

كلية العلوم.....

قسم الكيمياء.....

توصيف مساق : Laser Applications in chemistry
403345

1. معلومات مدرس المساق (Instructor)

اسم (مدرس / منسق) المساق :	Dr. Raed Ghanem
الساعات المكتبيّة :	9-10
رقم المكتب والرقم الفرعي :	Chemistry Department
البريد الإلكتروني :	raedag@aabu.edu.jo
مساعد البحث والتدريس/المشرف/الفني (إن وجد):	

2. وصف المساق (Course Description)

This course is designed to investigate the basics concepts of LASER and its application in chemistry. The course contents will cover the following subjects: Introduction to the basic concepts of Laser, History of Laser. Molecular spectroscopy. Electronic Transition. Properties of Laser Light. How such Properties of Laser come from. How Laser Works. Laser Construction. Methods of Achieving Population Inversion. Laser action and Laser studies of photodissociation photoionization and unimolecular processes

3. بيانات المساق (Course Title)

رقم المساق: 403345	اسم المساق: Laser Application in chemistry	المستوى: 2
طبيعة المساق: Theory	المتطلب السابق / المتزامن: 403102	وقت المحاضرة: 10:00-11:00
العام الجامعي: 2020-2021	الفصل الدراسي: First	عدد الساعات الدراسية: 3

4. أهداف المساق (Course Objectives)

General Objectives : Understand the basic concepts of laser and how they used to understand chemical process.

4. مخرجات التعلم (Intended Student Learning Outcomes)
(المعرفة والمهارات والكفايات)

يفترض بالطالب بعد دراسته لهذا المساق أن يكون قادرا على:

After completing this course, the student should demonstrate the knowledge and ability to:

After finishing this course, students will be able to describe the laser system and understand its application in chemistry.

5. السياسة العامه والحضور (Course Policies: Attendance Policy)

Course participants are expected to master the material from Calculus I .

1. This course will require weekly problem sets. A thorough understanding of each problem set will help you master the concepts.
2. The course will have two exams plus a final exam.
3. Classes will involve hands-on worksheets to summarize key ideas/results and to practice new material. Participating in the in-class exercises will help you master the concepts.
4. Students will be expected to prepare course material as indicated in reading assignments.
5. It is your responsibility to get copies of the lecture & recitation material
6. **Attendance at all classes will be recorded and is mandatory.** Please make sure you read and fully understand the University of Al Al Bayte Attendance Policy. This policy will be strictly enforced.

تنبيه: في حال التغيب عن اي امتحان لن يكون هناك امتحان تعويضي الا في حالة وجود عذر و حالة طارئة من المستشفى و على الطالب ابراز العذر في فترة لا تتجاوز الثلاثة ايام مه تاريخ الامتحان, و للمدرس الحق في قبول او رفض العذر، و حسب التعليمات

6. محتوى المساق (Course Content)

1. Introduction
2. History of Laser
3. Molecular spectroscopy
4. Electronic Transition
5. Properties of Laser Light
6. How such Properties of Laser come from
7. How Laser Works
8. Laser Construction
9. Methods of Achieving Population Inversion
10. Laser action
11. Laser studies of photodissociation photoionization and unimolecular processes