

Master in Branch: *Chemistry*

Speciality: *Pharmaceutical Chemistry*

Brief

Pharmaceutical Chemistry at Khemis Miliana University is one of the major branches of Chemistry . This specialty is extremely broad and diverse with a broad base of applications. La formation en chimie pharmaceutique permet provides students with the appropriate knowledge to understanding of the chemical characteristic of bioactive molecules and the principles of chemistry. At the Master's level, all students are required to follow three semesters of different courses on chemistry final project that will be defended at the end of the fourth semester.

| Field | Branch | Speciality |
|--------------------------|------------------|---------------------------------|
| <i>Material Sciences</i> | <i>Chemistry</i> | <i>Pharmaceutical Chemistry</i> |

First Semester

| Teaching unit | Matter | Credit | Coefficient | C | TD | TP | Volume (hour) |
|-------------------------|--|--------|-------------|------|-------|----|---------------|
| Fundamental Unit | Pharmaceutical industry | 4 | 2 | 1h30 | 1h30 | | 45h00 |
| | Bases of organic synthesis | 4 | 2 | 1h30 | 1h30 | | 45h00 |
| | General and pharmacology and molecular | 4 | 2 | 1h30 | 1h30 | | 45h00 |
| | Structural biochemistry | 3 | 1,5 | 1h30 | 45min | | 33h45 |
| | Drug technology | 3 | 1,5 | 1h30 | 45min | | 33h45 |
| Methodological unit | Physico-chemical methods of analysis I | 3 | 2 | 1h30 | 1h | | 37h30 |
| | Laboratory I | 4 | 2 | | | 3h | 45h |

| Teaching unit | Matter | Credit | Coefficient | C | TD | TP | Volume (hour) |
|-------------------|----------------------------|--------|-------------|------|----|----|---------------|
| | Pharmaceutical equipment | 2 | 1 | 1h30 | | | 22h30 |
| Discovery unit | Green chemistry | 1 | 1 | 1h30 | | | 22h30 |
| Transversale Unit | Language and communication | 2 | 2 | 3h | | | 45h |

Second Semester 2

| Teaching unit | Matter | Credit | Coefficient | C | TD | Practical Work | Volume (hour) |
|-------------------------|---|--------|-------------|------|--------|----------------|---------------|
| Fundamental Unit | Pharmaceutical chemistry II | 4 | 2 | 1h30 | 1h30 | | 45h00 |
| | Chemistry of natural substances | 4 | 2 | 1h30 | 45 min | | 33h45 min |
| | Drug Technology II | 4 | 2 | 1h30 | 45min | | 33h45min |
| | General microbiology and industrial | 3 | 1,5 | 1h30 | 1h30 | | 45h00 |
| | Metabolic biochemistry | 3 | 1,5 | 1h30 | 1h30 | | 45min |
| Methodological unit | Physico-chemical methods of analysis II | 2 | 1 | 1h30 | | | 22h30min |
| | | | | | | | |

| Teaching unit | Matter | Credit | Coefficient | C | TD | Practical Work | Volume (hour) |
|-------------------|--|--------|-------------|------|----|----------------|---------------|
| | Kinetics, Catalysis and Electrochemistry | 3 | 2 | 1h30 | 1h | | 37h30min |
| | Laboratory II | 4 | 2 | | | 3h | 45h00 |
| Discovery unit | Toxicology and safety Industrial | 1 | 1 | 1h30 | | | 22h30 |
| Transversale Unit | Language and Communication II | 2 | 2 | 3h | | | 45h |

Third Semester

| Teaching unit | Matter | Credit | Coefficient | C | TD | TP | Volume (hour) |
|-------------------------|--|--------|-------------|------|-------|------|---------------|
| Fundamental Unit | Analysis and control of drug | 5 | 3 | 3h | 1h30 | | 67h30 |
| | Heterocyclic Chemistry | 5 | 2 | 3h | 1h30 | | 67h30 |
| | Macromolecular Chemistry | 4 | 2 | 1h30 | 45min | | 33h45 |
| | Botanical Pharmaceutical | 4 | 2 | 1h30 | 45min | | 33h45 |
| Methodological unit | Statistical Methodology and Optimization | 4 | 2 | 1h30 | | 1h30 | 45h00 |
| | Electrochemical analysis | 3 | 2 | 1h30 | | 1h00 | 37h30 |

| Teaching unit | Matter | Credit | Coefficient | C | TD | TP | Volume (hour) |
|-------------------|---|--------|-------------|------|----|----|---------------|
| | Environmental Chemistry and fight against pollution | 2 | 1 | 1h30 | | | 22h30 |
| Discovery unit | Management and research strategy and development in industry pharmaceutical | 1 | 1 | 1h30 | | | 22h30 |
| Transversale Unit | English and documentation scientific | 2 | 2 | 3h | | | 45h |

Semester 4

Internship in a company sanctioned by a thesis and a defense.

| | VHS | Coeff | Crédits |
|-------------------------|-----|-------|---------|
| Personal Work | 550 | 09 | 18 |
| Internship in a company | 100 | 04 | 06 |
| Seminars | 50 | 02 | 03 |
| Other (Supervision) | 50 | 02 | 03 |
| Total Semester 4 | 750 | 17 | 30 |