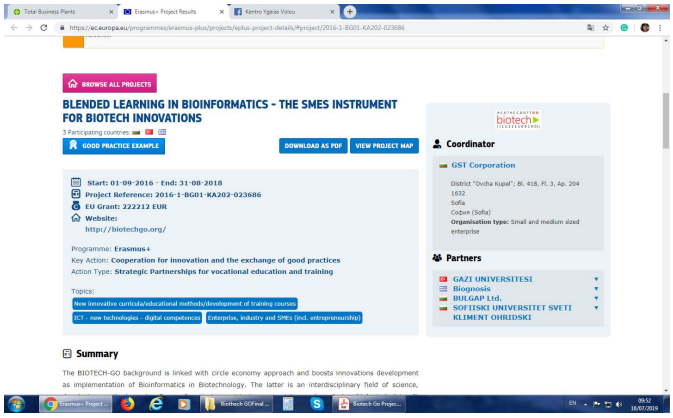
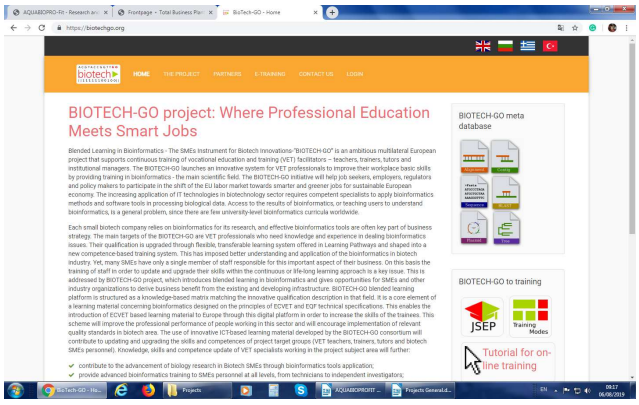
Blended Learning in Bioinformatics -
The SMEs Instrument for Biotech Innovations-
"BIOTECH-GO"

BEST PRACTICE AWARD





The BIOTECH-GO background is linked with circle economy approach and boosts innovations development as implementation of Bioinformatics in Biotechnology. The latter is an interdisciplinary field of science, developing methods and software for storing, retrieving, organizing and analyzing biological data. It combines computer science, statistics, mathematics and engineering, to study and process biological data.

The rationale of BIOTECH-GO is to create a better understanding and application of Bioinformatics in Biotech industry. To address the necessity for use and integration of Bioinformatics resources in Biotech SMEs, BIOTECH-GO introduces blended learning in bioinformatics and gives opportunities for SMEs

and other industry organizations to derive business benefit from introducing and developing this technology.

In order to achieve this, BIOTECH-GO is focused on improving the skills and qualifications of VET professionals – the main training mediators of the bioinformatics' progress (VET teachers/trainers/tutors, and biotech SMEs personnel) and further supporting their employment opportunities and recruitment cycle.

The main objectives pursued reflect the specific partner country needs and are focused on:

- ✔ identifying the common strategies to bridge the gap of the labor market skill needs in bioinformatics;
- ✔ training the target groups in two basic directions:
  - a) How to study the peculiarities of biological resources,
  - b) What are the applications of bioinformatics in biotechnology;
- ✔ creating a virtual space and available training contents, enriched with visual elements and simulations;
- ✔ showing the innovative character of bioinformatics technologies and effect on biotech industry;
- ✔ studying the influence of bioinformatics on technologies in decrease material inputs, reduce energy consumption and emissions;
- ✔ boosting and greening the economy through raising competitiveness and employability via provision of technical competence and training skills.

The project partnership is established with understanding for VET need to shift educational policy from "knowledge" to "competence" and for introduction of the concept of Learning Outcomes and ECVET within the Bioinformatics training. It unifies partners with different background, satisfying the project goal from BG, GR and TR, and comprises two SMEs, an NGO, and two Universities.

The main activities are assigned by project methodology based on SDLC concept, which divides the project lifetime into 5 phases and 10 activities:

- ✔ BIOTECH-GO justification,
- ✔ Cooperation and communication Guidelines preparation,

- ✔ Establishment of BIOTECH-GO managerial structure,
- ✔ Creation of BIOTECH-GO b-learning concept,
- ✔ Work methodology & management,
- ✔ Intellectual Outputs working out,
- ✔ Multiplier Events organization and performance,
- ✔ BIOTECH- GO impact,
- ✔ Dissemination & Use,
- ✔ Post-project sustainable actions.

Results and impact attained are divided to 3 different types

i) Results concerning organization and performance of

- the overall project development,
- piloting of Intellectual Outputs (O)
- Multiplier Events (E)
- specific activities associated with project Dissemination & Use

ii) Intellectual outputs:

a) BIOTECH-GO National Case Studies reviewing the status of current practices and national peculiarities in Bioinformatics training in project partners' counties,

b) BIOTECH-GO Training Design & Delivery Framework representing project blended training platform,

c) BIOTECH-GO Joint Study Education Programme (JSEP) comprising multilingual blended education material in bioinformatics,

d) BIOTECH-GO training modes, which foresaw establishment and functioning of a blended scheme for organization and operation of a training process in bioinformatics based on improved accessibility,

e) Tutorials for trainees and training providers that represent user friendly material for the target groups to use the blended learning model;

iii) Multiplier Events supporting performance and popularization of all project results.

The impact of BIOTECH-GO is the innovative programme providing new practical guidance tools and training materials in Bioinformatics. It proposes opportunities to make education more relevant to the needs of the labor market.
BIOTECH-GO b-learning based on Learning Outcomes (LOs) implements of the "new skills for new jobs" strategy at national and EU level. It is realized through the knowledge part of the ICT based LOs scheme and supported by the performance of multiplier events in each participating country.

The longer-term benefits are anticipated by the application of competence-based approach for training of the target groups, realized and upgraded with new bioinformatics skills and competences, needed by both employers and society. Thus, the current challenge facing bio-scientists and biotech SMEs - to be able to manage and exploit the available information and transform it into new knowledge with a socioeconomic impact, is emphasized and durable project effect is achieved.