

THE VIRTUAL EDUCATION COMMUNITY ARTICULATION AND OPERATIONAL MODEL

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1. THE ECHEMTEST+ ROADMAP

In order to convert as much as possible chemical knowledge from tacit into explicit, as is the mission of the ECTN Association, the VEC SC adopted the Prosumer (Producer+Consumer) model at the end of the EU funded EC2E2N2 project. This was achieved by launching the self-funded ECHEMTEST+ project in the year 2017 after implementing the EOL (Exams On Line) Open Source software on the Cloud, porting on that platform the related **EChemTest**[®] Libraries, running a 2nd Training event in Perugia, signing the relevant VEC Agreement with the Institutional Test Centres and Agencies and adopting the Chem-Learn portal developed as a joint endeavour by the University of Perugia and its former spinoff Master-UP srl.

The results of the year 2017 in terms of Self Evaluations Sessions (SES)s were BUDAPEST (627), MILANO (571), KRAKOW (510), VIENNA (310), GENOVA (163), KAZAN (123), AMSTERDAM (95), THESSALONIKI (48), PERUGIA (48), LJUBLJANA (11), NAPOLI (8).

2. THE VEC STANDING COMMITTEE

At the same time the VEC standing committee was reorganized as **e-test Commission** dealing with **EChemTest**[®] and having a consultation role on e-test quality and sessions as well as on issues of electronic education and related activities (the present material has been used to redesign the web page of the VIRTUAL EDUCATION COMMUNITY (VEC)). The number of its members was significantly reduced with three of them being appointed by the AC (the Chair, the coordinator for **EChemTest**[®] and the coordinator for Learning Objects (LO)s) and two of them elected (the user representative and the TC Coordinator representatives (see Table 1).

TABLE 1: E-test Commission

Role	Name	e-mail
Chair (appointed)	Prof. Antonio Laganà	lagana05@gmail.com
Coordinator for EChemTest [®] (TC teams, Library committees, ..)	Dr. Noelia Faginas Lago	piovro@gmail.com
Coordinator for Learning objects (Distributed repository, audiovisuals, ..)	Dr. Sergio Tasso	srg.tasso@gmail.com
User Representative (elected)	Prof. Sanjiv Prashar	sanjiv.prashar@urjc.es
Test Center Teams Representative (elect.)	Dr. Heinz Krebs	heinz.krebs@tuwien.ac.at

The e-test Commission maintains a Panel of Library Experts (see Table 2) to the end of carrying out the development and maintenance of the **EChemTest**[®] English master library, organizes international initiatives, takes care of the **EChemTest**[®] promotion at international level and of the issuing of related Certificates.

TABLE 2: Panel of Library Experts

Subject	Name	e-mail
General Chemistry 1 (Pre-University)	Prof. Kristiina	kristiina.wahala@helsinki.fi

General Chemistry 2 (University access)	Wähälä	
Analytical Chemistry 3 (Bachelor)	Prof. Milt Karayannis,	mkaragia@cc.uoi.gr
Biological Chemistry 3 (Bachelor)	Prof. Arne van der Gen Prof. Blanka Kralova	arnevandergeren@hotmail.com blanka.kralova@vscht.cz
Chemical Engineering 3 (Bachelor)	Prof. Severine Camy Dr. Anne-Marie Billet	severine.camy@ensiacet.fr annemarie.billet@ensiacet.fr
Inorganic Chemistry 3 (Bachelor)	Prof. Sanjiv Prashar Prof. Marina Rui	sanjiv.prashar@urjc.es marina@chimica.unige.it
Organic Chemistry 3 (Bachelor)	Prof. P. Gärtner, Dipl. Ing. Heinz Krebs	peter.gaertner@tuwien.ac.at heinz.krebs@tuwien.ac.at
Physical Chemistry 3 (Bachelor)	Prof. Gergely Toth Dr. Krisztina Kovacs Dr. Gabor Vass	toth@chem.elte.hu kkriszti@chem.elte.hu vassg@elte.hu
Computational Chemistry 4 (Master)	Dr. Noelia Faginas Lago	piovro@gmail.com
Conservation Science 4 (Master)	Prof. Evangelia Varella Dr Ioannis Kozaris Dr. Elena Koliarmou	varella@chem.auth.gr ikoazaris@chem.auth.gr elena.koliarmou@gmail.com
Advanced Organic Chemistry 4 (Master)	Prof. Oldrich Paleta	Oldrich.Paleta@vscht.cz

3. THE TEST CENTRE NETWORK

The e-test Commission maintains also the Panel of Coordinators of the National Test Centres (NTC)s (see Table 3). NTCs take care of translating into the relevant national language and maintaining the translated version of the **EChemTest**[®] libraries, of organizing **EChemTest**[®] national initiatives and of promoting **EChemTest**[®] at national level. NTCs together with local Accredited Test Sites (ATS)s (see Table 3) take care of administering and reporting Self Evaluation Sessions (SES)s and managing related activities.

TABLE 3: Panel of Coordinators of National and Local Test Centres

Test Centre	Coordination Team	e-mail
NTC.AT Vienna University of Technology AUSTRIA (and German speaking area) TCA.Vienna@echemtest.eu	Prof. Johannes Froehlich Dipl. Ing. Heinz Krebs	johannes.froelich@tuwien.ac.at heinz.krebs@tuwien.ac.at
NTC.FI University of Helsinki FINLAND TCA.Helsinki@echemtest.eu	Prof. Kristiina Wähälä	kristiina.wahala@helsinki.fi
NTC.GR Aristotle University of Thessaloniki	Prof. Evangelia Varella Dr. Joannis Kozaris	varella@chem.auth.gr ikoazaris@chem.auth.gr

GREECE TCA.Thessaloniki@echemtest.eu	Dr. Eleni Koliarmou	elena.koliarmou@gmail.com
NTC.HU Étvös Lörand University of Budapest HUNGARY TCA.Budapest@echemtest.eu	Prof. Gergely Toth Dr. Krisztina Kovacs Dr. Gabor Vass	toth@chem.elte.hu kkriszti@chem.elte.hu vassg@elte.hu
NTC.IT, ATS.PERUGIA.IT University of Perugia ITALY TCA.Perugia@echemtest.eu	Prof. Antonio Laganà Dr. Noelia Faginas Lago Dr. Roberta Selvaggi	lagana05@gmail.com piovro@gmail.com roberta.selvaggi@unipg.it
NTC.NL University of Amsterdam NETHERLANDS TCA.Amsterdam@echemtest.eu	Prof. Steen Ingemann Jorgensen Dr. Natasa Brouwer	S.IngemannJorgensen@uva.nl natasa.brouwer@uva.nl
NTC.PL Jagiellonian University of Technology of Krakow POLAND TCA.Krakow@echemtest.eu	Prof. Artur Michalak Dr. Krzysztof Szczeponek	michalak@chemia.uj.edu.pl szczeponek@chemia.uj.edu.pl
NTC.RU Kazan National Research Technological University KAZAN TCA.Kazan@echemtest.eu	Dr. Bulat Vagapov Dr. Natalya Bashkirceva	boulat88@gmail.com bashkircevan@bk.ru
NTC.SI University of Ljubljana SLOVENIA TCA.Ljubljana@echemtest.eu	Prof. Marjan Veber Dr. Jurij Rescic	marjan.veber@fkkt.uni-lj.si jurij.rescic@fkkt.uni-lj.si
NTC.SP University Complutense of Madrid SPAIN TCA.Madrid@echemtest.eu	Prof. Maria Teresa Villalba Prof. Alfredo Lainez Prof. Javier Sánchez Prof. Javier Lacadena	mvillalb@ucm.es ferrando@ucm.es javiersbenitez@ucm.es jlacadena@quim.ucm.es
ATS.GENOVA.IT University of Genova ITALY ATS.Genova@echemtest.eu	Prof. Marina Rui	marina@chimica.unige.it
ATS.MILANO.IT University of Milano ITALY ATS.Milano@echemtest.eu	Prof. Michele Ceotto	michele.ceotto@unimi.it
ATS.NAPOLI.IT University of Napoli Federico ii ITALY ATS.Napoli@echemtest.eu	Prof. Riccardo Tesser	riccardo.tesser@unina.it
ATS.SIENA.IT University of Napoli Federico ii ITALY ATS.Siena@echemtest.eu	Prof. Alessandro Donati Ing. Gianluca Mazzei	Alessandro.donati@unisi.it Gianluca.mazzei@unisi.it
HOSTED BY NTC.PL of KRAKOW	Prof. Artur Michalak	michalak@chemia.uj.edu.pl

University of Chemistry and Technology of Prague CZECH REPUBLIC TCA.Krakow@echemtest.eu	Dr. Krzysztof Szczeponek	u.pl szczeponek@chemia.uj.edu.pl u.pl
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Only members of the Panel of Experts and of the Panel of NTC coordinators can become members of the e-test Commission. The e-test Commission provides training and accreditation events for NTC and ATS coordinators as well as for members of the Panel of Experts. The e-test Commission also keeps relationships with private Agencies wishing to deliver **EChemTest**[®] sessions. All members of the e-test Commission, NTC, ATS and all members of the Panel of Experts and of the Agencies have to sign the **Code of Conduct** of the e-test Commission before they commence their duties. In cases of inactivity for four or more years, retraining has to be undertaken by the involved Members to familiarise themselves with current e-test Commission practices.

4. THE OPERATIONAL MODEL

In the operational scheme adopted by the VEC the ECTN Association its member Higher Education Institutions (HEI)s collaborate to produce/utilize their own educational activities and structures. The collaboration leverages the above mentioned **Panel of experts** and **Panel of TC coordinators** and makes use of technical support of its HEI members and Agencies (e.g. using the LibreEOL platform [1], the Chem-Learn portal and the members of a cluster of SMEs operating under the umbrella organization of ECTN acting as market facilitators [2]).

As a result **EChemTest**[®] is at present a highly valued European brand featuring top-level Chemistry knowledge assessment activities. Further activities of the ECHEMTEST⁺ project are those aiming at designing and implementing support T&L audio-visual Learning Objects (LO)s on the distributed repository GLOREP.

1] <http://echemtest.libreeol.org/doc/ECHEMTestGuide.pdf>

2] <http://services.chm.unipg.it/ojs/index.php/virtlcomm/article/view/24>