

Supplemental Document for GIS 3XXX Poisons for Good and Evil

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Course Description, continued.

Just as lethal chemicals can be repurposed into life-saving solutions, helpful anthropogenic compounds can also become detrimental. We will consider the opioid epidemic, pharmaceutical side effects, and residual pesticides on our food, discussing the unintended consequences of these otherwise beneficial chemicals (Evil!). We will explore how these chemicals leak into the environment, leading to detrimental ecological and public health ramifications. (Evil!) We will uncover the higher toll of these pollutants on communities of color and/or lower socioeconomic status (Evil!), and the responsibility of corporations, government agencies, and citizens to eradicate this environmental injustice. Students will grasp the process of how their products (e.g. medicine, frying pans) are created and the personal, environmental, and social toll of these purchases. Furthermore, they will see how their buying and voting power can impact the biosphere via the creation, protection, and regulation of poisons.

Alignment of Course Goals to Assignments

Explain how the goals identified above will be met and assessed, for example through specific readings and assignments, continued.

9. Throughout the semester, students will be introduced to various sources of information, including articles from the news and periodicals, and books. As a class, we will not only discuss the content itself, but the process of creating these documents (e.g. Who is fact-checking? How much research goes into writing even a single chapter of a nonfiction book? Which media outlets are reputable regarding scientific information?). Ultimately, the students should recognize reputable sources and practice gleaning the most important points made by the authors. We will read several book chapters together and discuss the main ideas. We will also listen to some brief audio summaries (called “Blinks,” which can be accessed via the Blinkist app or website), which highlight five to ten big ideas in a single sentence and in an approximately 1 page (1-2 minutes of audio) summary supporting the big idea. At the beginning of the semester, the students will select a nonfiction book on a relevant poison topic of their choice; they will read the book and tease out the big ideas for themselves. They will have multiple opportunities throughout the semester to refine their book’s big ideas and draft their summaries. Just as with the Blinks, the students will compose their own audio “Blips” on their selected book, and the whole class will be able to listen to these audio book summaries about poisons. These activities enhance the students’ information literacy, teach them how to glean the most relevant information from a large volume of text, and expose them to dozens of perspectives on poisons (more books than they would read during one semester). In the table on the following page are books that students may select for their Blips.

Example Books Students May Select for Blips Project

Ecology, Evolution, or Examples of Poisonous Organisms	
Monarchs and Milkweed : A Migrating Butterfly, a Poisonous Plant, and Their Remarkable Story of Coevolution	By: Anurag Agrawal
Venomous: How Earth's Deadliest Creatures Mastered Biochemistry	By: Christie Wilcox 2016
Venom: The secrets of Nature's Deadliest Weapon	By: Ronald A. Jenner, Eivind Undheim 2017
Evolution of Venomous Animals and Their Toxins	By: P. Gopalakrishnakone, Anita Malhotra 2018
Human Health and Recreation	
Clinical Toxinology in Asia Pacific and Africa	By: Abdulrazaq Garba Habib, Abul Faiz, Chen-Chang Yang, ETC 2015
Toxins and Drug Discovery	By: Lourdes, Cruz, Gopalakrishnakone, Sulan Luo 2017
How to Change Your Mind: What the New Science of Psychedelics Teaches Us About Consciousness, Dying, Addiction, Depression, and Transcendence	By: Michael Pollan 2018
This Is Your Mind on Plants	By: Michael Pollan 2021
Human Uses	
Daily Poison: Pesticides - an Underestimated Danger	By: Johann G Zaller
Our Daily Poison: From Pesticides to Packaging, How Chemicals Have Contaminated the Food Chain and Are Making Us Sick	By: Marie-Monique Robin 2014
Banned: A History of Pesticides and the Science of Toxicology	By: Davis, Frederick Rowe 2014
Environmental Impacts	
Rainforest Medicine: Preserving Indigenous Science and Biodiversity in the Upper Amazon	By: Jonathon Miller Weisberger 2013
Earthly Goods: Medicine-Hunting in the Rainforest	By: Christopher Joyce 1994
Other	
The Poisoner's Handbook: Murder and the Birth of Forensic Medicine in Jazz Age New York	By: Deborah Blum 2011
Biological Toxins and Bioterrorism	By: Mahdi Balali-Mood 2015
Criminology of Serial Poisoners	By: Michael Farrel

Draft Schedule for *GIS 3XXX Poisons for Good and Evil* Course:

Week	Main Topic	Additional concepts, terms	Possible Reading, Resources	Possible Assessment/Activity Type
1	How do we see poisons? Perspectives from the Media, Literature, Film, etc.	Information literacy	Romeo & Juliet, Alice in Wonderland, Game of Thrones, Requiem for a Dream, Harry Potter	1 page reaction paper on personal perception of poison (reference the media or experiences that have led to this opinion)
2	What is a poison? The science of receptors and ligands	antagonists, agonists, toxicology	Excerpt from: <i>Toxicology</i> by Gary D. Osweiler	Quiz
3	Why do poisons exist?	Plant/animal defense mechanisms, coevolution, competition, mimicry	Excerpts from <i>Plants That Kill</i> by Dauncey and Larsson, Springer Reference Series on Poisons	Select a book to "Blip" by week 13
4				Journal: Why did poisons evolve?
5	Human use of nature's poisons	harvest for poison or medicine (holistic or conventional--what's the difference?), drugs	NatGeo Article: <i>Pick Your Poison—12 Toxic Tales</i> , Excerpt from <i>Botanical Miracles: The Chemistry of Plants That Changed the World</i> by Cooper and Deakin	March Madness of "Wicked" Plants
6				Journal: Discuss what you learned about a poison this week. Did you see this substance as a chemical before these lessons?
7	Humans developing Poisons	As poison: dosage effect, lethal vs. helpful	Excerpt from: <i>Toxicology</i> by Gary D. Osweiler	Journal: What are the main ideas in the first half of your book? Rough draft of your first "Blip"
8		As drugs/medicine: drug abuse, pharmaceutical development process	HHMI Video (Exploring Biodiversity: The Search for New Medicines), Excerpts from <i>Dreamland: The True Tale of America's Opiate Epidemic</i> by Sam Quinones and <i>Go Ask Alice</i>	Quiz
9		As pesticides	Excerpt/Blinks from <i>Silent Spring</i> by Rachel Carson	2 page opinion paper on a selected topic (e.g. "Big Pharma" or Organic farming)
10	Accidental Poisons	(Non)point pollution, oil spills, Chernobyl, water quality regulations	Excerpts from <i>Our Stolen Future</i> by Theo Colborn, <i>Alice in Wonderland</i> by Lewis Carroll	Journal: What are the main ideas in the second half of your book?
11		Endocrine Disruption, traces in food		Quiz; Draft of all "Blips" due

12		Environmental Justice/Racism	Excerpts from <i>Exposure</i> by Robert Bilott, <i>The Jungle</i> by Upton Sinclair, and others	Journal: Discuss what you learned about Accidental Poisons. How will you respond to this new understanding?
13		Drug Side effects	NY Times article: <i>When Drug Side Effects Pose Real Dangers</i>	Audio "Blips" due on Flipgrid. Journal: Refer to your first assignment of the semester, and write about how your perception of poison has changed (cite specific examples discussed in class/Blips that have molded your new perspective)
14	How do we see poisons now?!	Buying power, voting power		2 page reaction paper on your personal use of poisons and how these choices may impact the environment and other people. How could you minimize the detrimental impacts of your choices?

Grading for *GIS 3XXX Poisons for Good and Evil* Course

- 5% Reaction Paper 1
- 15% Quizzes (3 at 5% each)
- 25% Journal Entries (5 at 5% each)
- 10% Participation
- 10% Opinion Paper
- 10% Reaction Paper 2
- 25% Audio Blips

GENERAL STUDIES AGREEMENT FORM

For New General Studies Courses

Please complete and attach all materials for your General Studies Course Proposal Application to this form. If you have questions about the General Studies process or would like to discuss your course prior to submitting your Application, please contact the Convenor of the appropriate General Studies Course Review Committee. The completed application should be sent to the Dean of the School of General Studies.

If you design your own course, you will be asked to submit a Proposal Application. Refer to the document entitled "How to Propose a General Studies Course" for description of the course proposal process and guidelines for completing your Proposal Application.

If you propose to teach an existing course or a section of a course with multiple sections, it will suffice to submit a standard syllabus. However, if you propose to teach a course that is part of the College's course inventory but may have fallen into disuse because a faculty member either departed or no longer teaches the course, please submit a complete Proposal Application as if the course were new.

Adjuncts of courses that are not part of multiple section offerings agree to meet with the apropos General Studies committee during the second and fourth years of a course offering to review their experience; after that, adjunct faculty will review their course every 5 years. This course review follows the course review process described in the document entitled "How to Propose a General Studies Course"; refer to that section for fuller explanation of the review process and procedures.

All faculty members whose General Studies courses are approved agree to submit their courses for a review process every five years. A section of the web page entitled "How to Propose a General Studies Course" describes the review process; refer to that section for an explanation of the review process and procedures.

Finally, all instructors are advised that the approval of a General Studies course does not automatically insert such a course into an interdisciplinary minor no matter how suitable such inclusion may be. Decisions about faculty membership in the minor and about inclusion of courses in the curricula of minors are at the discretion of the program faculty of the minor. Similarly, courses do not receive attributes or subscripts automatically, either. Nor does a course become part of the Freshman Seminar Program concurrent with its approval as a General Studies course. Attribute and subscript designation and inclusion in the Freshman Seminar Program require separate approval after the course has gone through the General Studies course approval process. Faculty members interested in such designations should contact the appropriate coordinator.

Please sign this page and submit it together with your General Studies Course Proposal Application materials to the Dean of the School of General Studies.

Melanie Schroer

Signature

Date

Please print your name clearly here

GENERAL STUDIES NEW COURSE PROPOSAL FORM

These sections should be completed by the faculty/staff member proposing the course.

Acronym	Course Level (1XXX 2XXX 3XXX 4XXX 5XXX 6XXX)			Credits	
Schedule Type	<input type="checkbox"/> Lecture (1-5)	<input type="checkbox"/> Seminar (0-6)	<input type="checkbox"/> Tutorial (7)	<input type="checkbox"/> Independent study (8)	<input type="checkbox"/> Internship (9)
Instructor Name	Program	School			
Complete Course Title (30 characters maximum)					
Prerequisite	<input type="checkbox"/> Yes	<input type="checkbox"/> No			
If yes, list prerequisite by Acronym & Number					
Course Status:	<input type="checkbox"/> New	<input type="checkbox"/> Adapted			

NOTE: All Subscript designations and/or W/Q approvals must be submitted through the appropriate Convenor.

Course Description for the Bulletin – must be approximately 45 words

The sections below should be completed by the General Studies Convenor.

Review Outcome:	Yes	No			
<input type="checkbox"/> <input type="checkbox"/> Course meets guidelines for "G" category					
<input type="checkbox"/> <input type="checkbox"/> Course meets at least two General Studies objectives			List Objective Numbers _____		
Course As A Whole Is:		<input type="checkbox"/> Approved Unanimously	<input type="checkbox"/> Disapproved With A Split Vote		
		<input type="checkbox"/> Approved With A Split Vote	<input type="checkbox"/> Disapproved Unanimously		
Subcommittee Members Present:					
Recommendations:					

Program Convenor: _____ **Date:** _____

Dean of General Studies: _____ **Date:** _____

1. General Studies Category

Identify and explain the ways in which the course fits the selected [course category](#) (GAH, GEN, GIS, GNM or GSS):

Select Course Category:

Explanation of chosen course category:

2. Course Description (250-300 word explanation of the course, overall focus, and academic rationale):

3. Course Proposal Narrative

Explain the new learning opportunities provided by the course and the interdisciplinary nature of the course; in addition provide a course outline/syllabus, including overall organization of the course – learning modules, breakdown of the in-class and out of class work -- readings and assignment descriptions; please refer to the document entitled "[How to Propose a General Studies Course](#)" for a fuller description.

Interdisciplinary Nature:

Difference from a Program Course in an Academic Discipline

Describe the ways in which the course is different in content, goals, and objectives from a Program course in a discipline:

4. Alignment of Course Goals to Assignments

Identify the objectives met by this course. All courses are expected to meet at least two [General Studies objectives](#) and one or more college-wide ELOs. Content goals specific to the course should also be given here.

Course Content Goals:

List specific goals here (e.g. For a Food Science course - Students will explain the physics of heat transfer and how this influences cooking with different materials)

General Studies Objectives	ELOs	IDEA

Explain how the goals identified above will be met and assessed, for example through specific readings and assignments. If you need more space, please attach additional information with your completed form.

Adjunct faculty proposing a new General Studies course should, in addition, complete a Sponsor Form and attach a CV.

Please send this form and any attachments to the Dean of the School of General Studies at least two weeks prior to a scheduled new course proposal meeting. Sample, completed new course forms are accessible on the [General Studies website](#).