# IDS 1703 Frontiers of AI: Artificial Intelligence Course Syllabus

Please note that this syllabus is subject to change; you will be notified of any changes to course policies, assignments or grading.

#### Course Information

In this course, you will learn what artificial intelligence (AI) is (from a high-level, conceptual standpoint) and how it is used to solve real-world problems in a wide variety of disciplines. This course will give you a broad overview of how AI technologies are transforming science, art, medicine, business, and more, and it will equip you to think about how AI might be applied to your own areas of interest. This course is intended for students from any major/discipline, and you do not need to have previous AI or technical expertise. Most class sessions will feature guest lectures from researchers at UF or industry who use AI in their work.

# **Course Objectives**

This 1-credit course will expose you to basic concepts of AI technologies and how they are applied in a wide variety of disciplines. We will address the following questions throughout the semester:

- What is AI? (And what is it *not*?)
- What are the main approaches to AI and how do they work (high-level, non-technical overview)?
- How is Al applied to real-world problems?
- How are AI systems evaluated?
- How can we ensure that AI systems are fair and equitable, and how can we use them ethically?

Finally, an important objective of this course it to equip you to think about how AI might be applied in your own area(s) of interest.

#### **Class Meetings**

- Synchronous class meetings, join if you can Tuesday 7th Period ET(1:55 pm 2:45 pm).
- Class Zoom sessions will be recorded and made available asynchronously.
- The class will meet via Zoom.
- You may access Zoom meetings and recordings through the Zoom Conferences link on the left navigation menu.

# **Textbooks/Supplies**

No textbook or supply purchase is required for this course.

#### Required Software & Equipment

You will need access to a reliable computer with broadband Internet access to complete class assignments. We will be using the following software programs:

- Zoom (You can find resources and help using Zoom at ufl.zoom.us.)
- A web browser
- Perusall a social reading annotation tool integrated with Canvas

#### **Prerequisites/ Corequisites**

This course does not require any prerequisites or corequisites.

#### **Communications**

Instructor: Matt Gitzendanner

- Please use the Canvas email tool to contact me! ("Inbox" on the left side of the page.)
- Student help/discussion hours:
  - I will hold open hours every Thursday from 2:00-3:00 pm via Zoom.
  - Stop by to discuss the class or ask questions about AI.
  - If the regularly scheduled time does not work, please contact me to schedule an alternative time.

#### **General Questions**

If you have general course questions (if not asked in class), please post them on the <u>Course Questions Discussion Forum</u>. Other students are likely to have the same question, and by asking questions in the forum, everyone can see the answers. It may save you time to do a keyword search for your topic to see if someone else has already asked your question. Please remember to subscribe to your post so that you will be e-mailed when it gets a response.

#### **Grades or Personal Issues**

Please don't hesitate to contact me if you have any questions or concerns you do not want to ask in the <u>Course Questions discussion forum</u>. I am here to help you succeed in this course!

Email me within Canvas using the inbox in the menu to the left. You are also welcome to talk with me after class, drop by during office hours, or set up an appointment.

#### **Netiquette – Communication Courtesy**

You are expected to contribute to the ongoing constructive feedback that is essential to the learning process. All class members are expected to follow rules of common courtesy in all email messages, threaded discussions, and chats. This course aims to provide a safe place for constructive, respectful discussions. View the Class Etiquette guide for details.

#### Student Responsibilities, Assignments, & Grading

#### **Attendance Policy**

- You are encouraged to attend the synchronous Zoom class sessions if
  possible. Doing so will allow you to interact directly with the instructor and our
  guest presenters. However, attendance is not factored into your grade.
- Whether you attend class synchronously or asynchronously, you will be responsible
  for any announcements made during class, and you must submit all assignments by
  their deadlines.
- Assignments will generally be posted well in advance, so you should have sufficient time to complete and submit these assignments even if you don't attend class synchronously.

#### **Assignments**

Your grade in this course will be determined by five components.

Most weeks, there will be a reading where you comment using Perusall. The **reading is due** at midnight on Monday before class. A discussion thread will open at the start of class, and you should post and comment before midnight on Friday. After class, the reading for the following week will open. There are a few weeks with different assignments, but that is the general pattern.

#### 1. Pre-class readings (200 points)

- Purpose: Educational research confirms that students learn more when they come
  to class having engaged ahead of time with the main class topics. Therefore, before
  most class sessions, you will be expected to learn and think about some of the
  ideas discussed during the live class session. Furthermore, practicing critical
  reading of relevant, Al-related literature will help you prepare to learn more about
  applications of Al on your own.
- Task: Before most class sessions, you will be given a reading assignment to help you prepare for class. You will engage these readings interactively with your peers using a web-based tool called "Perusall." Working in groups of about 20 students, Perusall will allow you to annotate the readings with comments and questions and respond to comments and questions posted by your classmates. Reading assignments will be due by 11:59 PM on Mondays. We will cover Perusall and reading assessment in more detail on the first day of class.
- Assessment: You will be assessed primarily by the comments and questions you
  add to the readings in Perusall, which should demonstrate serious and substantial
  intellectual engagement with the readings and/or meaningful responses to other
  students' questions and comments. Perusall is designed to help you get full credit
  for these assignments (if you so desire).
- There will be 11 reading assignments throughout the semester. Each reading assignment will be worth 20 points; your lowest score will automatically be dropped from your final grade.
- 2. Class engagement and discussion participation (100 points)
  - Purpose: Because a major goal of this course is to learn about applications of Altechnologies directly from researchers using those technologies, it is critical that you carefully listen to each guest speaker's presentation.

- **Task:** Most presentations will have a discussion thread asking you to comment on a question you have, something interesting you learned, or an ethical consideration of the topic. Post and comment on other students' posts.
- Assessment: The discussions are worth 10 points each; your lowest score will be dropped. I hope to avoid needing to define what is being graded, and people will participate in the discussions. I ask each student to answer the prompt and comment on another student's post. I hope there is more discussion. Any comments that are inappropriate or in violation of the course expectations will result in a score of 0 for that week's discussion.
- 3. (Very) brief essays/reflections (120 points)
  - **Purpose:** A key goal of this course is to enable you to think deeply about how Al technologies will transform your area(s) of interest and the world at large. Writing brief essays is an excellent way to organize your thoughts and reflect on the impacts of Al. Plus, writing within very short word limits will help you hone your abilities to write concisely and clearly, which are valuable skills!
  - Task: Three times during the semester, you will be asked to write and submit a very brief essay/reflection in response to a question or prompt given by the instructor. The maximum word length of each essay will be announced for each assignment, but will generally be about 150 words.
  - **Assessment:** Essays will be assessed by their content and quality of writing. A full grading rubric will be provided for each essay. Each essay will be worth 40 points.
- 4. Pre- and post-course surveys (40 points)
  - **Purpose:** Assessing your understanding of AI concepts and applications at the course's beginning and end will help you and the instructor gauge how much you've learned and provide insight into how the course could be improved.
  - Task: At the beginning of the course, you will be asked to complete a brief survey asking about your background, your understanding and perceptions of AI, and your expectations for the course. At the end of the course, you will complete a second survey that will again ask about your understanding and perceptions of AI, your feedback on the usefulness of the course, and suggestions for improvement. Each survey will be worth 20 points.
  - Assessment: You will receive full credit for completing each survey thoughtfully.

#### **Assignment Deadlines**

- View the course summary below for all assignment deadlines.
- Pre-class readings in Perusall are due the Monday before the class session at 11:59 pm ET.

#### **Late Assignments**

- Late assignments up to 3 days late will be accepted for partial credit.
- Your lowest score will automatically be dropped for both pre-class reading assignments and discussions and will not factor into your final grade.
- In the event of circumstances that make meeting assignment deadlines impossible, including medical emergencies or conflicts with University-approved activities, please discuss the situation with the course instructors as far in advance as possible.
- Discussion posts are due Friday after the class session at 11:59 pm ET.
- The pre-course survey is due at 11:59 PM ET on September 1st.
- The post-course survey is due at 11:59 PM ET on December 8th.
- Due dates/times for the brief essays/reflections are (these are tentative!):
  - Essay 1 due at 11:59 PM ET on October 13.
  - Essay 2 due at 11:59 PM ET on November 17.
  - Essay 3 due at 11:59 PM ET on December 2.

Late work will generally be accepted up to 3 days late for partial credit. Additionally, the lowest grade for pre-class readings and discussions will be dropped.

# Grading

| Component                       | <b>Points Possible</b> | Percent of Final Grade |
|---------------------------------|------------------------|------------------------|
| Pre-class readings/assignments  | 200                    | ~43%                   |
| Discussion posts                | 100                    | ~22%                   |
| (Very) brief essays/reflections | 120                    | ~26%                   |
| Pre- and post-course surveys    | 40                     | ~8%                    |
|                                 | 460                    | 100%                   |

# **Grading Scale**

| Percent      | Grade | Grade Points |
|--------------|-------|--------------|
| 94.0 - 100   | А     | 4.00         |
| 90.0 - <93.0 | A-    | 3.67         |
| 87.0 - <90.0 | B+    | 3.33         |
| 83.0 - <87.0 | В     | 3.00         |
| 80.0 - <83.0 | B-    | 2.67         |
| 77.0 - <80.0 | C+    | 2.33         |
| 73.0 - <77.0 | С     | 2.00         |
| 70.0 - <73.0 | C-    | 1.67         |
| 67.0 - <70.0 | D+    | 1.33         |
| 63.0 - <67.0 | D     | 1.00         |
| 61.0 - <63.0 | D-    | 0.67         |
| 0 - <61.0    | Е     |              |

View more information on the UF Grading policy.

# **Policies**

NOTE: This course complies with all UF academic policies. For information on those policies and for resources for students, please see UF's "Academic Policies and Resources" web page.

