

IDH2930 — Honors (Un)Common Read – Spring 2024
‘The Alchemy of Air’ by Thomas Hager
class #27228, section #2316

Instructor	Dr. Alexander Angerhofer (Dr. A.)
Phone	392-9489 (office, CLB318A)
E-mail	Please use the Canvas messaging system to communicate with your instructor.
Class Times	T 7 th period (1:55pm-2:45pm) in SFH 221 (Scott Family Hall, New Chemistry Bldg.)
Office Hours	M 8 th period (3:00 – 3:50pm) in CLB318A and by appointment at other times.

Holidays	01/15 (MLK Day), 03/11 – 03/15 (Spring Break), 04/25–26 (Reading Days).
Class Text	“The Alchemy of Air,” by Thomas Hager, Broadway Books, New York 2008, ISBN #978-0-307-35179-1.
Points Earnable	17× discussion paragraphs @ 2 pts. each for 34 pts. total. 8× active discussion participation @ 4 pts. each for 16 pts. total. 1× discussion leader @ 20 pts. each for 20 pts. total. 1× 8 min. presentation @ 30 pts. each for 30 pts. total. Extra points are available since there are up to 18 discussion paragraphs possible and 9 active discussion participations. You can also earn extra points on your presentation (up to 7 extra points are possible).
Grading Scheme	Out of 100 points: A ≥ 94% (94 pts.) 94% (94 pts.) > A– ≥ 91% (91 pts.) 91% (91 pts.) > B+ ≥ 88% (88 pts.) 88% (88 pts.) > B ≥ 82% (82 pts.) 82% (82 pts.) > B– ≥ 79% (79 pts.) 79% (79 pts.) > C+ ≥ 76% (76 pts.) 76% (76 pts.) > C ≥ 70% (70 pts.) 70% (70 pts.) > C– ≥ 67% (67 pts.) 67% (67 pts.) > D+ ≥ 64% (64 pts.) 64% (64 pts.) > D ≥ 58% (58 pts.) 58% (58 pts.) > E.

Course Schedule (tentative):

Date	Reading	Topic	Assignments
01/09/24		Discussion of Syllabus	
01/16/24	pp. xi – 23	Introduction, Chapters 1 & 2: Sir William Crookes' Prophecy, Nitre and Gunpowder.	Discussion paragraphs, student-led discussion
01/23/24	pp. 25 – 61	Chapters 3 – 5: The Guano Islands and the Nitrate Wars.	Discussion paragraphs, student-led discussion
01/30/24	pp. 65 – 88	Chapters 6 & 7: Fritz Haber, Early Experiments in Nitrogen Fixation, Scientific Controversies, BASF.	Discussion paragraphs, student-led discussion
02/06/24	pp. 89 – 110	Chapters 8 & 9: Carl Bosch, Finding a Catalyst, Early Success.	Discussion paragraphs, student-led discussion
02/13/24	pp. 111 – 147	Chapters 10 – 12: Setbacks and Industrial Developm., Oppau Plant, WW I, Production of Explosives.	Discussion paragraphs, student-led discussion
02/20/24	pp. 151 – 191	Chapters 13 – 15: Fritz Haber's Chemical Warfare, Haber's Marriage Ends, The War's Aftermath, Haber's Search for Gold from the Sea.	Discussion paragraphs, student-led discussion
02/27/24	pp. 193 – 214	Chapters 16 & 17: Bosch leads BASF, Oppau Explosion, New Products, Rise of IG Farben.	Discussion paragraphs, student-led discussion
03/05/24	pp. 215 – 251	Chapters 18 – 20: Haber's Institute, Personal Issues, Depression, Rise of Hitler, Haber's Exile and Death.	Discussion paragraphs, student-led discussion
03/19/24	pp. 253 – 281	Chapters 21, 22 & Epilogue: Nazification of IG Farben, WW II, Legacy of the Haber-Bosch Process.	Discussion paragraphs, student-led discussion
03/26/24		tba	Guest Lecture
04/02/24		Topics of Student Interest Related to the Book	Student Presentations
04/09/24		Topics of Student Interest Related to the Book	Student Presentations
04/16/24		Topics of Student Interest Related to the Book	Student Presentations
04/23/24		Topics of Student Interest Related to the Book	Student Presentations

Further Important Information:

1. **Overview:** IDH2930 are discussion-oriented courses centered around a single book. They provide 1 academic point toward Honors Completion if completed with a grade of B or higher. Grading is primarily participation based. All students are expected to participate vigorously and earn an 'A' in the course.
2. **Goals:** After reading the book the student will be familiar with the history of the Haber-Bosch process, what it is, how it was developed, and its effects on world history in the 20th century. They will also be familiar with the biographies of the main protagonists in the story, Fritz Haber and Carl Bosch, their successes and failures. Perhaps most importantly, the student will understand the implications of 'fixed nitrogen' on modern agriculture, industrial chemistry, and our environment.
3. **Logistics:** During the first approximately two thirds of the semester we will read the book, two to three chapters (out of 22) each week. During this period the classroom meeting will be dedicated to active discussion of the text. Students will have read the assigned chapters (see above list) ahead of time and prepare two paragraphs describing topics they found to be of interest to them that they wish to consider in the class discussion. These paragraphs will be

submitted on canvas and are due the day before class meets, *i.e.*, Mondays at 12:00 pm to allow the discussion leaders to review and help them prepare to lead the discussion the next day. Students will take turns serving as discussion leaders. The last few meeting times of the semester will be devoted to student presentations on ‘mini research projects’ of the students’ own choosing. Out of the many topics that were discussed in the first part of the semester students will pick what interests them most and explore it further, supported by their own research. These mini research projects will involve further reading in the academic literature and other sources of information. There will be a question and answer session of approximately 2 minutes after each presentation. Please make use of your instructor’s office hours to help you fine-tune your upcoming presentation. The grade students receive for their presentation (37 points max. which includes extra points) will come from both peer and instructor evaluations. Sign-up sheets will be available for students to select dates for their discussion leader role and their classroom presentation.

4. **Textbook:** Thomas Hager, ‘The Alchemy of Air,’ Crown Publishing Group, New York 2008, ISBN 978-0307351784. Subtitle: ‘A Jewish Genius, a Doomed Tycoon, and the Scientific Discovery That Fed the World but Fueled the Rise of Hitler.’ This book serves as the basis for the reading and is required. It is available in hardcover, paperback, and as an ebook. Any of these editions are fine. The pages referenced in the course schedule above are taken from the paperback version.
5. **Elearning:** This course uses the canvas elearning site. Please log on at <https://elearning.ufl.edu/> to get access to your course page. Assignments should be submitted on canvas.
6. **Assignments – Reading:** Please refer to the reading assignments in the course schedule above. Reading of the book is essential for your participation. You will have to finish reading the assigned chapters on Monday prior to our Tuesday class meeting at which the material will be discussed. We will have finished the reading and discussion of the book by March 21.
7. **Assignments – Discussion Paragraphs:** After reading the assigned chapters each week you are expected to write a paragraph **each** on **two** topics of interest which you would like to see addressed in the discussion that week. Each of your paragraphs is worth 2 points. These paragraphs may contain cited statements from the book that you found intriguing, questions that have arisen in your mind after the reading, concepts discussed in the chapter, *etc.* Anything that is related to the reading assignments for that week is fair game. There are nine student-led discussions for which discussion paragraphs will be formulated. The deadline for their submission is on the day before the discussion at noon. This will allow discussion leaders to look at the paragraphs and organize their talking points for the following day.
8. **Assignments – Discussion Participation:** Active participation in the student-led discussions is essential for this book to come to life. Be prepared to expand verbally on your discussion paragraphs, be ready to ask questions, answer questions, and in other ways constructively contribute to the discussion. The instructor will keep track of your participation for grading. Discussion participation is worth 4 points per meeting.
9. **Assignments – Leading the Discussion:** For one of the nine discussions you will be a discussion leader, possibly teaming up with a second discussion leader. You should come prepared to lead the discussion. Typically, you should start with a very brief review of the chapters that had been assigned for the week, followed by discussion points you have picked from the various topics that were indicated in the discussion paragraphs of your classmates as well as your own. In leading the discussion your primary job will be to draw your fellow students into a lively discussion. Your instructor will keep track of your discussion leadership for grading. Leading a discussion is worth 20 points. Due to the relatively large enrollment there will be several discussions that are team-led with two discussion leaders sharing the responsibility.

10. **Assignments – Student Presentations:** In the last third of the semester (starting on April 2nd) each student will deliver a 7 – 8 minute presentation to the class. Students should select a topic of interest to them that is related to the book. It is expected that the presentations are more in depth than just a review of parts of the book. You may use the bibliography in the book to do your own research on your topic of interest and educate the class on what you found. Examples of such topics are: further background research on the history of the Haber-Bosch process, its historic and modern implications, environmental issues, the biographies of either of the two protagonists or their competitors, the rise of the chemical industry, international politics in the 20th century, impact of chemistry on the two world wars, *etc.*, if it is connected to the topic of our book it is fair game. Students may start working on their research as soon as they decide on their topic of interest. There is no ‘chapter’ or chronological order necessary for these presentations. Students should feel free to utilize the expertise and resources of the instructor. To make sure that your presentation will be successful, it is a good idea to share it with your instructor approximately a week in advance so that he can give you guidance on content and delivery. The presentation is worth 30 points.
11. **Class Attendance:** Regular class attendance is essential for your success. However, we will not do roll-calls. Repeated absence in class and discussion session will make it very difficult to earn full participation points. For further information on UF's attendance policies which are in effect for this course, see: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx> .
12. **Office Hours:** I have set apart office hours on Mondays, after discussion paragraphs are due, *i.e.*, M–8 period from 3:00 pm till 3:50 pm in CLB318A. Discussion leaders should take advantage of these office hours if they wish to get my feedback on their planned discussion for the following day. However, I am also available by appointment (please request via the canvas messaging system at least one day in advance), particularly if your schedule prevents you from coming to my office hours.
13. **Email Policy:** For all course-related business, use your official @ufl.edu gatorlink email address or the e-learning messaging system (preferred). I will generally not respond to emails from other sources (*e.g.*, your gmail or yahoo address).
14. **Cell Phone Etiquette:** Please put all cell phones or other electronic devices on ‘**silent mode**’ during all class/discussion periods. Please do not leave the classroom to make a phone call. Thank you!
15. **Classroom Behavior:** Please conduct yourself professionally and responsibly during classroom times. If you want to contribute to the class discussion or ask a question, indicate so by lifting your hand and wait until you are called upon by the discussion leader or presenter. Arriving late or leaving class early can be very disrupting to the presentation, discussion, and other students and should be kept to a minimum. If you have to arrive late for a class period, please enter quietly. If you have to leave the class early you may do so quietly but you should not come back during the same class period. You are permitted to use your notebook computer for note-taking during class as long as it does not disturb your fellow students (*i.e.*, sound has to be off, very quiet keys or use of pen-enabled tablet).
16. **Online 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 UF course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.
17. **Students with Disabilities:** Students with disabilities requesting accommodation should first register with the Disability Resource Center (352-392-8565, <https://disability.ufl.edu/>) by

providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. The student is responsible for scheduling the exam dates with the DRC. Students with disabilities should follow this procedure as early as possible.

18. **Counseling Services:** The University of Florida provides counseling services for students, staff, and faculty. See <https://counseling.ufl.edu/>. If you or a friend are in distress, call 352-392-1575 (M – F, 8am – 5pm), email umatter@ufl.edu, or walk in for emergency consultation during service hours (9:00 am – 4:00 pm) at 401 Peabody Hall. For other hours or weekends, call the Alachua County Crisis Center, 352-264-6789. For sexual assault recovery services call the Student Health Care Center at 352-392-1161. For life-threatening emergencies always call 911.
19. **Emergency Numbers and Web Sites:**
 - UFPD (UF Police Department): In case of emergency dial 911. The UF campus police non-emergency number is 352-392-1111. Their web site: <https://police.ufl.edu/>,
 - UF Emergency management: 352-273-2100. <https://emergency.ufl.edu/>,
 - Infirmery (Student Health Care Center): 352-392-1161, <http://shcc.ufl.edu/>.
 - EH&S (Environmental Health & Safety): 352-392-1591, <http://www.ehs.ufl.edu/>.
20. **Other Academic Resources:** UF provides several other resources for students, such as Library Support here: <https://uflib.ufl.edu/find/ask/>, where you can find various ways to receive assistance with respect to using the libraries or finding resources.
 - The Career Resource Center is located on level One in the Reitz Union, 352-392-1601, and provides career assistance and counseling. Refer to <https://career.ufl.edu/> for further info.
 - The Teaching Center is located in Broward Hall, call 352-392-2010 or 352-392-6420 and provides students with tutoring services and counseling regarding general study skills. Refer to <http://teachingcenter.ufl.edu/> for further info. It may also provide employment opportunities for well qualified students to work as tutors.
 - The Writing Studio is located at 302, Tigert Hall, 352-846-1138, and provides help with brainstorming, formatting, and writing papers, see: <https://writing.ufl.edu/writing-studio/>.
 - The Ombuds Office is located at 31 Tigert Hall, 352-392-1308, and provides students assistance in resolving problems and conflicts that arise in the course of interacting with the University of Florida. By considering problems in an unbiased way, the Ombuds works to achieve a fair resolution and works to protect the rights of all parties involved. For further information go to <https://ombuds.ufl.edu/>.
21. **Cell Phone Etiquette:** Please put all cell phones or other electronic devices on “**silent mode**” during all class periods. Please do not leave the classroom during lecture to make a phone call. Use your cell phone only for approved learning activities while class is in session. Thank you!
22. **Honor Code:** This class will operate under the policies of the student honor code. The students, instructor, and TAs are honor-bound to comply with the Honors Pledge: **We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Student Honor Code.** You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit 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."* It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks. Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for

consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <https://sccr.dso.ufl.edu/process/student-conduct-code/> .

23. **Disclaimer:** This syllabus represents my current plans and objectives. If those need to change as the semester progresses, then the changes will be communicated to the class clearly during lecture announcements and on canvas and the syllabus will be updated.

If you have further questions, please contact me. Have a great semester!

Sincerely yours, Dr. Alexander Angerhofer (Dr. A)