
* Academic Integrity
* Student Feedback Survey
* Final Exam Schedule

## Additional Information

**Master of Science in Learning Analytics Orientation and Resource Hub**

This [Orientation and Resource Hub](https://uta.instructure.com/courses/98914) is a central resource for students in the master’s program. It has all critical information related to the program, any events, UTA resources, and training for new students.

**Departmental and Program Assistance**

If you have any questions about the MSLA program, please contact Justin T. Dellinger, Ph.D. at [jdelling@uta.edu](mailto:jdelling@uta.edu).

### Attendance

At the University of Texas at Arlington, taking attendance is not required but attendance is a critical indicator of student success. Each faculty member is free to develop his or her own methods of evaluating students’ academic performance, which includes establishing course-specific policies on attendance. As the instructors of this section, we will take attendance sporadically. However, students are expected to participate weekly in order to complete all the activities.

While UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients “begin attendance in a course.” UT Arlington instructors will report when students begin attendance in a course as part of the final grading process. Specifically, when assigning a student a grade of F, faculty report must the last date a student attended their class based on evidence such as a test, participation in a class project or presentation, or an engagement online via Canvas. This date is reported to the Department of Education for federal financial aid recipients.

**Academic Success Center**  
The Academic Success Center (ASC) includes a variety of resources and services to help you maximize your learning and succeed as a student at the University of Texas at Arlington. ASC services include supplemental instruction, peer-led team learning, tutoring, mentoring and TRIO SSS. Academic Success Center services are provided at no additional cost to UTA students. For additional information visit: [Academic Success Center](https://www.uta.edu/student-success/course-assistance). To request disability accommodations for tutoring, please complete this [form](https://forms.office.com/Pages/ResponsePage.aspx?id=Q1vcXL7XqkyBc3KeOwpi2ccSjcIXpSJAqJFuDEhczLlUMVVHRVRIVlJJWDZJWlVYOUgxNjRPODdLVS4u).

**The English Writing Center**  
The Writing Center offers **FREE** tutoring in 15-, 30-, 45-, and 60-minute face-to-face and online sessions to all UTA students on any phase of their UTA coursework. Register and make appointments online at the [Writing Center](https://uta.mywconline.com/) (https://uta.mywconline.com). Classroom visits, workshops, and specialized services for graduate students and faculty are also available. Please see [Writing Center: OWL](http://www.uta.edu/owl) for detailed information on all our programs and services.

**Library Information**  
Each academic unit has access to [Librarians by Academic Subject](https://libraries.uta.edu/research/librarians) that can assist students with research projects, tutorials on plagiarism and citation references as well as support with databases and course reserves.

### Research or General Library Help

Ask for Help

* [Academic Plaza Consultation Services](https://library.uta.edu/academic-plaza)(library.uta.edu/academic-plaza)
* [Ask Us](http://ask.uta.edu/)([ask.uta.edu/](http://ask.uta.edu/))
* [Research Coaches](https://library.uta.edu/subject-librarians) (http://libguides.uta.edu/researchcoach)

Resources

* [Library Tutorials](https://library.uta.edu/how-to) ([library.uta.edu/how-to](http://library.uta.edu/how-to))
* [Subject and Course Research Guides](https://libguides.uta.edu/) ([libguides.uta.edu](http://libguides.uta.edu/))
* [Librarians by Subject](https://library.uta.edu/subject-librarians) (library.uta.edu/subject-librarians)
* [A to Z List of Library Databases](https://libguides.uta.edu/az.php) (libguides.uta.edu/az.php)
* [Course Reserves](https://uta.summon.serialssolutions.com/#!/course_reserves)(https://uta.summon.serialssolutions.com/#!/course\_reserves)
* [Study Room Reservations](https://openroom.uta.edu/)(openroom.uta.edu/)