

Report from the Standards Committee

Committee members

- **Chair**
- Pascale Gaudet SIB

- **Members**
- Sarah Morgan EBI
- Patricia Palagi SIB
- Bruno Gaeta APBioNet
- Pedro Fernandes IGC
- Judit Kumuthini CPGR
- Vicky Schneider-Gricar TGAC
- Manuel Corpas TGAC
- Fran Lewitter ISCB
- Mike Charleston

- **'Listeining in'**
- Erik Bongcam-Rudloff SGBC SeqAhead
- Michelle Brazas OICR
- Cath Brooksbank EBI

Goals of the committee

- Develop standards and guidelines to support many different aspects of bioinformatics training.

Specifically:

- Exploring accreditation mechanisms for learners and trainers
- Developing guidelines for course material descriptions
- along with the Technical Committee, support SASI as needed

Committee organization

- No subgroups
- Mailing list: standards@mygoblet.org
- Monthly Google hangouts (have been held irregularly in 2015)

Action points after the AGM 2014

- Implement a mechanism for trainers to describe their expertise on the myGOBLET site

Trainers skills questionnaire

Topic	Description	Year	Level: Basic/Intermediate/Advanced	Detail				
Communication								
Verbal communication skills	Able to deliver information orally in a clear manner that is understood by trainees.							
Written communication skills	Able to create written information e.g. tutorials and exercises at the correct level for trainees and at an appropriate level both for face-to-face situations and to enable self-study.							
Presentation skills	Able to create suitable slide-sets for lecture-style sessions and to present complex information in an engaging and accessible manner							
Planning and management								
Session planning	Able to define the requirements for a single session; able to plan appropriate activities based on objectives of session and time available							
Curriculum planning	Able to organise a balanced programme; clear understanding of target group and course outcomes; appropriate mix of theory and practice							
Event management	Appreciation of what's needed to make trainees get the most out of the training: adequate breaks, networking opportunities, simple logistics							
Trainee engagement								
Flexibility in delivery	Ability to adapt a session / course in real-time based on live feedback							
Empathy with trainees	Recognising how trainees are engaging with the subject; drawing trainees into the learning opportunity presented							
Understanding/knowledge of trainees	Understanding trainees' differing requirements and coping with different learning speeds							
Expertise and knowledge								
Subject area knowledge	Having appropriate and up-to-date knowledge / expertise in the subjects taught							
User application awareness	Understanding how a trainee will apply the information							
Knowledge of training methodology	Awareness of individual learning styles and basic pedagogy / andragogy							
Specific technical skills								
	NOTE: We could look into implementing EDAM (http://www.ebi.ac.uk/ontology-lookup/browse.do?ontName=EDAM); I understand this is what Elixir is planning to do.							

Trainers skills questionnaire – cont'd

Specific technical skills

Programming

Databases

System Administration

Software/Application Development

Software /pipeline Development

Web services and applications development
(Web technologies)

Cloud/Super computing/Grid

Algorithm Development

Statistics

Data Management

Data Analysis

Biostatistics & biocomputing

Computational Bayesian methods

Data visualization

Mixture models and sampling methods

Optimization heuristics in statistical modeling

Multivariate data analysis

Machine learning

Protein Function Prediction

Bioinformatics Standards and reporting
Standardization/Ontologies/Markup Languages

Semantics

LIMS (Laboratory Information Management System)

Computational Biology

Computational Genomics

Computational Molecular Biology

Computational Structural Biology

Genome Annotation

Computational Proteomics

Chemoinformatics

System Biology and Networks

Meta Genomics

Sequencing, microarray and Genotyping Technologies

Functional Genomics

Genetic Variation Analysis

Pharmacogenomics/Pharmacogenetics/Pharmaco

Kinetics/Toxico Genomics

Medical Informatics

Clinical Informatics

Immuno Informatics

Transcriptomics

Regulation and Epigenomics

Bioinformatics of Disease and Treatment

Population and Statistical Genetics

Bioimaging and signal processing

Pathogen Informatics

Molecular Evolution

Phylogenetics

Trainers skills questionnaire – cont'd

- Decision: keep trainer evaluations restricted to technical skills; other skill too difficult to assess objectively
- Implementation:
 - Option 1: Implement questionnaire submitted to Tech Committee after AGM 2014 (dropped)
 - **Option 2: Use skills as defined in**

Bioinformatics Curriculum Guidelines: Toward a Definition of Core Competencies

Lonnie Welch^{1*}, Fran Lewitter², Russell Schwartz³, Cath Brooksbank⁴, Predrag Radivojac⁵, Bruno Gaeta⁶, Maria Victoria Schneider⁷

- Option 3: Use EDAM; to align with Elixir (?)

What has been achieved in 2015

- Requested the Technical Committee to implement some form of the survey (Jan, March, July)
- Status ??

2015 task: Provide guidelines for course material description

- Goal: Develop mechanisms that would provide a GOBLET 'seal of approval' on teaching materials, courses and other events.
- Notes are here:
https://docs.google.com/document/d/1r9oO_h5w2gOr_AMH_UHT_PT-jfGRYjlvVYYqnEAWs6Q/edit

(See Google doc or word doc for template for the course descriptions)

Short term and long term plan of fundraising committee

- Standards committee's activities are dependent/overlapping with LET and Technical committees
- Provide guidance rather than actual products

Comments, feedback, suggestions

- This slide is yours !