

المركز الوطني للتقويم والاعتماد الأكاديمي

**National Center for Academic Accreditation and Evaluation**

### ATTACHMENT 5.

**T6. COURSE SPECIFICATIONS**

**(CS)**

**102 Bot**

**Course Specifications**

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| Institution: **King Saud university** | Date3/1/ **2018** |
| College/Department :**College of Science /Department of Botany and Microbiology** | |

**A. Course Identification and General Information**

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| 1. Course title and code: **General Botany [102 Bot.]** |
| 2. Credit hours: **3 (2 + 1)** |
| 3. Program(s) in which the course is offered.  (If general elective available in many programs indicate this rather than list programs) |
| 4. Name of faculty member responsible for the course  **Professor Reda Helmy Sammour** |
| 5. Level/year at which this course is offered: 1st Level |
| 6. Pre-requisites for this course (if any):  None |
| 7. Co-requisites for this course (if any):  None |
| 8. Location if not on main campus: |
| 9. Mode of Instruction (mark all that apply):  90  a. traditional classroom What percentage?  b. blended (traditional and online) What percentage?  c. e-learning What percentage?  d. correspondence What percentage?  f. other What percentage?  Comments:  10  a) Computer Labs are used to teach the course. Traditional Classroom isn't used at all.  b) Quizzes will be held through Blackboard System for all students |

**B Objectives**

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| 1. What is the main purpose for this course?   * knowledge and understanding of biological concepts, facts, ideas and techniques and of the applications of biology in society and industry * skills in problem solving * practical abilities associated with biology * investigative and reporting skills associated with project work * positive attitudes such as being open-minded and being willing to recognize alternative points of view, having an interest in biology, in themselves and their environment, being aware that they can make decisions which affect the well-being of themselves and others, and the quality of their environment |

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| 2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)   * Developing programs combining between laboratory and field work. * Encouraging students to undertake self-dependent studies. * Encouraging the self e-learning. |

**C. Course Description** (Note: General description in the form used in Bulletin or handbook)

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| Course Description:  Plant and their importance. Chemical and fine structures of the plant cell. Metabolism. Anatomy. Plant tissues, Plant water relations. Heredity and its applications. Levels of structural organization and evolution in plants (structure, taxonomy, economical and biological importance). Plant morphological and anatomical adaptation to environment Environmental pollution. |

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| 1. Topics to be Covered | | |
| List of Topics | No. of  Weeks | Contact hours |
| Introduction: Characteristics of living things and Cell types | 1 | 4 |
| Eukaryotic Cell Structure and Function of Plant. | 1 | 4 |
| Molecular basis of reproduction and Inheritance Basic & Chromosome structure | 1 | 4 |
| Cell division: Binary fission, Mitosis & and Meiosis. | 1 | 4 |
| Mendelian Genetics | 1 | 4 |
| Plant structure: Morphology of plant and Organ Adaptation | 2 | 8 |
| Plant structure: Anatomy of plant + FIRST QUIZ | 1 | 4 |
| Plant physiology: Movement of water and solutes in plants. | 1 | 4 |
| Plant physiology: Flow of energy (Photosynthesis and respiration). | 1 | 4 |
| Classification of organisms: Microorganisms. | 1 | 4 |
| Classification of organisms: Plant. | 1 | 4 |
| Plant Ecology: The dynamics of Ecosystems. | 1 | 4 |
| Plant Ecology: The Biomes, Ecology and Human future + SECOND QUIZ | 1 | 4 |
| Revision | 1 | 4 |

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| 2. Course components (total contact hours and credits per semester): | | | | | | | |
|  | | Lecture | Tutorial | Laboratory/  Studio | Practical | Other: | Total |
| Contact  Hours | Planed | 30 |  |  | 30 |  | 60 |
| Actual |  |  |  |
| Credit | Planed | 2 |  |  | 1 |  | 60 |
| Actual | 2 |  |  | 1 |  | 60 |

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| 3. Additional private study/learning hours expected for students per week.  3 |

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| 4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy | | | |
| **On the table below are the five NQF Learning Domains, numbered in the left column.**  **First**, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.) | | | |
| **Code**  **#** | **NQF Learning Domains**  **And Course Learning Outcomes** | **Course Teaching**  **Strategies** | **Course Assessment**  **Methods** |
| **1.0** | **Knowledge** | | |
| 1.1 | Define Basic Concept of general botany and Plant biology | * Lecturers | * Exams, and Assignments |
| 1.2 | Recognize plant-Environment Relationships | * Lecture and Group Discussion, Videos, animation | * Exams and assignments |
| **2.0** | **Cognitive Skills** | | |
| 2.1 | Develop the ability of how to utilize the theoretical concepts in applicable form | Library and Internet Search | Evaluation of Activates case s**tudy+** Exams |
| 2.2 | Explain the characters that link plants to each other and to their environment. | Team Work Studies and Reporting | Evaluation of Activates **-** Group reports+ Exams |
| **3.0** | **Interpersonal Skills & Responsibility** | | |
| 3.1 | Ability to Express Opinion and Criticize peers, Bear Responsibility and Cope with Positive and Negative Criticism from Others | Student Group Debates and Discussions | Peer and Instructor Evaluation |
| **4.0** | **Communication, Information Technology, Numerical** | | |
| 4.1 | Ability to Use Information Media Short assay | Scientific Reports Based on Web search | Ability to Use Information Media |
| **5.0** | **Psychomotor** | | |
| 5.1 | Ability to work with a microscope- Prepare and Demonstrate Plant specimen, Examine tissue structure under microscope , Draw diagrammatic presentation for root, stem, leaf structure, Perform mineral nutrition experiment | Guided practice | Practical Exam |

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| 5. Schedule of Assessment Tasks for Students During the Semester | | | |
|  | Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.) | Week Due | Proportion of Total Assessment |
| 1 | Monthly first exam | 7th | 10 |
| 2 | Monthly second exam | 13th | 10 |
| 3 | Presentation of project and discussion | 14th | 10 |
| 4 | Practical exam | 14th | 30 |
| 5 | Final exam | 15th | 40 |
| 6 | Total | 15 | 100 |

**D. Student Academic Counseling and Support**

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| 1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)  Office hours: Three Hours weekly (to be posted each semester) |

**E Learning Resources**

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| 1. List Required Textbooks   * Biology of plants 5th Ed. by Raven, P.H., Evert, R.F. and Eichhorn, S.E.(1992) W.H. Freeman and company, Worth Publishers. New York * Supporting books: * Biology Of Plants 5th ed. by Raven et al. 1992 Worth Publishers. (Translation into Arabic by Al-Whaibi, M. H. and A. S. Al-Khalil, 2002., (2005 second Ed.) Scientific Publications, King Saud University Press, Riyadh, Saudi Arabia. (In Arabic). * Manual of Biology of Plants.2002. (2005 second Ed.) Arif, I. A., A. S. Al-Khalil, Al-Whaibi, M. H. ,R. M. Al-Summ and K. M. Zayed. Scientific Publications, King Saud University Press, Riyadh, Saudi Arabia. (In Arabic). * Study Guide to Plant Biology (In Brief). 2008. Al-Whaibi, M. H. and A. S. Al-Khalil) Scientific Publications, King Saud University Press, Riyadh, Saudi Arabia. (In Arabic). |
| 2. List Essential References Materials (Journals, Reports, etc.)   * Raven, P.H., Evert, R.F. and Eichhorn, S.E.(1999). Biology of plants 6th. E. W.H. Freeman and company, Worth Publishers. New York. * Raven, P.H., Evert, R.F. and Eichhorn, S.E.(2005). Biology of plants 7th. E. W.H. Freeman and company, Worth Publishers. New York. |
| 3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.   * http://www.biology-online.org/ * http://www.biology-online.org/11/1\_plant\_cells\_vs\_animal\_cells.htm * http://www.bioscience.org/urllists/biology.htm |
| 4. Other learning material such as computer-based programs/CD, professional standards or regulations and software. |

**F. Facilities Required**

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| Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.) |
| 1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)  Available |
| 2. Technology resources (AV, data show, Smart Board, software, etc.) |
| 3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) |

**G Course Evaluation and Improvement Processes**

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| 1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching  Course evaluation survey  Program evaluation survey  Student experience survey |
| 2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department  Peer – Peer Reviewing |
| 3. Processes for Improvement of Teaching  Training courses by the Deanship of Skills Development  Peer – Peer Reviewing |
| 4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) |
| 5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.  The course file contains the course specification, course report, analysis of the course evaluation survey, a sample of assignments, homework, quizzes, answer sheets, student grades and the teacher evaluation survey filled by the students. All these are evaluated by the faculty and utilized for improvement of the course effectiveness |

Name of Course Instructor:

Signature: Reda Helmy Sammour\_\_\_\_\_\_\_\_ Date Specification Completed: \_\_\_3 January 2018\_\_

Program Coordinator: \_Prof. Mohamed A. El-Sheik & Kakshan Perveen\_\_\_

Signature: \_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date Received: \_3 January 2018