



**BIOL-388 Syllabus  
Neurobiology of Drug Addiction**

**Basic Course Information:**

**Course Prefix/Number:** BIOL-388

**Course Title:** Independent Study

**Student-ID:** Malak Hussain – S00049959

**Class Meeting Times:** N/A

**Class Location:** N/A

**Instructional Modality:** Hybrid (Online/Onsite)

**Instructor:** Dr Joelle Nader-Nasr

**Office Location:** A330

**Office Phone:** 965-1802040 EXT: 3731

**Email:** [jnader@auk.edu.kw](mailto:jnader@auk.edu.kw)

**Office Hours:** online appointments only; Monday and Wednesday 9:30AM-12:30PM

**AUK Mission Statement:**

The American University of Kuwait is a liberal arts institution dedicated to teaching, learning, and scholarship. The University offers programs that provide students with the knowledge and skills necessary for lifelong learning and professional success. AUK enriches society by fostering an environment that encourages critical thinking, effective communication, personal growth, service, and leadership.

**Department Mission Statement:**

The Department of Mathematics and Natural Sciences is committed to excellence in teaching, research, and scholarly activities. The Department prepares AUK students in different disciplines with the fundamental scientific and analytical skills critical to a quality liberal education. The department strives to prepare students to be successful in their careers and promotes lifelong learning.

**Course Description:**

This course presents a study of the neurocircuitry and biochemistry underlying drug addiction. The challenge for the student will be to learn about brain mechanisms related to addictive

behaviors and understand the interaction of impairments in different systems leading to these behaviors. The student will be able to evaluate some of the neurochemical substrates that contribute to the establishment of an addictive process. Hence, the information obtained in this course will allow the student improving her/his knowledge about the complexity of the human nervous system and assess the consequence of impairments in the said system.

**Course Learning Outcomes:** Upon successful completion of the course, students will be able to:

<b>Course Learning Outcomes (CLOs)</b>
<b>CLO1:</b> Understand the basic concepts of addiction
<b>CLO2:</b> Understand the role of different brain regions in the addiction cycle
<b>CLO3:</b> Understand the complexity of the human nervous system, its importance in controlling behaviors and the behavioral consequences related to an impaired system

### Course Delivery/Methodology:

This is an independent study course, which will not meet in a traditional classroom. The course uses a variety of modalities that include reading from handouts, books, library resources, and recommended web sites that will be posted on **Moodle**, which can be accessed [American University of Kuwait \(auk.edu.kw\)](http://AmericanUniversityofKuwait(auk.edu.kw)). The student will complete the topics, communicate with the instructor on a regular basis (through emails and online meetings), and submit a comprehensive report about the digestive system and nutrition facts due at the end of the semester.

### Required Textbook/Required Readings:

No textbook is required for this course. Recommended articles, websites and videos will be posted on Moodle.

### Evaluations and Grading:

Evaluation Type	Weight
Midterm Exam (1)	30%
Quiz (2)	15%
Research Paper	25%
Final Exam (1)	30%
<b>Total</b>	<b>100%</b>

**Midterm Exam:** The midterm exam will take place **online** during the **Midterms week**. The exam will include different types of questions: multiple-choice, matching, fill-in-the blank, and short answer questions.

**Quiz:** There will be 2 fifteen minutes **online** quiz that will cover lecture material and assigned reading and problems. The quiz will be composed of multiple-choice questions.

**Final Exam:** The final exam will take place on **Thursday June 2, 2022**. It will be a combination of multiple choice and short answer questions.

**Research Paper:** The student is expected to submit a research paper (30 pages maximum, including charts, graphs and/or pictures) discussing the topic. The report deadline is **Thursday May 19, 2022**. More details are provided in *appendix 1 and 2* at the end of this syllabus.

**AUK Official Grading Scale:**

Letter Grade	Percentage	University Points
A	94-100	4.0
A-	90-93	3.7
B+	87-89	3.3
B	84-86	3.0
B-	80-83	2.7
C+	77-79	2.3
C	74-76	2.0
C-	70-73	1.7
D+	67-69	1.3
D	64-66	1.0
D-	60-63	0.7
F	0-59	0.0

**Code of Academic Honesty and Integrity:**

Upon admission to the American University of Kuwait, students agree to act responsibly in all areas of academic, personal and social conduct and to take full responsibility for their individual and collective action. Such regulations are found in the American University of Kuwait Catalogue, Student Handbook, and the AUK website at [www.auk.edu.kw](http://www.auk.edu.kw). Any question of interpretation regarding the code of academic honesty and Integrity shall be reported to the appropriate academic dean. The Code shall be reviewed annually at the discretion of the academic deans. Any student or student organization found to have committed the cited violations or misconduct, either on or off campus, is subject to the disciplinary sanctions outlined in adjudication procedures.

- **Plagiarism:**

The term “plagiarism” includes, but is not limited to, an attempt of an individual to claim the work of another as the product of his or her own thoughts regardless of whether that work has been published. Plagiarism includes, but is not limited to, quoting improperly or paraphrasing text or other written materials without proper citation on an exam, term paper, homework, or other written material submitted to an instructor as one’s own work. Plagiarism also includes handing in a paper to an instructor that was purchased from a term paper service or downloaded from the Internet and presenting another person’s academic work as one’s own.

- **Cheating:**

The term “cheating” includes but is not limited to, copying homework assignments from another student; working together with another individual on a take-home test or homework when not approved by the instructor, looking at and/or copying text, notes or another person’s paper during an examination when not permitted to do so. Cheating also includes the giving of work information to another student to be copied and/or used as his or her own. This includes but is not limited to giving someone answers to exam questions either when the exam is being given or after having taken an exam; informing another student of specific questions that appear or have

appeared on an exam in the same academic semester; giving or selling a term paper, report, project or other restricted written materials to another student.

Student Code of Conduct and Code of Academic Honesty and Integrity will be applied, in addition to the following specific to the hybrid model of education:

- Video recording of class sessions (by instructors and/or students) is prohibited and is a violation of the university codes.
- The privacy of the session is to be maintained (no other members of the household should be available during the sessions).
- Professional physical appearance is expected during online classes. All participants in the online class should ensure proper attire and setting (blurred background can be used to accommodate settings).
- Copyright as well as intellectual property rules and regulations apply.
- ***MASKS are to be worn properly all the time when on campus grounds. Repeated violations of the MASK policy will result in removal from class and/or campus.***

### **Academic Support:**

Learning Support Services focuses on empowering students to become independent and successful learners by developing their literacy skills, enhancing their understanding, and helping them improve their academic and study skills. Learning Support Services is comprised of two centers: the Tutoring Center and the Writing Center. The Tutoring Center provides free academic support in various subjects to AUK student. Email: [tutoringcenter@auk.edu.kw](mailto:tutoringcenter@auk.edu.kw).

The Writing Center provides multilingual support (English, Arabic, French, and Spanish) through individual or small-group consultations. Email: [writingcenter@auk.edu.kw](mailto:writingcenter@auk.edu.kw)

### **Disability Accommodations:**

AUK provides equal and inclusive educational environment in order to enable all students to meet and perform requisite academic standards and to participate in the opportunities and activities of its community. If you believe you can benefit from accommodations for a learning, physical, or mental health disability, [click here to book a session through the Counseling Center/Disability Services Booking Page](#), to ask about disability services at AUK, initiate an accommodation plan, or receive disability services. You can also email [counseling@auk.edu.kw](mailto:counseling@auk.edu.kw) if you need assistance in booking a session.

### **Course Policies/Student Responsibilities:**

To participate in one of AUK's hybrid courses, you need this technology:

- A computer/laptop capable of running Windows 10 or later, or MAC OS X
  - Please note that other electronic devices such as tablets or phones may function for attending Zoom sessions. However, they are not recommended for typing (assignments, discussion board, using chat feature etc.).
- The latest version of Firefox, Chrome, Microsoft Edge, Internet Explorer, or Safari
- **Microsoft Office Suite** or a compatible Open Office Suite
- Adobe Acrobat Reader or other applicable **PDF reader**
- **Webcam** or other built-in camera on laptops, tablets, or phones
- **Microphone** or other built-in microphones on laptop, tablets, or phones

### Late and Missing Work Policy:

If any student fails to submit an assignment on the due date for a valid reason, the student may still hand it within the next few days, prior to solutions being out in class, with a **deduction of 25%** of the grade.

### Communication Policy:

Please be sure to use your **AUK official email**, **write your full name** and indicate which **class** and **section** you are taking (ex. BIOL-105-01) when you send me an email. If you have a question, please check the syllabus first and if your question is not answered there, then please feel free to send an email, during working hours, and I will be happy to clarify. I will do my best to respond within 48 hours of receiving your email. **Please note that emails sent on weekends might be responded to on Sunday.**

### Course Schedule:

Week Number	Date	Material	Announcements
Week # 1	Feb 9 – 10		
Week # 2	Feb 13 – 17	Introduction to the course, Syllabus and online tools needed to complete the course	
Week # 3	Feb 20 – 24		
Week # 4	Feb 27 – March 3	<i>University Closed (National Liberation Days - Prophet's Ascension - Spring Break)</i>	
Week # 5	March 6 – 10		
Week # 6	March 13 – 17		<b><u>Quiz 1</u> – Addiction cycle - <i>March 16</i></b>
Week # 7	March 20 – 24		
Week # 8	March 27 – 31		
Week # 9	April 3 – 7		<b><u>Midterm Exam</u> <i>April 4</i></b>
Week # 10	April 10 – 14		<i>Midterm grades available April 10 at 4pm</i>
Week # 11	April 17 – 21		
Week # 12	April 24 – 28		<b><i>Report first submission deadline April 28</i></b>
Week # 13	May 1 – 5	<i>University closed (Eid El-Fitr)</i>	
Week # 14	May 8 – 12		<b><u>Quiz 2</u> – Addictive substances – <i>May 11</i></b>
Week # 15	May 15 – 19		<b><i>Report final submission deadline May 19</i></b>
Week # 16	May 22 – 26		
Week # 17	May 29 – June 2		<b><u>Final Exam</u> <i>June 1</i></b>
Week # 18	June 5 – 9	<i>Final grades available June 13 at 4 pm</i>	

### Syllabus Changes:

There may be changes to the schedule and syllabus during the semester. When this happens, I will inform you in class and over email.

# Appendix – 1 – Research Paper

Submission deadline : Thursday May 19, 2022

## Topics outline

1. Introduction to the topic:
  - ✓ Definition of addiction
  - ✓ Factors that increase the risk of substance use and addiction
2. The addiction cycle:
  - ✓ The binge stage
  - ✓ The withdrawal stage
  - ✓ The anticipation stage
3. Brain regions involved in substance use disorders:
  - ✓ Basal ganglia
  - ✓ Extended amygdala
  - ✓ Prefrontal cortex
4. Classes of substances affecting the brain:
  - ✓ Opioids
  - ✓ Stimulants
  - ✓ Alcohol
  - ✓ Synthetic drugs
5. Conclusion

## Format

30 pages maximum, including charts, graphs and/or pictures

Word document or pdf

Use MLA format (*see appendix-2 for more details*)

## General guidelines

- 1- Get familiar with the topic: identify the key points.
- 2- Research information: find reliable resources and organize the information.
- 3- Form your thesis: a statement that puts forward what you are trying to explain.
- 4- Create an outline:
  - a. think about what you are trying to communicate and what is the structure that will allow you to do that in a clear and organized way.
  - b. Have an introduction, an argumentation, and a conclusion.
- 5- Review, and edit your paper for content, grammar... before submitting it.
- 6- References:
  - a. Have at least 5 different credible sources of information
  - b. If something is a common fact (if you can find the fact stated, without credit, in three or more credible sources), you don't need to mention where the idea comes from.
- 7- Do not be afraid of asking questions. The objective is to help you learn more about new topics.

## General grading criteria

The following criteria will be considered when grades are assigned:

- Integration of knowledge: concepts learned in class were understood and applied in the paper
- Topic focus: the topic is clearly defined, and the thesis identifies the direction of the paper
- Depth of discussion and cohesive ideas: in-depth discussion of the topic and arguments well developed throughout the paper. Information from different sources are well linked together
- Spelling and grammar
- Sources: the use of credible and reliable sources that are cited correctly with at least 5 scholarly books and peer-review journal articles.

## Appendix – 2 – MLA Format Criteria

Format Type	Format Information
<b>Margins</b>	<ul style="list-style-type: none"> <li>– 1 inch {top, bottom, left, and right} (1 inch = 2.5cm)</li> <li>– for page numbers, set at 1/2 inch (1.25 cm) from the top upper-right hand corner, flushed to the right margin.</li> </ul>
<b>Text Formatting</b>	<ul style="list-style-type: none"> <li>– Font: Times New Roman</li> <li>– Size: 12 points</li> <li>– Do not justify the text</li> <li>– Double-space the <b>entire</b> research paper</li> <li>– Leave one space after a period</li> </ul>
<b>Heading</b>	<p>Begin at 1 inch from the top of the page, type:</p> <ul style="list-style-type: none"> <li>– Your name</li> <li>– Professor name</li> <li>– Course number</li> <li>– Date</li> </ul> <p>All on separate lines. Begin your research paper title on a new line and center it.</p>
<b>Page Numbers</b>	<ul style="list-style-type: none"> <li>– Place page number in all pages</li> <li>– Place page numbers 1/2 inch from the top-right margin</li> <li>– Type your last name before the page number: your last name followed by a space then page number.</li> </ul>
<b>Tables and Illustrations</b>	<p>Place tables and illustrations as close as possible to the parts of the text to which they relate. A table is labeled Table, given an Arabic numeral, and titled. Photograph, map, drawing should be labeled Figure (usually abbreviated Fig.), assign an Arabic numeral, and give a caption.</p>
<b>References &amp; Work cited</b>	<p>Present your references in MLA format. Below are some examples:</p> <ul style="list-style-type: none"> <li>- <u>Book</u>: the author, title (italicized), publisher, and year</li> <li>- <u>Journal</u>: the author(s), the title, the journal (italicized), volume and issue numbers, date of publication, page range, a link to the article</li> <li>- <u>Website</u> (including online newspapers and magazines): the author, the title, the journal (italicized), publication date, URL</li> <li>- <u>YouTube video</u>: the author. “Title of Video.” Website, uploaded by Uploader, Day Month Year of publication, URL.</li> <li>- <u>TED Talk</u>: the name of the speaker, the talk title, the site name <i>TED</i>, the month and year, and the URL</li> </ul>