**Quantitative and Population Genetics** (Zoo 552)

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| **Course Designation** | Zoo-552 | 552 حين | **رقم المقرر ورمزه** |
| **Course Name** | Quantitative and Population Genetics | وراثة العشائر والوراثة الكمية | **اسم المقرر** |
| **No. of Credits** | 2 (1 + 1) | 2 ساعات (1 + 1) | **عدد الوحدات الدراسية المعتمدة** |
| **Prerequisites** | Zoo-374 | 374 حين | **متطلب سابق** |
| **Co-requisite Course** | None | لا يوجد | **متطلب مصاحب** |

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| **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 | Final exam  | 14 Week | 40% |
| 2 | Midterm exam (with oral presentation) | 7 Week | 30% |
| 3 | Midterm exam (with Reports) | 7 Week | 20% |
| 4 | Performance evaluation + attendance | Weekly | 10% |

**Course Description**:

Studying Genetics and quantitative genetics for determining genetic distances, population structure, variance components and basic genetic parameters such as heritability and response toselection.

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| List of Topics | Week no. |
| 1. Genetic structure of the population
 | 2 |
| 1. Forces of gene frequency changes
 | 3 |
| 1. Evolution of DNA Sequencing
 | 4 |
| 1. Small populations
 | 5 |
| 1. Measurements of variability
 | 6 |
| 1. Presentation and Exam
 | 7 |
| 1. Resemblance between relatives
 | 8 |
| 1. Heritability
 | 9 |
| 1. Selection
 | 10 |
| 1. Inbreeding and cross breeding
 | 11 |
| 1. Metric traits
 | 12 |
| 1. BLUB estimation
 | 13 |
| 1. Final exam
 | 14 |