#### Course Title: Horticulture 3 (Fruit Production)

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| **University** | **Benha** |
| **Faculty** | **Faculty of Agriculture** |
| **COURSE SPECIFICATIONS:** |
| Program of which the course is given | **Agricultural Biotechnology** |
| Major or Minor element of Program |  |
| Departments offering the Program | **All departments** |
| Department offering the course | **Horticulture**  |
| Academic year / Level | **Level 3** |
| Date of specification approval |  |

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| **A- BASIC INFORMATION**  |
| Title  | Horticulture 3 (Fruit Production) |
| Code | HO 0203 |
| Credit Hours  | 4 Hours / week |
| Lecture | 2 Hours / week |
| Practical | 2 Hours / week  |
| Total: | 56 Hours / semester |

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| **B- PROFESSIONAL INFORMATION** |
| **1 – OVERALL AIMS OF COURSE** |
| This course aims to supply the student with * Knowledge and skills related to the different types of fruit and economic importance.
* Environmental needs of the fruit trees to help distribute them to the appropriate places cultivated.
* How to establish nurseries and orchids of various fruit trees.
* Knowledge and skills related to the horticultural practices to get the highest productivity and the best quality of fruits characteristics.
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| **2 – Intended Learning Outcomes of Course (ILOs)** |
| **A. Knowledge and Understanding:** |
| ***By the end of the course, students should:**** Recognize the appropriate environmental conditions for each type of fruit trees.
* Mention economic importance and nutritional value of each type of fruit.
* Know the horticultural practices for fruit trees to maintain the productivity and to increase production life.
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| B. Intellectual Skills: |
| ***Successful completion of this course will allow students to:**** Identify problems that affect negatively on fruit trees productivity and how to overcome them and solve.
* Divide the different factors that affect the growth and productivity of fruit trees.
* Compare the different techniques used in the propagation, planting and caring for fruit trees and harvest the fruits.
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| C. Professional and Practical Skills: |
| * Apply the necessary horticultural practices for fruit trees, methods and the right time to hold them and its purpose.
* Cultivate orchids, taking into account the productivity and quality attributes.
* Train on prune fruit trees to increase the production and fruit quality.
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| D. General and Transferable Skills: |
| * Working in a team.
* Respect the ethics and etiquette of the job.
* Manage the work and time efficiently.
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| 3. CONTENTS |
| **Topic** | **No. of hours** | **Lectures** | **Practical** |
| Introduction- Study of main topics (History, Importance, Propagation and cultivation, climate, soil and water requirements, horticultural practices, flowering, fruit-setting and development, disease and pest management, fruit maturity and harvesting) for each of the following fruit crop :- |  |  |  |
| Citrus | 8 | 4 | 4 |
| Date palm | 4 | 2 | 2 |
| Mangoes | 4 | 2 | 2 |
| Banana | 4 | 2 | 2 |
| Olive and Guava  | 4 | 2 | 2 |
| Annona, Papaya, and Avocado | 4 | 2 | 2 |
| Grapes | 8 | 4 | 4 |
| Stone fruits | 8 | 4 | 4 |
| Pome fruits | 4 | 2 | 2 |
| Catkin-bearing Nut trees | 4 | 2 | 2 |
| Figs and pomegranates | 4 | 2 | 2 |
| Total: | 56 | 28 | 28 |

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| 4. TEACHING AND LEARNING METHODS |
| 1. The main subject areas are covered in the lectures (see syllabus Plan).
2. Several student seminar sessions give the opportunity for students to bring questions or discuss any aspects of the course with the tutor.
3. Students are given a topic to research in small groups which they report as an oral presentation. Collective feedback on the strengths and weaknesses of the presentations are provided.
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| 5. STUDENT ASSESSMENT METHODS |
| ***Students will be evaluated by attendance, fulfillment and effort in exercises and presentations, and examination grades:***1) Laboratory work: to assess the ability of students to understand and perform small laboratory experiments. |

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| 6. ASSESSMENT SCHEDULE |
| No | AssessmentAssessment | **Week** |
| 1 | Periodical exam  | 4, 8 th weeks |
| 2 | Practical exam | 14 th week |
| 3 | Oral exam | 15 th week |
| 4 | Final exam | 16 th week |

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| 7. WEIGHTING OF ASSESSMENT |
| No | AssessmentAssessment | **%** |
| 1 | Periodical exam  | 15% |
| 2 | Practical exam | 15% |
| 3 | Oral exam | 10 % |
| 4 | Final exam | 60 % |
| TOTAL | 100 % |

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| 8. LIST OF REFERENCES |
| 1. **Brill, S. and Dean, E. 1994.** Identifying and harvesting edible and medicinal plants in wild (and so wild) places). Harper Collins Publ. Inc., NY, USA. [http://www.amazon.com/Identifying-Harvesting-Edible-Medicinal-Plants/dp/0688114253/ref=sr\_1\_1?s=books&ie=UTF8&qid=1390947774&sr=1-1&keywords=Identifying+and+harvesting+edible+and+medicinal+plants+in+wild](http://www.amazon.com/Identifying-Harvesting-Edible-Medicinal-Plants/dp/0688114253/ref%3Dsr_1_1?s=books&ie=UTF8&qid=1390947774&sr=1-1&keywords=Identifying+and+harvesting+edible+and+medicinal+plants+in+wild)
2. **Gladstar, R. 2012.** Rosemary Gladstar`s medicinal herbs: A. beginner`s guide: 33 healing herbs to know, grow and guide. Storey Publ., MA., USA. [http://www.amazon.com/Rosemary-Gladstars-Medicinal-Herbs-Beginners/dp/1612120059/ref=sr\_1\_1?s=books&ie=UTF8&qid=1390947808&sr=1-1&keywords=Rosemary+Gladstar%60s+medicinal+herbs](http://www.amazon.com/Rosemary-Gladstars-Medicinal-Herbs-Beginners/dp/1612120059/ref%3Dsr_1_1?s=books&ie=UTF8&qid=1390947808&sr=1-1&keywords=Rosemary+Gladstar%60s+medicinal+herbs)
3. **Mase, M. 2013.** The wild medicine solution: Healing with aromatic, bitter and tonic plants. Healing Arts Press, Rochester, VT, USA. [http://www.amazon.com/Wild-Medicine-Solution-Healing-Aromatic/dp/1620550849/ref=sr\_1\_1?s=books&ie=UTF8&qid=1390947862&sr=1-1&keywords=The+wild+medicine+solution%3A+Healing+with+aromatic%2C+bitter+and+tonic+plants](http://www.amazon.com/Wild-Medicine-Solution-Healing-Aromatic/dp/1620550849/ref%3Dsr_1_1?s=books&ie=UTF8&qid=1390947862&sr=1-1&keywords=The+wild+medicine+solution%3A+Healing+with+aromatic%2C+bitter+and+tonic+plants)
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| 9. FACILITIES REQUIRED FOR TEACHING AND LEARNING |
| 1. Teaching aids/ materials: e.g. boards – overhead projector – data-show projector – stationary.. etc.
2. Teaching room/hall.
3. Computers.
4. Facilities for site visits etc., which are necessary for teaching the course.
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| **Course Coordinators:**  | **Prof. Dr. Issam A. Hassaballa****Prof. Dr. Fouad M. Abd El-Latif** |
| **Date: / / 2015** |