

**نموذج توصيف مقرر**  
**Course Description Form**

Name of College\Faculty : Science

اسم الكلية:

Name of Department: Chemistry

اسم القسم العلمي:

|                                                                                                                               |                   |                                                           |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------|
| Course Name                                                                                                                   | Organic Chemistry | اسم المقرر                                                |
| Course No.                                                                                                                    | CHEM 258          | رقم المقرر                                                |
| No. of Credits                                                                                                                | 1                 | عدد الوحدات                                               |
| Theoretical Hours                                                                                                             | 1                 | عدد الساعات النظرية                                       |
| Practical Hours                                                                                                               | 0                 | عدد الساعات المحلّية                                      |
| Course topics                                                                                                                 |                   | مواضيع المقرر                                             |
| Spectroscopy and structures.                                                                                                  |                   |                                                           |
| Text book: (Name, Author , Year , Publisher)                                                                                  |                   | عنوان الكتاب : ( الاسم ، المؤلف ، سنة الطبع ، دار النشر ) |
| P. Y. Bruice, Organic Chemistry, Prentice Hall International, Latest Edition.                                                 |                   |                                                           |
| References: (Name , Author , Year . Publisher)                                                                                |                   | عنوان المرجع : ( الاسم ، المؤلف ، سنة الطبع ، دار النشر ) |
| R. M. Silverstein, F. X. Webster, D. J. Kiemle, Spectrometric Identification of Organic Compounds, Earliest + Latest Edition. |                   |                                                           |

| Prerequisites<br>CHEM 256 |                       | متطلبات المقرر |   |  |                          |
|---------------------------|-----------------------|----------------|---|--|--------------------------|
| Grading                   | Exams                 |                | % |  | الاختبارات               |
|                           | Quizzes               |                | % |  | امتحانات قصيرة           |
|                           | H.W.                  |                | % |  | واجبات                   |
|                           | Project (field study) |                | % |  | مشاريع ( دراسة ميدانية ) |
|                           | Final                 |                | % |  | الاختبار النهائي         |
| آلية رصد المقرر           |                       |                |   |  |                          |

|  |   |  |
|--|---|--|
|  | % |  |
|--|---|--|

### Chapters included:

| Chapter | Topic                                                         | Sections Included | Sections Excluded |
|---------|---------------------------------------------------------------|-------------------|-------------------|
| CH.13   | Mass Spectrometry; Infrared Spectrometry; UV/Vis Spectrometry | 1-6, 8-18         | 7, 19-23          |
| CH.14   | NMR Spectroscopy                                              | 1-15, 17-22       | 16, 23            |

| Course objectives             |                                                                                                                                    |                                                |                                             |        |     |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------------------------------|--------|-----|
| No.                           | Course Objectives (Learning Outcomes)                                                                                              | Example(s) of relevant (Topics and activities) | Recommended Level to satisfy the objectives |        |     |
|                               |                                                                                                                                    |                                                | High                                        | Medium | Low |
| 1                             | To introduce the basic theory and different instrumentation and techniques used in mass spectroscopy.                              |                                                |                                             | X      |     |
| 2                             | To introduce the basics of IR spectroscopy and electromagnetic radiations.                                                         |                                                | X                                           |        |     |
| 3                             | To introduce the basic theory and techniques of nuclear magnetic resonance ( $^1\text{H}$ and $^{13}\text{C}$ NMR).                |                                                | X                                           |        |     |
| 4                             | To combine and integrate the different previous spectral data to assign and/or confirm the structure of complex organic molecules. |                                                | X                                           |        |     |
| Fields                        |                                                                                                                                    |                                                |                                             |        |     |
| Skills                        |                                                                                                                                    |                                                |                                             |        |     |
| Coordinator (Name and Rank) : |                                                                                                                                    | Convener of the organic chemistry              |                                             |        |     |
| Signature and stamp :         |                                                                                                                                    |                                                |                                             |        |     |
| Date:                         |                                                                                                                                    | 11\ 11 \2025                                   |                                             |        |     |