



T-104  
2022

## Course Specification



Course Title **Taxonomy of Flowering Plants**

Course Code: **BOTN342**

Program: **Bachelor of science in Biology**

Department: **Biology Department**

College: **College of Science**

Institution: **Jazan University**

Version: **T-104**

Last Revision Date: **28 February 2023**



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## A. General information about the course:

### Course Identification

1. Credit hours: 2

#### 2. Course type

a. University ☒ College ☐ Department ☐ Track ☐ Others ☐

b. Required ☐ Elective ☒

3. Level/year at which this course is offered: Level 9 – 3<sup>rd</sup> Year

#### 4. Course general Description

The course describes the basis of flowering plant taxonomy which is represented in flower. It deals with the flower structure and concentrated on taxonomic floral parts. It discusses the old and modern plant classification with different attributes. The course is designed to provide students with systematic Units and classification Keys. It illustrates different Plant Families whether monocots or dicots. The students are able to draw the floral diagram and write its formula.

5. Pre-requirements for this course (if any): Plant Morphology & Anatomy BOTN 241

6. Co- requirements for this course (if any): None

#### 7. Course Main Objective(s):

At the end of the course students will be able to:

This course is designed to provide students with the following concepts:

1. Definition of plant taxonomy with different system development classifications.
2. Nomenclature of plant species.
3. Description of non-essential floral parts (Calyx and Corolla).
4. Description of essential floral parts (Androecium and Gynoecium).
5. Sexes and Symmetry in flowers
6. Different Placentation in flowers
7. Different types of inflorescences
8. Different types of fruits
9. Floral formula and diagram
10. Study of monocots and dicots families

### 1. Teaching mode (mark all that apply)

| No | Mode of Instruction  | Contact Hours | Percentage |
|----|--|---------------|------------|
| 1. | Traditional classroom  | 10            | 76.9%      |
| 2. | E-learning   | 1             | 7.7%       |
| 3. | Hybrid <ul style="list-style-type: none"> <li>Traditional classroom</li> <li>E-learning</li> </ul> | 1             | 7.7%       |
| 4. | Distance learning  | 1             | 7.7%       |

## 2. Contact Hours (based on the academic semester)

| No | Activity            | Contact Hours |
|----|---------------------|---------------|
| 1. | Lectures            | 11            |
| 2. | Laboratory/Studio   | 22            |
| 3. | Field               | -             |
| 4. | Tutorial            | -             |
| 5. | Others (Self-study) | 2             |
|    | Total               | 35            |

## B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

| Code | Course Learning Outcomes  | Code of CLOs aligned with program | Teaching Strategies | Assessment Methods                             |
|------|---|-----------------------------------|---------------------|--|
| 1.0  | Knowledge and understanding   |                                   |                     |  |
| 1.1  | Display a broad knowledge and understanding of the principals, theories and concepts of Plant Taxonomy. Define all principals, concept, theories and aspects concerning plant Taxonomy                | K1.1                              | Lectures, lab work  | Define, draw, complete                         |
| 1.2  | Express in depth knowledge and understanding of research methodology and inquiry techniques in the field of Plant Taxonomy. Classify all biological specimens and processes.                          | K3.3                              | Lectures, lab work  | Define, write short notes, Identify, Interpret |
| 2.0  | Skills  |                                   |                     |  |
| 2.1  | Apply broad integrated underlying theories principals and concept in various contexts in Plant Taxonomy. Debate the biological theories, principals and processes.                                    | S1.1                              | Lectures            | Evaluate, deduce                               |
| 2.2  | Practice methods of inquiry, investigation and research for complex issues and problems in Plant Taxonomy.<br><br>Argue different biological approaches in laboratory or field or even theoretically. | S2.2                              | Lectures, lab work  | Evaluate, deduce                               |



| Code | Course Learning Outcomes  | Code of CLOs aligned with program | Teaching Strategies | Assessment Methods     |
|------|---|-----------------------------------|---------------------|------------------------|
| 2.3  | Communicate in main forms and use of specialized digital technology and ICT tools to demonstrate an understanding of theoretical knowledge and transfer specialized knowledge, skills and complex ideas to a variety of audiences. Perform an efficient oral presentation, with effective use of visual aids, using allotted time and all IT available resources. | S4.2                              | Lab work            | write practical report |
| 3.0  | Values, autonomy, and responsibility  |                                   |                     |                        |
| 3.2  | Work collaboratively and constructively and lead diverse teams to perform a wide range of tasks with responsibility and play a major role in joint work planning and evaluation. Develop competencies in critical thinking, delivering scientific information, reporting and data analysis.   | V3.2                              | Lab work            | Group tasks            |

## C. Course Content

| No    | List of Topics  | Contact Hours |
|-------|---|---------------|
| 1.    | Systems of Classification.                            | 1             |
| 2.    | The binomenclature of plant                           | 1             |
| 3.    | The Flowers (calyx and corolla)                       | 1             |
| 4.    | The Flowers (Androecium and Gynoecium)                | 1             |
| 5.    | The placental position                                | 1             |
| 6.    | The inflorescence                                     | 1             |
| 7.    | The dry fruits classification                         | 1             |
| 8.    | The fleshy fruits classification                      | 1             |
| 9.    | The floral diagram and formula                        | 1             |
| 10.   | Dicotyledonous plants                                 | 1             |
| 11.   | Monocotyledonous plants                               | 1             |
| 12.   | The recent trends in flowering plants classifications | Self-Study    |
| Total |   | 11            |



## D. Students Assessment Activities

| No | Assessment Activities * | Assessment timing (in week no) | Percentage of Total Assessment Score |
|----|-------------------------|--------------------------------|--------------------------------------|
| 1. | Theoretical assignment  | 3                              | 5%                                   |
| 2. | Theoretical quiz        | 3                              | 5%                                   |
| 3. | mid-term exam           | 6                              | 10%                                  |
| 4. | Practical quiz          | 4                              | 5%                                   |
| 5. | Practical assignment    | 6                              | 5%                                   |
| 6. | Final practical exam    | 11                             | 20%                                  |

\*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)

## E. Learning Resources and Facilities

### 1. References and Learning Resources

|                          |   |
|--------------------------|---|
| Essential References     | <ul style="list-style-type: none"> <li>Chaudhary, 1989-2000. Flora of Saudi Arabia. Riyadh KSA</li> </ul>   |
| Supportive References    | <ul style="list-style-type: none"> <li>سعد، شكري ابراهيم. (2016) النباتات الزهرية. دار الفكر العربي. القاهرة.</li> <li>الجندي، أحمد (وآخرون). (2010) التطبيقات العملية في تقسيم النبات. أوز القاهرة.</li> </ul>   |
| Electronic Materials     | <a href="http://floraofksa.myspecies.info/#:~:text=Saudi%20Arabia%20has%20about%20%2C300,of%20the%20Kingdom%20Saudi%20Arab">http://floraofksa.myspecies.info/#:~:text=Saudi%20Arabia%20has%20about%20%2C300,of%20the%20Kingdom%20Saudi%20Arab</a><br>E. Flora of Saudi Arabia |
| Other Learning Materials | -----   |

### 2. Required Facilities and equipment

| Items  | Resources                             |
|--|---------------------------------------|
| facilities<br>(Classrooms, laboratories, exhibition rooms, simulation rooms, etc.) | Traditional classrooms and E-learning |
| Technology equipment<br>(projector, smart board, software)                         | (projector, smart board, software)    |
| Other equipment<br>(depending on the nature of the specialty)                      | NA                                    |



## F. Assessment of Course Quality

| Assessment Areas/Issues                     | Assessor  | Assessment Methods           |
|---|---|------------------------------|
| Effectiveness of teaching                   | Students<br>Course Coordinator                      | Direct (Questionnaire)       |
| Effectiveness of students assessment        | Peer Reviewer                                       | Direct (Cross Check marking) |
| Quality of learning resources               | Students<br>Course Coordinator<br>Quality Committee | Indirect                     |
| The extent to which CLOs have been achieved | Course Coordinator<br>Quality Committee             | Indirect                     |
| Other                                       | ----  | ----                         |

**Assessor** (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

**Assessment Methods** (Direct, Indirect)

## G. Specification Approval Data

|                    |                          |
|--------------------|--------------------------|
| COUNCIL /COMMITTEE | BIOLOGY DEPARTMENT BOARD |
| REFERENCE NO.      | BIO2214                  |
| DATE               | 20/9/2022AD              |

