Course Specifications
Valid as from the academic year 2020-2021

Sports Performance Data Analysis (D013134)

Due to Covid 19, the education and evaluation methods may vary from the information displayed in the schedules and course details. Any changes will be communicated on Ufora.

Course size (nominal values; actual values may depend on programme)

Credits 3.0  Study time 90 h  Contact hrs 30.0 h

Course offerings in academic year 2020-2021

A (semester 1)  English  Gent

Lecturers in academic year 2020-2021

Deconinck, Frederik  GE30  lecturer-in-charge

Offered in the following programmes in 2020-2021  crdts offering

Master of Science in Movement and Sports Sciences (main subject Sports Training and Coaching)  3  A

Teaching languages

English

Keywords

Data management, data analysis, notational analysis, sports performance, embedded scientist

Position of the course

This course is seen as an end point of the learning pathway methodology / statistics in sports and movement sciences and offers insights and tools for advanced analysis and visualization of multidimensional dataset in a sports and performance context.

Contents

1. Introduction to data science.
   - background
   - examples from the field
2. Data management
   - working with excel
   - working with Matlab
   - working with R
3. Case studies
   - Artificial neural network
   - Analysis GPS data in ball sports
4. Data visualisation

Initial competences

1. To have insight into and knowledge of the wide range of data that can be collected from athletes
2. To have acquired essential competences addressed in Research methodology and statistics I and II and Advanced research methodology and statistics.

Final competences

1. Knowing the role and added value of an embedded scientist in a sports club, federation or related setting.
2. Data op een semi-geautomatiseerde manier kunnen verwerken met verschillende softwarepakketten.
3. Data op een aantrekkelijke en overtuigende manier kunnen presenteren.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment.

Conditions for exam contract

(Approved)
This course unit cannot be taken via an exam contract

Teaching methods
- PDE tutorial, seminar: practical PC room classes, lecture: response lecture

Extra information on the teaching methods
- Attendance of all classes is mandatory.

Learning materials and price
- The materials will be provide via Ufora

References
- See Ufora

Course content-related study coaching

Evaluation methods
- continuous assessment

Examination methods in case of periodic evaluation during the first examination period

Examination methods in case of periodic evaluation during the second examination period

Examination methods in case of permanent evaluation
- Portfolio, participation, assignment

Possibilities of retake in case of permanent evaluation
- not applicable

Extra information on the examination methods
- You will be evaluated on 4 assignments that you keep in a portfolio, your participation and involvement in the lessons and a paper in which the different skills are tested in an integrated form at the end of the course.

Calculation of the examination mark
- Assignments: 4 x 15% = 60%
- Paper: 40%
- All assignments and the paper must be submitted in order to pass this course. If one or more of the mandatory components is missing, a score of 10 or more out of 20 is automatically reset to 9/20.

Facilities for Working Students
- Contact the course leader.