

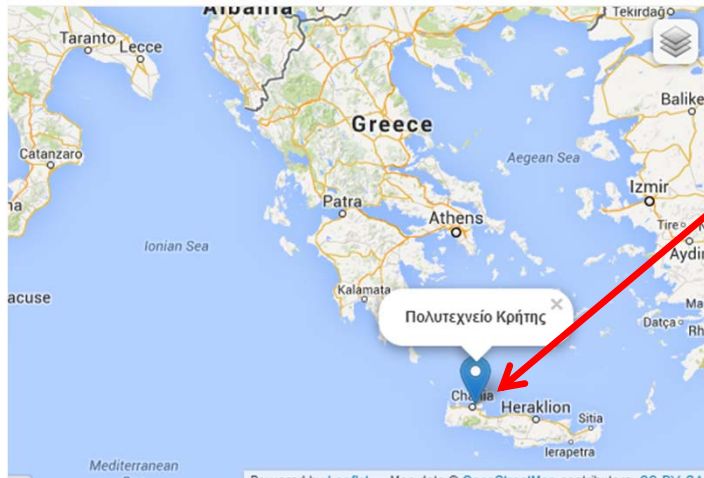


Technical University of Crete (TUC), Greece

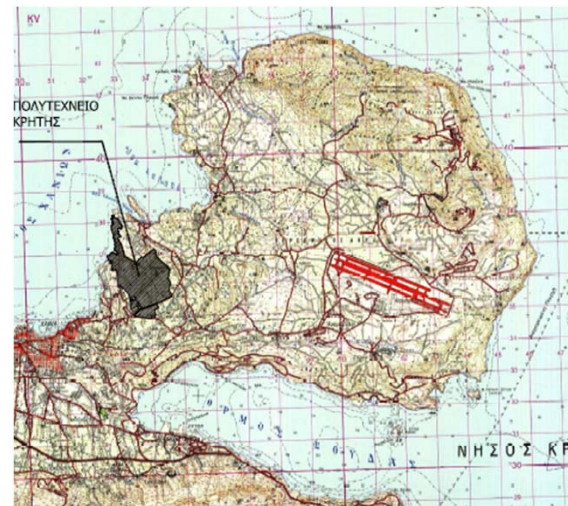
Kick-off meeting

Barcelona, 3-5 March 2014

Technical University of Crete - Overview



The Technical University of Crete (TUC) was established, at Chania (NW island of Crete, Greece) by the Law 545/77 on the “Establishment of a Technological Institution under the title Technical University of Crete and other provisions”.





Technical University of Crete - Overview

- **Technical University of Crete, TUC, Greece** (www.tuc.gr) was founded in 1977 and comprises 5 academic engineering schools: the School of Production Engineering and Management, the School of Mineral Resources Engineering, the School of Electronic & Computer Engineering, the School of Environmental Engineering and the School of Architectural Engineering, all of which have set very high objectives. TUC offers also a number of very competitive post-graduate programmes in various engineering fields. The mission of TUC is to develop modern engineering specialties, to place emphasis on research in fields of advanced technology as well as to establish close cooperation with the industry and other production organizations in Greece and abroad. TUC has many laboratories with state-of-the-art equipment, high technology infrastructure and excellent staff members with international collaborations in numerous research projects. The aforementioned testify the high quality of the educational and research work conducted at the modern facilities of TUC campus. This profile ranks TUC amongst the most prominent research institutions in Greece. TUC has longstanding cooperation with UNIKG, UNI, UBL.

Technical University of Crete - Overview



Academic Schools

Technical University of Crete has five Engineering Schools with innovative specialties. All the Schools run postgraduate programmes, and “multi-departmental” will be established as well:

- [Production Engineering and Management School \(DPEM\) http://www.dpem.tuc.gr/](http://www.dpem.tuc.gr/)
- [Mineral Resources Engineering School \(MRED\) http://www.mred.tuc.gr/](http://www.mred.tuc.gr/)
- [Electronic and Computer Engineering School \(ECE\) http://www.ece.tuc.gr/](http://www.ece.tuc.gr/)
- [Environmental Engineering School \(ENVENG\) http://www.enveng.tuc.gr/](http://www.enveng.tuc.gr/)
- [Architectural Engineering School \(ARCH\) http://www.arch.tuc.gr/](http://www.arch.tuc.gr/)



Group/team - overview

- **Assoc. Prof. Yiannis Tsompanakis, School of Environmental Engineering (ENVEG)**
- **Prof. Michalis Zervakis, School of Electronics and Computer Engineering (ECE)**
- **Prof. Aristomenis Antoniadis Production Engineering and Management School (DPEM)**
- **Dynamic involvement of other academic staff, research associates & post-grad students**





Field of TUC expertise related to WIMB

- Reverse Engineering – Bioengineering – Bioinformatics - Signal & Image Processing - Biomedical applications - Nanomaterials- Nanomanufacturing – Smart materials & Prototyping - Simulation of CAD/CAM Processes -Finite Elements Analysis - Computational Dynamics -
- Research Innovation: Start-ups - Spin-offs - IP rights
- Participation in previous biomedical Tempus project



Role of TUC in the project

WIMB tentative list of topics :

- 1) Commercialization in nanotechnologies;*
- 2) Biomaterials in clinical practice today;*
- 3) Industrial biomaterials;*
- 4) Biomedical applications of additive manufacturing;*
- 5) From nano and biomaterials to innovative products;*
- 6) From new product to clinical practice;*
- 7) Creation of university spin-offs;*
- 8) IP rights in research projects.*

Role of TUC in the project



4) Biomedical applications of additive manufacturing

Biomedical Engineering - Digital Signal & Image Processing Laboratory (DISPLAY) <http://www.display.tuc.gr>

- Bioinformatics Applications in Basic and Clinical Research
- Genomic Networks Modeling (Genomic Networks Analysis, Genomics & Survival Analysis, etc)
- Digital Signal Processing, Digital Image Processing, Hyper-Spectral Imaging , etc

Role of TUC in the project



4) Biomedical applications of additive manufacturing

TEMPUS Project : CRH-BME – Curricula Reformation and Harmonisation in the field of Biomedical Engineering (2009-2012) “Biomedical Engineering Education”
[\(http://www.display.tuc.gr/crh-bme/\)](http://www.display.tuc.gr/crh-bme/)

- The main objective was to update existing curricula in the field of Biomedical Engineering in order to meet recent and future developments in the area, address new emerging interdisciplinary domains that appear as a result of the R&D progress and respond to the Biomedical Engineering job market demands. The generic Biomedical Engineering programs assist participating Institutions to restructure their existing programs in full compliance with the Bologna Declaration and the ECTS and especially those that are in their initial stage of their educational system reform.



Role of TUC in the project

4) Biomedical applications of additive manufacturing

- <http://www.display.tuc.gr/crh-bme/>
- “Biomedical Engineering Education”
- **Main Aims and Objectives of the Project:**
- To update existing curricula in the field of Biomedical Engineering (BME)
- To prepare generic programs for graduate and postgraduate studies in BME
- To promote the development of new study programs in partners countries
- To support the possibility for the establishment of joint degrees
- To supply a template guidance document for Quality Assurance (QA) in the field of BME education
- To generate links with the medical device industry in Europe
- To recreate the TEMPERE thematic network



Role of TUC in the project

***4) Biomedical applications of additive manufacturing & 5)
From nano and biomaterials to innovative products;***

Reverse Engineering (Bioengineering, Cultural Heritage, etc)

<http://www.m3.tuc.gr/RESE-REVER.html>

MICRO / NANO manufacturing

<http://www.m3.tuc.gr/RESE-MICRO.html> &
<http://dml.chania.teicrete.gr/nano/>

**Machining simulation (Ball End & Face Milling, Drilling,
WaterJet, etc**

<http://www.m3.tuc.gr/RESE-SIMUL.html>

Role of TUC in the project

7) Creation of university spin-offs
& 8) IP rights in research projects



www.tuc.gr/innovation.html

TUC gives emphasis on academic personnel & students support for making prototypes, spin-offs, R&D and IP rights, etc.

Innovation Center of Crete

<http://www.innovationcenter-crete.gr/>

Virtual Incubator of Innovation Center of Crete

<http://vinc.innovationcenter-crete.gr>

Role of TUC in the project



I wish we have a great cooperation & success for WIMB!

Thank you for your attention!

Yiannis Tsompanakis

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