

Artificial Intelligence & Tax Law: Theory and Practice

Professor Mindy Herzfeld

**University of Florida Levin College of Law
Graduate Tax Program**

Syllabus

Compressed Course Winter Break 2022

AI and Tax LAW #7931

Professor Mindy Herzfeld

Office: 374

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Office Hours: Tuesday, Jan 11, 9-10 via zoom

Tuesday, Jan 18, 9-10 in room 374

A. Course Materials: The required reading/video links/tools to be utilized can be accessed through links provided below or are posted on Canvas.

B. Topics: The topics for class, along with the assigned readings are described in the pages that follow.

C. Grade: Your grade will be based on the following:

(1) Daily Assignments (25% of grade) (every day you will be asked to submit 2 questions related to the readings, for discussion topics for class)

(2) AI Tool Exercises (60% of grade) There are three exercises using different AI tools that you will be required to submit as part of the course, discussed in greater detail below. Half of your grade (30%) will be based solely based on submitting something on deadline during the week of the course (i.e., not on completeness or accuracy of answer). The other half (30% of the grade) will be awarded based on submission of final work product by January 29.

(3) Crypto fact pattern (15% of grade), due January 29, 2021. (Note: in lieu of crypto fact pattern, other types of work product may also acceptable upon discussion with and agreement by the professor, such as developing a model/analytic tool, developing a marketing plan for lawfirm for AI use).

This course follows the Levin College of Law's grading policies found here

<https://www.law.ufl.edu/life-at-uf-law/office-of-student-affairs/current-students/uf-law-student-handbook-and-academic-policies> . The below chart describes the specific letter grade/grade point equivalent in place.

Letter Grade	Point Equivalent
A (Excellent)	4.0
A-	3.67
B+	3.33
B	3.0
B-	2.67
C+	2.33
C (Satisfactory)	2.0
C-	1.67
D+	1.33
D (Poor)	1.0
D-	0.67
E (Failure)	0.0

D. Reading Assignments. You should be prepared to discuss the reading assignment for each class.

E. Attendance. Per ABA requirements, you will be expected to attend a minimum of 80 percent of all classes. Because this is a compressed course, attendance at each class is required and absence is reflected in the grading, without an excused absence from Student Affairs.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

F. Class Preparation

Because this is a compressed course, you should be prepared to spend several hours preparation time before the course begins. During the week of the course, you should be prepared to spend several hours a day that week reading and preparing assignments. In total, you can expect to spend approximately 30 hours in preparation for class, including reading and working on assigned exercises utilizing AI tools.

G. Guest Lecturers. There will be a number of guest lectures during the week as indicated below. They are giving of their time partly in order to learn from you. You will need to be prepared with assignments (readings and AI tools) for discussion with them.

Summary of the Course

Artificial Intelligence is one of the most exciting and important developments of our time. Machine learning has and will continue to alter the way we conduct business and our lives and is transforming the nature of work. In law, artificial intelligence is raising both fundamental questions about how law is made and the role of machines in the analysis of contracts and statutes, the evolution of law, and the role of machines in legal decisions. In the legal practice, artificial intelligence is introducing radical changes into the lawyer's role, how information is processed and how data is analyzed, and in the ability of lawyer's to charge for their skills and expertise. All of these changes are evident in the field of tax law as well.

This course will consider the application of artificial intelligence and the challenges it poses to legal thought, tax law in particular. It also considers some of the practical ramifications of those changes for the daily practice of tax law.

Assigned readings are noted below.

Objectives of the course

This course has a number of objectives:

1. To understand the term artificial intelligence;
2. To explore the applications of artificial intelligence to the law and the legal profession and the opportunities and challenges it poses to each and become familiar with the academic literature in the field;
3. To appreciate the unique opportunities and challenges AI offers in the field of tax law and to the tax profession;
4. To become familiar with AI tools that tax practitioners are utilizing in daily practice;
5. To explore an area of individual interest related to AI and tax.

Required Course Materials

All required readings are posted in canvas or linked to/listen in the syllabus.

1. **Reference Materials.** Additional reference materials are noted below and for each class.
2. **Office Hours.** I am available for in-person or phone consultations. These can be scheduled by email at herzfeld@law.ufl.edu.
3. **Alteryx registration: the course will include an exercise using the Alteryx tool.** Register for a trial 30 day access for free at <https://www.alteryx.com/designer-trial/free-30-days>
4. **BlueJ Legal registration: the course will include an exercise using the Blue J Legal tool.** Sign up for a free trial for Blue J Legal with this link: <https://www.bluejlegal.com/tax-analysts-free-trial>

Note: Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.”

Reference Materials

Cathy O'Neil, WEAPONS OF MATH DESTRUCTION (2016)

Ryan Calo, *Artificial Intelligence Policy: A Primer and Roadmap, Part I*, 51 U.C. DAVIS L. REV. 399, https://lawreview.law.ucdavis.edu/issues/51/2/Symposium/512_Calo.pdf (Part I)

David Lehr & Paul Ohm, *Playing with the Data: What Legal Scholars Should Learn About Machine Learning*, 51 U.C. Davis L. Rev. 653 (2017) [HIGHLY RECOMMENDED]

Class 1: Monday, January 10

Objectives of the Course

A Primer on Artificial Intelligence

Required Reading: Darrell West, *What is Artificial Intelligence?* Brookings (2018)
<https://www.brookings.edu/research/what-is-artificial-intelligence/>

Video: Tax Analysts: Artificial Intelligence and the Future of Tax (Dec. 8, 2020)
<https://events.taxanalysts.org/TAwebinar12082020>

Challenges and Opportunities in AI and Law

Required Reading: Daniel Susskind, *The Future of the Professions*, Proceedings of the American Philosophical Society, 162:2 (2018). ([Download](#))

Required Reading: Abdi Aidid and Benjamin Alarie, *Legal Singularity* (forthcoming 2021) (Draft Chapter 3: Computational Law) (in canvas)

AI as Used in Legal Support Today

Presentation from: Abdi Aidid, University of Toronto

Presentation from: Chris Kontadiris, US New Law Leader, PwC; Stephanie Skelly, Director, PwC

Presentation from: Tori Kim, eBrevia

Exercise: Contract Term Extraction (due on Wednesday)

Optional Additional Readings

1. Yannick Meneceur and Clementina Barbaro, *Artificial Intelligence and the Judicial Memory: The Great Misunderstanding*. "Les Cahiers de la Justice" 2019/2, 277-289., Available at <https://ssrn.com/abstract=3334335> or <http://dx.doi.org/10.2139/ssrn.3334335>
2. Jennifer Bauer, *The Necessity of Auditing Artificial Intelligence Algorithms* (December 11, 2017). Available at <https://ssrn.com/abstract=3218675>
3. Selena Silva and Martin Kenney, *Algorithms, Platforms, and Ethnic Bias: An Integrative Essay*, BRIE Working Paper 2018-3

https://brie.berkeley.edu/sites/default/files/brie_wp_2018-3.pdf

4. Lauri Donahue, *A Primer on Using Artificial Intelligence in the Legal Profession* (2018) <https://jolt.law.harvard.edu/digest/a-primer-on-using-artificial-intelligence-in-the-legal-profession>

Class 2: Tuesday, January 11

AI and Tax: Policy Issues

Required Reading:

Benjamin Alarie, *Turning Standards into Rules, Part 2*, 233 DTR 10 (2018). Or available on canvas.

Alarie and Gardhouse, *Battling Uphill Against the Assignment of Income Doctrine: Ryder*, 173 TAX NOTES FEDERAL 1253 (NOV. 29, 2021). Or available on canvas.

Anton Korinek, [Taxation and the Vanishing Labor Market in the Age of AI](#), 16 Ohio St. Tech L.J. 244 (2020) available at https://kb.osu.edu/bitstream/handle/1811/91831/1/OSTLJ_V16N1_244.pdf

Presentation: Benjamin Alarie, BlueJ Legal

Exercise: Debt Equity Analysis (Due on Wednesday)

Background Reading: Bloomberg Portfolio 702 has helpful background on the analysis of debt v. equity for tax purposes

Optional Additional Reading

Sarah Lawsky, *Form as Formalization*, 16 Ohio St. Tech. L. J. 114 (2020), available at <https://ssrn.com/abstract=3587576>

Susan C. Morse, *Do Tax Compliance Robots Follow the Law?* 16 Ohio St. Tech. L. J. 278 (2020), available at <https://ssrn.com/abstract=3537679>

Stephanie Hoffer, *Tax Theory and Feral AI*, 16 Ohio St. Tech. L. J. 157 (2020) available at <https://dx.doi.org/10.2139/ssrn.3520608>

Orly Mazur *Taxing the Robots*, 46 Pepp. L. Rev. 277 (2019)
Available at: <https://digitalcommons.pepperdine.edu/plr/vol46/iss2/2>

Jay Soled and Kathleen DeLaney Thomas, *Automation and the Income Tax*, 10 Col. J. of Tax Law 1 (2018), available at <https://ssrn.com/abstract=3316388>

Jay Soled & Kathleen DeLaney Thomas, *Regulating Tax Return Preparation*, 57 B.C. L. Rev. 151 (2017), available at <https://lawdigitalcommons.bc.edu/bclr/vol58/iss1/5>

Class 3: Wednesday, January 12

AI and Tax: Practitioner Utilization

Required Reading

1. *Laidlaw Transportation Inc. v. Commissioner*, T.C. Memo 1998-232
2. *Fin Hay Realty Co. v. United States*, 398 F.2d 694, 697 (3d Cir. 1968)

[Background (optional) reading on debt/equity: Bloomberg Portfolio 702, III.C]

3. Section 163(j) (skim)

4. Joint Committee Explanation (Bluebook) of 2017 Amendments to Section 163(j) (posted in canvas)

[Background (optional) reading on section 163(j): Bloomberg Portfolio 926, IX.B]

Other Class Prep:

Reference materials: Alteryx Community and You Tube Videos

<https://community.alteryx.com/?category.id=external>

Review: *Contract extraction tool*

Review: *Debt/Equity Analysis*

Problem Solving Exercise: *Alteryx/section 163(j) modeling (draft due on Friday). Petar Petrov, PwC*

Class 4: Thursday, January 13

AI and Tax Administration

Required Reading

Joshua Blank & Leigh Osofsky, [Legal Calculators and the Tax System](#), 16 Ohio St. Tech L.J. 73 (2020), available at: <https://ssrn.com/abstract=3411748>

Jeff Butler, [Analytical Challenges in Modern Tax Administration](#), 16 Ohio St. Tech L.J. 258 (2020) available at <https://core.ac.uk/download/pdf/323062029.pdf>

Charles Rossotti and Fred Forman, *Recover \$1.6 Trillion, Modernize Tax Compliance and Assistance: The How-To*, 168 TAX NOTES FEDERAL 1961 (Sept. 14, 2020) (on canvas)

Code Section 6045

Comments from: Fred Forman, [link to bio: <https://shrinkthetaxgap.com/about-the-author/>]

Remarks by: *IRS, LB&I: Mark Nyman, Director, Compliance Planning & Analytics; Ted Setzer, Director, Data Solutions*

Presentation: *Disney: Use of AI tools in-house.*

Optional Additional Reading

OECD Forum on Tax Administration, *Tax Administration 3.0: The Digital Transformation of Tax Administration*, <http://www.oecd.org/tax/forum-on-tax-administration/publications-and-products/tax-administration-3-0-the-digital-transformation-of-tax-administration.htm> (2020)

Kimberly A. Houser and Debra Sanders, *The Use of Big Data Analytics by the IRS: Efficient Solutions or the End of Privacy as We Know It?*, XIX Vanderbilt J. Entertain't & Tech. L. 817 (2017)

GAO Tax information reporting & crypto

Class 5: Friday, January 14

Crypto and Tax

Mindy Herzfeld, *Beyond Digital: Is Cryptocurrency the Next Tax Frontier?* 98 TAX NOTES INT'L 1203 (June 15, 2020)

Jeffrey H. Kahn and Gregg D. Polsky, *The End of Cash, The Income Tax, and the Next 100 Years*, 41 Fla. St. U. L. Rev. 159 (2013), available at: <https://ir.law.fsu.edu/articles/221>

OECD, *Taxing Virtual Currencies: An Overview Of Tax Treatments And Emerging Tax Policy Issues* (2020) www.oecd.org/tax/tax-policy/taxing-virtual-currencies-an-overview-of-tax-treatments-and-emerging-tax-policy-issues.htm (chapter 3) (available in Canvas)

GAO Report on Virtual Currencies (2020) (available in canvas)

Presentation from: Lawrence Zlatkin, VP Tax, Coinbase

Review: Section 163(j) Model

Optional Additional Reading

GAO, *Virtual Currencies: Additional Information Reporting and Clarified Guidance Could Improve Tax Compliance* GAO-20-188 (Feb 12, 2020) <https://www.gao.gov/products/GAO-20-188> .

Abraham Sutherland, *Dilution and True Economic Gain From Cryptocurrency Block Rewards* with Mattia Landoni, 168 *Tax Notes* 1213 (Aug. 17, 2020), available at [SSRN](#)

Abraham Sutherland, *Taxing Cryptocurrency Block Rewards," Introduction to the Taxation Problem*, Coin Center, (Nov. 20, 2019) [Article](#)

Abraham Sutherland, *Cryptocurrency Economics and the Taxation of Block Rewards*, 165 *Tax Notes* 749 (Part 1, Nov. 4, 2019) and 165 *Tax Notes* 953 (Part 2, Nov. 11, 2019) [SSRN](#) | [Part 1 Article](#) | [Part 2 Article](#)

Eric D. Chason, *Cryptocurrency Hard Forks and Revenue Ruling 2019-24* (December 9, 2019). 39 *Virginia Tax Review* 2 (2019), available at <https://ssrn.com/abstract=3501179>

University Policy on Accommodating Students with Disabilities:

Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Office of Student Affairs when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

University Policy on Academic Misconduct:

Academic honesty and integrity are fundamental values of the University community. Students

should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>.

**Netiquette: Communication Courtesy: All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats.

<http://teach.ufl.edu/docs/NetiquetteGuideforOnlineCourses.pdf>

Getting Help:

For issues with technical difficulties for E-learning in Sakai, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

** Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Other resources are available at <http://www.distance.ufl.edu/getting-help> for:

- Counseling and Wellness resources
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

Should you have any complaints with your experience in this course please visit <http://www.distance.ufl.edu/student-complaints> to submit a complaint.

Course evaluation:

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.