

IDS 4956: Exploring Science in Scotland and London

Program title: UF in the UK: Exploring Science

I. General Information

Class Meetings

- Students will travel abroad during the Spring 2025 semester AFTER classes/exams end and BEFORE Summer A begins (Sunday, May 4th, 2025 – Sunday, May 11th, 2025). This is officially a Spring 2025 one-credit course.
- Students WILL be back in Gainesville to take classes, in person, in Summer A/C if they would like.
- We will meet once, TBD, in Gainesville, FL, during the Spring 2025 semester before the start of the program.
- Location of study abroad: Edinburgh, Glasgow, the “highlands of Scotland”*, and London, England.

*“Choose your adventure.” See activities for Tuesday, May 6th below.

Instructor

- Brian Harfe, Ph.D.
- Email: bharfe@ufl.edu

Prerequisites

- None
- **The course is open to all majors**
- Open to all UF undergraduates, including freshman

Course Description

The course aims to provide an introductory international experience and allow students to explore some of the scientific discoveries that have changed the world (in person!), including a visit to Dolly, the world’s first cloned animal (Edinburgh, Scotland), and the original Watson and Crick model of DNA (London, England). Participation in this course requires no science background, **and all majors are welcome.** During the one-week course, students will travel to Edinburgh, Glasgow, the Highlands of Scotland*, and London, England. Most afternoons and evenings are designated “free time” to explore these fantastic places! The attached document includes some places students have visited. See: “Things to do on the UF in the UK trip!”

Students will also explore two universities, the [University of Glasgow](#) and the [University of London \(UCL\)](#), which they can attend the following year as exchange students. On the “free day,” students also have the option of exploring the [University of Aberdeen, which you can also](#)

[attend as an exchange student](#). All exchange programs are run by Dr. Brian Harfe, the faculty member directing this study abroad program. The opportunity to spend a semester/academic year abroad is available to all students, irrespective of whether they participate in the Study Abroad program. However, preference will be given to students who have participated in this study abroad program.

Tentative Schedule and Dates for the 2025 Study Abroad Program

Tentative dates are Sunday, May 4th 2025 (Edinburgh, Scotland arrival) – Sunday, May 11th, 2025 (depart London, England)

To be in Edinburgh on Sunday, May 4th, you will likely need to leave the US on Saturday, May 3rd (overnight flight). You can, of course, show up earlier and meet us in Edinburgh on Sunday, May 4th.

Sunday May 4th (Edinburgh, Scotland):

- AM: Arrive in Edinburgh, Scotland (we will take the [Edinburgh tram](#) from the airport to the hotel)
- PM: Group lunch and orientation to Edinburgh (Dr. Harfe)
- PM: Explore the city! (hotel in Edinburgh).

Monday, May 5th (Edinburgh, Scotland):

- 9:30 am: Visit [Edinburgh Castle](#)
- PM: Visit the [National Museum of Scotland](#). At the museum, see [Dolly](#), the first cloned animal.
- In the evening, you have free time to explore the [Royal Mile and Edinburgh](#) (hotel in Edinburgh).

Tuesday, May 6th **FREE DAY** (*students are responsible for the cost of activities this day. I have put some suggestions below)

Suggestions for trips/things to do (so many possibilities!):

- [Tripadvisor day trip suggestions](#) (an excellent place to get some ideas)
- Day trip to the Highlands of Scotland, including visiting [Urquhart Castle and Loch Ness](#)! Several students went on this trip previously (~\$75)
- Day trip to Aberdeen, Scotland, including Aberdeen University, where you can (through UF) [spend the entire academic year if you would like](#)! (round trip train is ~\$110)
- [Stirling](#), Scotland, and [Stirling Castle](#) (round trip train is ~\$30)
- Saint Andrews, Scotland. [Home of golf](#), an amazing (ruined) [Cathedral](#), and [a vibrant town](#). (round trip train is ~\$30. Keep in mind the train stop is called “Leuchars” which is outside of town)

Wednesday, May 7th ([Glasgow, Scotland](#)):

Day trip to Glasgow (1-hour train ride from Edinburgh to Glasgow).

- AM: Guided walking tour of Glasgow University. You can apply (through UF) to spend the [entire academic year here](#) if you would like!
- AM: Visit [The Hunterian Museum](#), located on the University of Glasgow Campus. The Hunterian Museum includes permanent exhibits on "[Medicine in Glasgow – Past and Present](#)" and "[Lord Kelvin: Revolutionary Scientist](#)."
- PM: Explore Glasgow City Centre (shopping!). In the evening, take the train back to Edinburgh (hotel in Edinburgh)

Thursday, May 8th (London, England):

- AM: Train to London (4.5 hours). Arrive at London Kings Cross Station. Yes, there is a [Platform 9 ¾](#).
- PM: Orientation to London and explore the city on your own.

Friday, May 9th (London, England):

- AM: [British Museum](#) (lunch at museum or surrounding area)
- PM: Walking tour of the [University of London \(UCL\)](#) for students interested in [attending UCL as a UF exchange student](#). Or explore the city on your own.

Saturday, May 10th (London, England):

- AM: Visit the [Science Museum, London](#). This is an incredible place with exhibits spanning the COVID pandemic to one of the world's oldest clocks (from the 1300s). At the museum, see:
 - o The original [Watson and Crick model of DNA](#).
 - o The "[most significant medical collection in the world](#)."
 - o The museum also has an outstanding selection of early microscopes and computers!
 - o And one of the world's most famous exhibits on all things "[Space](#)" (as in exploring places not on Earth).
- PM: Explore the city on your own.

Sunday (May 11th): Fly from London home.

Required Readings and Works

Required readings/works (prior to leaving for the trip):

The Double Helix: A Personal Account of the Discovery of the Structure of DNA by James D. Watson, (NOTE: 2001 version, not the 1968 version) 256 pages. **It is a quick read!**

- There are some parts of this book that go into detail about the experiments performed by the scientists. Feel free to SKIM the detailed scientific parts of this book. You will not be tested on any information in this book. Rather the reading is to give you a general idea of the history and controversy surrounding this discovery. You will have the opportunity to see the [model of DNA](#) that is pictured in this book while in London.

Optional readings/videos:

Rosalind Franklin: The Dark Lady of DNA by Brenda Maddox (2003) 416 pages by Brenda Maddox

- Biography of the scientist who provided the key piece of information Watson and Crick needed to decipher the structure of DNA “but who was airbrushed out of the greatest scientific discovery of the twentieth century” (Brenda Maddox).

The Code Breaker: Jennifer Doudna, Gene Editing, and the Future of the Human Race by Walter Isaacson (2021)

- Biography of Jennifer Doudna, 2020 winner of the Nobel Prize for her co-discovery of CRISPR (CRISPR technology can be used to modify DNA).
- Note: pages 17-28 “DNA” is a brief, balanced retelling of the Watson “Double Helix” book that is required for this course. Pages “Watson Revisited” and “Doudna Pays a Visit” pages 285-398, describe Dr. Doudna’s visit with Dr. Watson.

Foundation (2021 TV series on Apple TV+).

- While the series is only loosely based on the novels by Isaac Asimov, there is an interesting storyline that revolves around human cloning (as an aside, this storyline is not part of the Asimov books).

Materials and Supplies Fees: n/a

II. Graded Work

Description of Graded Work

Grades will be weighted as follows:

% OF FINAL GRADE	DESCRIPTION	DUE DATES
15%	Final Paper: Reflections. See rubric below for grading. 2-3 double-spaced pages (not including any references). See Assignment Details below for more information.	The Friday after returning from the UK.
85%	Participate in the Study Abroad Program.	May 4 th - 11 th , 2025

Grading Scale

For information on how UF assigns grade points, visit: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

A	94 – 100%		C	74 – 76%
A-	90 – 93%		C-	70 – 73%
B+	87 – 89%		D+	67 – 69%

B	84 – 86%		D	64 – 66%
B-	80 – 83%		D-	60 – 63%
C+	77 – 79%		E	<60

Assignment Details and Grading Rubrics

Final Paper: Reflections (due 11:59 pm on the Friday after returning from the UK). The final paper should reflect on what you have learned during the trip. The paper should be 2-3 double-spaced pages (not including references; references are not required). It will count for 15% of your final grade and will be graded on a 0-15 scale following the below rubric.

Criteria	Points
Describe one scientific exhibit you visited on the trip. Explain if the impact of seeing the exhibit in person affected/did not affect your view of the scientific discovery it depicted.	4
Discuss how the trip abroad changed/did not change your views on the discovery of the structure of DNA	3
Describe if the trip abroad increased/decreased your desire to participate in a future exchange and/or study abroad program?	3
What was the best part of the trip? What would you change (suggestions for improvement!)	5
Total Points	15

III. Schedule

Course meeting times. The pre-departure meeting and trip occur during the Spring 2025 semester.

TBD: Pre-departure meeting on the UF Gainesville campus.

May 4th-11th of the 2025 Spring semester – Study Abroad Program to Scotland and England!

Learning Outcomes (SLOs)

At the end of this course, students will be expected to have achieved the following learning outcomes:

Content: *Students demonstrate competence in the terminology, concepts, theories and methodologies described in the course.*

- Identify, describe, and explain the ways that cloning and the genetic manipulation of DNA has impacted human society. **Assessments:** Participation in class discussions and the Study Abroad Trip, final paper.

Critical Thinking: *Students carefully and logically analyze information.*

- Critically evaluate, and compare differences in the US and British education systems
Assessments: Participation in class discussions

Communication: *Students communicate knowledge, ideas and reasoning clearly and effectively in written and oral forms appropriate to the discipline(s).*

- Effectively communicate with members of other cultures. **Assessments:** Study Abroad Trip.

Connection: *Students connect course content with meaningful critical reflection on their intellectual, personal, and professional development at UF and beyond.*

- Reflect on what you have learned in the course. **Assessments:** Discussion during the last class meeting, Final paper

V. Required Policies

Attendance Policy

Requirements for class attendance and make-up 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>

Students Requiring Accommodation

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting

<https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

UF Evaluations Process

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/>.

University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code

(<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Counseling and Wellness Center

Contact information for the Counseling and Wellness Center: <http://www.counseling.ufl.edu/>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

The Writing Studio

The writing studio is committed to helping University of Florida students meet their academic and professional goals by becoming better writers. Visit the writing studio online at <http://writing.ufl.edu/writing-studio/> or in 2215 Turlington Hall for one-on-one consultations and workshops.

In-Class Recordings

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.

UF International Center

UF International Center Study Abroad: 352-273-1539.