EuChemS-DAC Study Group Annual Report for 2023-2024

Study Group Name: SG Education

Study Group Head and Affiliation: Dr. Martin Vogel, University of Muenster, Germany

Study Group Members and Affiliations:

Prof. Dr. Reiner Salzer, Dresden University of Technology, Germany

Prof. Dr. Ivo Leito, University Tartu, Estonia

Prof. Dr. Miltiades Karayannis, University of Ioannina, Greece (stopped his membership officially in 2023)

Dr. Martin Vogel, University of Muenster, Germany

Objectives:

- -Teaching analytical chemistry in the 21st Century
- Evaluation of curricula in analytical chemistry at the current stage of the Bologna process
- European employment survey for chemists and chemical engineers
- Electronic media in teaching and assessing analytical chemistry

Activities and Outputs in 2023-2024 (e.g. reports, publications, seminars, meetings):

- R. Salzer / Publication of the reports of the ACS/EuChemS Joint Employment Survey for Chemists and Chemical Engineers ESEC3 in May 2024: European Employment Survey for Chemists (ESEC3) Careers of Chemistry Graduates in Europe (https://chemistry-europe.onlinelibrary.wiley.com/doi/10.1002/chem.202401223, free access); Employment Survey for European Chemists (ESEC3) How Diverse is Europe's Chemical Workforce? (https://chemistry-europe.onlinelibrary.wiley.com/doi/10.1002/chem.202401222, free access); Support by several organisations including DAC is gratefully acknowledged.
- R. Salzer / Participation in an evaluation team of the ECTN Label Committee for a Chemistry Eurolabel certificate (R. Salzer).
- R. Salzer, I. Leito / How to Navigate to your Dreamjob? Summerschool of the Erasmus+ programme "Excellence in Analytical Chemistry"; Tartu; 2023/24
- R. Salzer / Activities planned for 2024-2025: Development of an updated questionnaire for a new edition of the EuChemS Employment Survey for Chemists and Chemical Engineers in 2025; Execution of the EuChemS Employment Survey for Chemists and Chemical Engineers in summer 2025
- R. Salzer, I. Leito / Activities planned for 2024-2025: How to Navigate to your Dreamjob? Summerschool of the Erasmus+ programme "Excellence in Analytical Chemistry"; Tartu; 2024/25
- I. Leito / 11th edition of the MOOC "Estimation of Measurement Uncertainty in Analytical Chemistry" (https://sisu.ut.ee/measurement/uncertainty), see also https://analytical.chem.ut.ee/2024/05/measurement-uncertainty-online-course-11th-run-has-successfully-finished/
- I. Leito / 8th edition of the MOOC "LC-MS Method Validation" (https://sisu.ut.ee/lcms_method_validation/), see also https://analytical.chem.ut.ee/2024/02/lc-ms-validation-online-course-8th-run-has-finished/
- I. Leito / The online learning materials of the MOOC "Instrumental Analysis of Cultural Heritage Objects" (https://sisu.ut.ee/heritage-analysis/) are close to completion but we are still unable to launch the course during 2023 or 2024, as was planned. We expect to start the first run of this course in 2025.
- I. Leito / Participation in panel discussion "Maximising employability and guaranteeing programme continuity" at the *Erasmus Mundus* 20th Anniversary conference "Beyond Borders and Boundaries" (27-28 May 2024, Hotel Le Plaza, Brussels).
- I. Leito / Presentation "Quality in Chemical Measurements: Education Activities at University of Tartu" In the Spring seminar of Finntesting association "Quality in measurements. How quality-related issues are educated at university level?" (29 May 2024)
- I. Leito / Participation in several meetings of the Eurachem Measurement Uncertainty Working Group throughout the year
- M. Vogel / Co-editor of the column in *Analytical & Bioanalytical Chemistry* "ABCs of Education and Professional Development in Analytical Science, focus on closing the gap between academia and industry regarding education.
- M. Vogel / Member of and contribution to IUPAC Project 2019-039-3-500: Status of Analytical Chemistry Education
- M. Vogel / Publication of the column contribution "Incorporation of analytical chemistry in the undergraduate curriculum: examples from different regions of the world" together with T. J. Wenzel, P. B. C. Forbes, B. C. Galarreta, Bhavik A. Patel, D. K. Y. Wong in *Anal Bioanal Chem* (2024). https://doi.org/10.1007/s00216-024-05360-3
- M. Vogel / Oral contribution to the educational session during EuroAnalysis 2023, Geneva/Switzerland "Remote teaching in Analytical Chemistry Lessons learnedduring COVID-19 pandemic"

• M. Vogel / Member of the Scientific Committee of EuroAnalysis 2025 in Barcelona/Spain to cover the field of analytical chemistry education
Do you intend to propose a Task Group in the scope of the activities of DAC-EuChemS? If so, please mark the option(s) below:
☐ to prepare a state-of-the-art review in a given field;
☐ to organize short courses, particularly in EuroAnalysis;
☑ to promote online thematic seminars;
⋈ to organize a thematic session in EuroAnalysis;
☐ to promote other activities, clearly disclosed in the application and approved by the Annual Meeting.
Report submitted by: Dr. Martin Vogel
Date submitted: July 4, 2024

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