COURSE NAME: Entrepreneurship for physicists

PERIOD 3 / 6 ECs for academic skills; available from 2016

COURSE COORDINATORS: Prof. dr. Enno Masurel (VU-ACE) and Prof. dr. Davide Iannuzzi (VU)

DESCRIPTION:

Entrepreneurship, defined here as ‘creation, discovery and exploitation of value-adding opportunities’, is an increasingly important subject for students and professionals, also in the discipline of physics. The growing complexity and accelerating dynamics of the technologies that lie behind life sciences pre-clinical studies, medical treatments, alternative and sustainable energy sources, innovative material, micro- and nanodevices, and complex research projects in the high energy particle physics and astrophysics sectors often urge professionals to think, act, and communicate in an entrepreneurial way. In this course, students will learn the ropes of this emerging field via three educational pillars:

1) Students will be learning modern theories of entrepreneurship, with focus on the relationship between entrepreneurship and innovation, sustainable entrepreneurship, life cycle of the firm, valorization of knowledge, entrepreneurial competences;

2) They will familiarize with a set of entrepreneurial soft skills, which they will put into practice when they will be asked to approach different stakeholders to further their projects to gain commitments or to obtain important information. For this purpose, the students will receive training in generating initial ideas for opportunities, and networking and network utilization.

3) They will be introduced to business planning. For this purpose, the students, supported by guest lecturers and coaching sessions, will write (in small groups) a Business Model Canvas (BMC 3.0) around an innovative idea that they deem interesting for entrance into the market.

All projects and initiatives will of course revolve around innovative ideas emerging from physics research activities.

After the successful completion of this course, the student will, among others:

- Be familiar with an innovation outlook on entrepreneurship;
- Be aware that value-adding opportunities not only contain financial aspects but also social and ecological aspects (sustainable entrepreneurship);
- Have developed insight into, and actual developed, one’s own enterprising competencies;
- Have learned about the processes involved in the recognition and exploitation of opportunities, about creating societal value and about the nature and role of networks;
- Have gained the ability to write a feasibility plan on how to bring an innovation to the market;
- Have gained knowledge of different entrepreneurial processes and the importance of valorization of scientific findings and business ideas for a knowledge-based economy.
Literature


