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

<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
<th>Year</th>
<th>Level: Basic/Intermediate/Advanced</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication</strong></td>
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<tr>
<td>Verbal communication skills</td>
<td>Able to deliver information orally in a clear manner that is understood by trainees.</td>
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<tr>
<td>Written communication skills</td>
<td>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.</td>
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<tr>
<td>Presentation skills</td>
<td>Able to create suitable slide sets for lecture-style sessions and to present complex information in an engaging and accessible manner.</td>
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<td><strong>Planning and management</strong></td>
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<tr>
<td>Session planning</td>
<td>Able to define the requirements for a single session; able to plan appropriate activities based on objectives of session and time available.</td>
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<tr>
<td>Curriculum planning</td>
<td>Able to organise a balanced programme; clear understanding of target group and course outcomes; appropriate mix of theory and practice.</td>
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<tr>
<td>Event management</td>
<td>Appreciation of what’s needed to make trainees get the most out of the training: adequate breaks, networking opportunities, simple logistics.</td>
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<tr>
<td><strong>Trainee engagement</strong></td>
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<td>Flexibility in delivery</td>
<td>Ability to adapt a session / course in real-time based on live feedback.</td>
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<tr>
<td>Empathy with trainees</td>
<td>Recognising how trainees are engaging with the subject; drawing trainees into the learning opportunity presented.</td>
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<tr>
<td>Understanding/knowledge of trainees</td>
<td>Understanding trainees’ differing requirements and coping with different learning speeds.</td>
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<tr>
<td><strong>Expertise and knowledge</strong></td>
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<tr>
<td>Subject area knowledge</td>
<td>Having appropriate and up-to-date knowledge / expertise in the subjects taught.</td>
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<tr>
<td>User application awareness</td>
<td>Understanding how a trainee will apply the information.</td>
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<tr>
<td>Knowledge of training methodology</td>
<td>Awareness of individual learning styles and basic pedagogy / andragogy.</td>
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<tr>
<td><strong>Specific technical skills</strong></td>
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<tr>
<td>NOTE: We could look into implementing EDAM (<a href="http://www.ebi.ac.uk/ontology-lookup/browse.do?ontName=EDAM">http://www.ebi.ac.uk/ontology-lookup/browse.do?ontName=EDAM</a>); I understand this is what Elixir is planning to do.</td>
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</tbody>
</table>
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/Pharmacokinetics
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 to 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 Welch¹, 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_AMHUHT__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!