



Course Title:	Advanced Breeding Programme Management
Tutors:	Dr Kristin Leus, EAZA Population Management Advisory Group, CBSG Europe Programme Officer, Copenhagen Zoo Kristine Schad, EAZA Population Biologist
Aimed at:	ESB and EEP coordinators that have completed the Basic Breeding Programme Management course
Stage:	3
Language taught in:	English
Taught hours:	22 (3.5 days)
Extra hours for study etc:	Varies from studbook to studbook
Cost:	EAZA members: €315 Non-members: €395
Minimum group size:	11
Dates:	17 – 20 January 2017
Delivery Method:	Combination of face to face and independent learning before the course
Location(s):	Chester Zoo, Chester, United Kingdom
Links to other courses:	Follows on from Basic Breeding Programme Management course

Course Aim(s):

This course aims to teach the process of producing a long term management plan for the captive population, as well as the annual breeding and transfer recommendations to implement the management plan. The course provides an in-depth understanding of the genetic management of captive populations including in-depth training in the use of specialised captive population management software (SPARK-plug and PMx).

Using your own studbook dataset, you learn to identify problems and issues in your dataset that need addressing before a successful population analysis is possible, how to create an analytical studbook to potentially overcome gaps in your population's pedigree, how to set genetic and demographic goals for your programme and how to create recommendations based on genetic and demographic analysis to achieve these goals.

Learning Outcomes:

By the end of this course you will be able to:

1. Prepare studbook data for analysis and create an analytical studbook if applicable to the data
2. Carry out demographic and genetic analysis to create goals for your population and formulate breeding recommendations to achieve those goals
3. Organise a masterplanning process for your breeding programme

Contents:

SECTION 1: PREPARING STUDBOOKS FOR ANALYSIS

- Routes available to ESB/EEP keepers to get help with data clean up and aspects of studbook data clean up most important to analysis and masterplanning
- Thought processes for an analytical studbook/ which assumptions and why/mechanics of creating an analytical studbook
- Exporting from SPARKS to PMx (technically and use of filter settings)
- Importing SPARKS export files into PMx / basic principles of the PMx programme



SECTION 2: DEMOGRAPHY

- The basic theory of growth rate calculations, life tables
- Life table results in PMx/distinguishing sense from nonsense/smoothing process
- The basic theory of projections from life tables and age pyramids (stable/non stable)
- Projected growth rate in PMx; difference between a deterministic and stochastic model
- Census

SECTION 3: GENETICS

- Refresh genetics of small populations (in captivity)
- Which individuals to include and why/why not and where in PMx to exclude them
- Run genetic calculations
- Interpret the main population statistics and founder statistics in PMx

SECTION 4: PROGRAMME GOALS

- Basic principles and theory underlying the setting of goals for zoo populations with different aims (link with Regional Collection Plans and Integrated Conservation Planning/One Plan Approach).
- Set goals for own programme.

SECTION 5: REPRODUCTIVE PLANNING

- Reproductive planning tool in PMx

SECTION 6: RECOMMENDATIONS

- Interpret the main individual statistics/kinship matrix in PMx
- Use of the pairing screen in PMx/use of mean kinship and kinship value
- Recommendations report in PMx

SECTION 7: OTHER FEATURES OF PMx

Assessment:

None

Additional information:

You will be required to work with the EAZA Population Management Advisory Group (EPMAG) on your data before the course in order to ensure you have a dataset that will enable you to benefit most during the training

You will need to bring your own laptop and studbook dataset to work on as part of this course. We can help you install SPARKS and PMx if needed.

How to apply:

Complete an application form (available at <http://www.eaza.net/academy/courses/>) and send it to info@eaza.net putting the course title in the subject line. Once you have submitted your application you will be contacted to confirm whether you have been accepted onto the training event.

