

CHEM 294 / IDIS 294 Drugs and Society

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Class Hours
Period 4a
MWF 11:45 – 12:35
PPHAC 117

Office Hours
Mon. 12:45 PM -> 2:15 PM
Wed. 10:00 AM -> 11:30 AM
And by appointment

This course will cover the molecular nature of drugs and their biological action, explore reasons for their use and abuse by individuals, and consider implications of these factors for society.

In the first portion of the class, students will work in multidisciplinary groups to learn the fundamentals, exploring drug structures and names, biochemical mechanisms of action, their sources and development, and laws that regulate their licit and illicit use. The last portion of the class will focus on the societal implications of drugs. Groups will research and report to the class about an important drug-related issue. In addition, each individual will investigate and take a stand on a controversial drug topic.

Course Goals

This course fulfills the LinC U1 Social Impact of Science requirement. Upon completing this course students will be able to:

- Know the terminology related to the naming, classification and regulation of drugs.
- Explain the mechanisms by which various types of drugs act to affect the health and behavior of humans.
- Search the science and social science literature to find references that inform and support their understanding of the effects of drugs on society.
- Analyze both social and natural science aspects of drug use or abuse and explain the results of their analyses both verbally and in writing.
- Work and communicate effectively in multidisciplinary groups to solve problems and complete assignments.

Required Text

Drugs and the Human Body with Implications for Society. 8th Ed.; by Ken Liska; Pearson Prentice Hall, Pearson Education Inc., 2009, Upper Saddle River, NJ
(ISBN: 0-13-244713-4) [Liska]

Schedule Of Topics

What are drugs and where do they come? definition, naming, categorizing
[Liska, Ch. 1, 2]

Learning about individual drugs: finding information, molecular nature, design and development
[Liska, Ch. 1, 2]

What laws regulate drug use? approval and control
[Liska, Ch. 3]

How do drugs enter the body and where do they go? administration and pharmacokinetics
[Liska, Ch. 4]

The nervous system: where many drugs interact
[Liska, Ch. 5]

Drug groups, as time and class interest dictate:

- Narcotics (opiates, opioids and related drugs) [Liska, Ch. 6]
- Minor tranquilizers (barbiturates and Valium-type drugs) [Liska, Ch. 8, 10]
- Major tranquilizers (antipsychotic drugs) [Liska, Ch. 10]
- Stimulants (amphetamines, cocaine, Ritalin, caffeine) [Liska, Ch. 7]
- Non-narcotic analgesics (NSAID's) [Liska, Ch.14]

Classroom Activities

Groups and Student Collaboration:

To aid you in developing an understanding of course material, each of you is assigned to a group of four or five students for work on in-class activities and your Group Project. Groups are set up to maximize the diversity of student backgrounds. We will be exploring both scientific and social aspects of the effects of drugs on people and society, so having diverse points of view should help groups progress efficiently through the variety of activities and projects as well as enrich everyone's experience. I hope that you will find that working with the members of your group will give you better insight in your analyses of the daily assignments and your Group Project.

Class Format:

This course employs a group work and discussion format that is somewhat unconventional. We will proceed through the course material using a series of activities designed to guide learning. For each class you will be given an activity and a reading assignment to help you answer specific questions to be discussed on class. When you come to class, groups will have a few minutes to determine the "best" answers to specific activity questions, recording them on the activity report sheet. Then two or three groups will be randomly selected to present their responses. Generally, these analyses will be requested before there has been any discussion of the assignment. Consequently, you will be asked to draw initial conclusions from your analyses of the material provided in the reading and present them as a starting point for class discussion. After the group presentations, we will have a few minutes for group discussion to develop responses to the initial presentations. Then additional group(s) will be selected to respond to the original group's analyses, and additional individual volunteer responses will be considered in an effort to reach consensus on the best analysis of the issue under consideration. When the first issue is settled, we will move on to the next consideration gradually building our understanding of drugs, their uses and effects on society. This process may be a bit uncomfortable for some of you at first, since you will have to rely on your own logic rather than something you have gotten from a lecture. However, as the semester progresses, you will develop a "sense" of the material and your confidence will increase making you more comfortable with presenting your ideas. *With this approach, the value of class periods is largely dependent upon what each student contributes, which means that completing the assignment before each class period is essential.*

Evaluation

Grades

All grades will be determined on an absolute letter grade scale, so there is no disadvantage to any student for helping another. In fact, often students develop a much better understanding of the concepts and material in the course by dealing with the difficulties and viewpoints of other students. Student collaboration is an important basis for the design of this course. The various activities and requirements for the course will contribute to your overall grade according to the following proportions:

Group Project	20 %
Exam [Nov. 9]	20 %
Position Paper [Due Dec. 9]	20 %
In-Class Work and Participation	20 %
Quizzes	10 %
News Reports	<u>10 %</u>
TOTAL	100 %

Group Projects

Read below.

Exam

The exam will be an in-class closed-book exam on Monday, November 9. It will cover class activities, reading assignments and questions about group projects (discussion questions and items of "essential knowledge" submitted by each group).

Position Paper

Read below.

In-Class Work and Participation

Things that count in this category: Activity group work (preparation for, analysis of, quality of recording and presentation to class as well as effective management of time and cooperation) and individual contributions to discussion of activities, questioning and discussion of Group Projects and Position Papers. Since attendance is required to contribute individually and to your group, class absence will impact your participation grade.

Quizzes

These will be short (approximately 10 minute) quizzes covering material developed in activities and class discussions since the last quiz on 9/14, 9/25, 10/9, and 10/23.

News Reports

Read below.

Group Projects

The CHEM 294/IDIS 294 Group Projects are designed to give each of you an opportunity to work with a team to explore a socially important issue related to drugs. This issue might involve problems related to drug abuse and treatment, but could also focus on positive or negative aspects of the development or use of therapeutic drugs or the political aspects of drug laws and their effect on society. A list of some possible issues is provided below, but I suggest that you get together as a group and decide on an issue that is particularly interesting to you. Any issue that relates drugs to society is potentially acceptable. Most of the suggested issues below are too broad to be dealt with in the time available for your project, so your group should focus on a specific aspect of your chosen issue that is tractable for the teaching time available. We can discuss appropriateness of the scope of an issue as you select your project topic.

Structure and Requirements

Each group is to explore its topic from appropriate literature references, which will vary depending on the topic. Some references may be from sources such as newspaper articles, government or non-profit organization reports or websites, but *at least two* must come from *academic social science journals or reference volumes* and *one from an academic science journal or reference volume*. If you are unsure whether a source is “academic,” ask me. The culmination of the project is for each group to collaborate to conduct one fifty-minute class on the major aspects of their issue and also lead class discussion on the topic. The group determines the format of the presentation and discussion; however, to prepare the class for the topic, each group will provide a reading assignment, 5 to 10 pages, to be read by the class before the presentation. To further focus learning and discussion, the group will also provide at least three discussion questions and four items of “essential knowledge”(crucial facts, concepts or ideas) that their audience must learn from the presentation. On the day of the presentation, the group as a whole will submit to me an annotated bibliography of the literature used for the presentation. Finally, to assure that all group members get appropriate credit for their contributions to the project, on the class day following the presentation, each member of the group will submit a two-page outline of her/his work on the project and an assessment of each group member’s contribution to the project (a format will be provided for group assessment). Your individual outline must also include a list of references explored.

Timeline for Group Projects:

- Wednesday, September 16
at the beginning of class
paper copy Submit a Group Project topic with a one-paragraph description of the issue and a one-paragraph explanation of the group’s interest in the topic.
- Monday, September 21,
starting at 12:00 AM Choose a Group Project presentation date. To do so:
Send top 3 dates to me by email (GP days on Class Calendar).
“First come, first served” basis for assignment. Presentation
schedule will be posted on Blackboard.
- Two class periods before the
presentation date at the
beginning of class Distribute the reading assignment. You may also provide the
discussion questions at this time.
- Presentation Date Provide class discussion questions and list of four items of
“essential knowledge” to be learned.
Submit the annotated bibliography.
- The class period following
presentation date Each individual in group submits outline of participation in the
project, works consulted, group member contribution assessment.

Sample Group Project Topics

The following list provides potential group project topics. Groups may choose one of these, but are encouraged to explore other social issues of particular interest to them and submit their own ideas for approval.

- Ethical standards and the marketing of prescription drugs
- How prescription drugs are altering American lives, minds, and/or bodies
- Drugs and sports
- Drug testing in the workplace
- The relationship between the pharmaceutical industry and treatment for depression or heart disease
- Cost *vs.* benefit of drug development
- Drugs as potential weapons
- Effects of drug company efforts on doctors' patterns of prescriptions
- Controlling the cost of medical care using drugs
- The problem of drug resistant bacteria
- Drug availability for all, drugs in the current healthcare debate
- Seasonal and pandemic influenza preparedness
- Generic *vs.* brand name drugs
- Drugs contaminating the environment
- Drugs influencing foreign policy: Mexico or Afghanistan

Position Paper

To provide each of you with an individual in-depth involvement with the effects of drugs, drug use and the need for drugs in our society, you will prepare a position paper on a controversial issue concerning drugs and society. This issue may be related to the one used in your group project or be unrelated to it, but it needs to be uniquely yours and not shared with another member of the class. Your position paper will be due by 5:00 PM on December 9, the last day of classes (There is no final exam for this course). The paper will be submitted inside a folder, as directed below, to document your research on the issue. You will also give the class a 15-minute presentation, which outlines your issue, provides the arguments on both sides of it, and finally gives your stand and reasons for supporting your position on the issue.

Structure of the Paper

Title	States your issue in the form of a question.
Introduction	Establishes the issue and explains the importance of addressing it.
Body	Provides the context of the issue including a summary of its history or background, a description of the competing positions on the issue with a concise statement of the supporting arguments for each, and presents your position on the issue with your supporting arguments. This discussion should consider the major points favoring each side and provide references and arguments dealing with the strengths and weaknesses of each. Your analysis of the competing arguments should provide a basis for a more detailed analysis that presents and justifies your opinion on the issue. It is important to show that you recognize the best arguments for the position opposing yours and to present the counter arguments that led you to reject that opinion as well as presenting materials that support your opinion.
Conclusion	Reviews your primary arguments and brings them together in a way that leaves the reader convinced of the primacy of your position.
References	Support for your statements and analysis must include references from at least three academic social science journals or reference volumes as well as one academic science journal or reference volume. Other references may be from sources such as books, newspaper articles, government or non-profit organization reports, or websites, etc. Follow APA style, on a separate "References" page.
Length	8-10 Double-spaced word-processed pages <i>excluding</i> the title page and reference page(s). (12 pt Times New Roman with 1 in. margins: top, bottom, left and right).
Format	Title page (centered vertically and horizontally, double spaced: full title, writer's name, course name and number, date) Page headers with your name, short title, and page numbers on all pages. Headings are encouraged in the body of the paper to help the reader see its organization. Visuals (diagrams, graphs, tables, etc.) may be used if they directly support your argument and are appropriately referenced. They are to be inserted into the text when introduced and the paper length is to be extended to account for their space. All pages stapled together.

Position Paper Folder

Turn in your report in a folder of the style used for class groups. Place the report in the left-side pocket. In the right-side pocket, assemble all paper records related to the production of your position paper. This should include: your returned page declaring your issue and its interest (originally turned on 10/5), notes

and outlines, any printouts you made of source materials and at least one draft of your paper. Finally, make sure your name is in the upper right corner of the folder cover.

Class Presentation

You will take 15 minutes of class time to summarize your issue, the arguments on both sides of it and provide your reasons for supporting your position on the issue. There will then be approximately 5 minutes for questions from the class and general discussion of the issue. Two presentations will be scheduled per class.

Timeline for Position Papers:

- Monday, October 5
by 5:00 PM
paper copy or by email
earlier than 10/5 OK
Submit a topic/title for your position paper in the form of a question (e.g. "Should marijuana be legalized?") with a one-paragraph description of the issue and a one-paragraph explanation of your interest in the issue. Only one class paper per issue will be approved, the first submission having precedence, so consider submitting early if you are passionate about an issue.
- Friday, October 16,
starting at 12:00 AM
Choose a Position Paper presentation date (PP days on Class Calendar).
Send top 3 dates to me by email. "First come, first served" basis for assignment. Presentation schedule will be posted on Blackboard.
- By Tuesday, November 3
Email attached as .doc(x) or paper
copy to my mailbox (Room 201
HOSC, closes at 4 PM)
Paper progress report: an annotated bibliography listing references consulted to date (at least 4), indicating how each will be a good source of information for your paper (or not). Must include at least one academic social science reference and one academic science reference.
- Presentation Date
Present your issue and position to the class (15 min.)
Lead discussion (5 minutes)
- December 9
By 5:00 PM
Submit paper in Position Paper folder

Sample Issues for Position Papers

The following list provides potential issues that might be used for a position paper. You may choose one of these, but you are encouraged to explore other controversial issues of particular interest to you.

- Should marijuana be a controlled substance?
- Do prohibitory drug laws work? Can laws control illicit drugs? Are we winning "The War on Drugs"?
- Is Drug Court an effective approach for dealing with drug abusers?
- Should the federal government provide support for development of "orphan drugs"?
- Should the federal government control "natural" dietary supplements?
- Should drug companies be allowed to advertise directly to consumers?
- Are psychiatric drugs a panacea or a problem? Are drugs over-prescribed for control of behavioral problems?
- Should pharmacists be allowed to refuse to dispense medications based on their personal values?
- Should women be able to obtain a prescription for emergency contraceptive measures in advance from their physicians as a precautionary measure?
- Should the "morning after pill" become an over-the-counter drug?
- Do we have a sufficient plan to supply vaccines for periodic or pandemic viral outbreaks?
- Do hospitals make a significant contribution to the spread of communicable diseases?
- Are physicians/consumers/hospitals responsible for antibiotic resistant bacteria?
- Does the relatively low involvement of women, minorities and/or children in clinical drug trials create a problem for doctors in choosing proper doses of prescription drugs for these populations?
- Are school-based drug prevention programs effective?
- Are current U. S. patent laws and FDA rules concerning generic drugs fair?
- Are pharmaceutical companies making excessive profit and contributing rising health care costs for government, employers and individuals?
- Are drug rehabilitation centers nothing more than ways to avoid prosecution?
- Should the federal government be required to negotiate drug prices with pharmaceutical companies?

News Reports

You will prepare five reports about drugs or drug issues recently in the news. Look for articles in a major news source such as *The New York Times* or *The Wall Street Journal*, *The Morning Call*, or your hometown newspaper (paper or online versions). You might also consult a more specialized magazine such as *Chemical and Engineering News*, browse the periodical shelves in Reeves Library, or ask a reference librarian for guidance to find something of interest *published within the last month*. Write a short report that summarizes your article, relates the news to material we have (or have not) covered in class or text reading, and, if appropriate, expresses your informed opinion about the news. It is expected that to prepare your report you will need to consult other sources in order to gain deeper understanding of the scientific, legal or other aspects of your news. On the report due dates some of the reports will be chosen for presentation and discussion in class.

Due dates: At the beginning of class, on 9/9, 9/18, 10/2, 10/16 and a date to be assigned between 11/11-12/9 once Position Paper presentation dates are known.

Format Word processed
 Name and date
 News article (title, author, source, date), also, attach hard copy (preferable) or url
 Report 300-400 words long, with no more than a third spent summarizing
 List references consulted to verify or better understand

Collaboration And Academic Integrity

Because educational research indicates that students learn best when they engage in discussions and analyses of class material with their peers, collaboration among students during class and in preparation for class is required for significant portions of this course. However, with group work comes the responsibility to fairly contribute to the group's learning process and production. Failure to attend, prepare or participate harms not only yourself, but also all group members. You should not expect full credit in group efforts if you do not make a sincere effort to meet group obligations. If there are issues related to unequal participation in group efforts, it is your obligation to bring them to my attention.

You are required to read the Academic Honesty Policy, found in the Student Handbook, at <http://www.moravian.edu/studentLife/handbook/academic/academic2.html>. To be fair to all students in the course and to assure maximum learning for each student, I will follow all the guidelines for academic honesty spelled out there. Ignorance of the rules and guidelines is not an acceptable excuse for infractions.

In short, you need to know that cheating and plagiarism will not be tolerated. Plagiarism is the misrepresentation of someone else's work as your own. Be very careful about this as you prepare your Group Projects, Position Papers and News Reports. Correctly citing and paraphrasing others' work can be tricky business, especially when you are operating outside of your field of expertise or comfort zone. For this reason you are encouraged to review practices for avoiding plagiarism such as can be found in your Bedford Handbook or online (e. g. "Safe Practices" at <http://owl.english.purdue.edu/owl/resource/589/01/>).

Classroom Etiquette

- Be ready to start class work at 11:45 AM: folders out, activity sheets distributed, messaging and socializing completed.
- Don't "come and go" during class: cell phones off, bathroom needs taken care of beforehand. Inform me and group ahead if you have a legitimate reason to interrupt class by leaving early or arriving late.
- Questions about assignments? Ask before or after class, and as appropriate, answers will be shared with entire class.
- If you have any other ideas for classroom behavior to maximize our learning experience, please share them with me for possible adoption in our class.

Notes

Students who wish to request accommodations in this class for a disability should contact Joseph E. Kempfer, M.Ed., Assistant Director for Disability Support, jkempfer@moravian.edu. Accommodations cannot be provided until authorization is received from the appropriate disability support provider on campus.

It within the instructor's purview to apply qualitative judgment in determining grades for any assignments and for the course final grade.

While I will try to hold to the material in this syllabus it is subject to change over the course of the semester. Changes will be posted on the class Blackboard.