

# Curricula Designer

## Short Manual

### Overview

The Curricula Designer is a web application that allows users to create new or upload existing higher education study programs and analyze their content according to requirements of work roles on a job market. For the analysis, the SPARTA Cybersecurity Skills Framework (CSF) is used. Work Roles and Competencies reflect the requirements of the NIST NICE Framework.

### Using the Tool

The tool is divided into 3 sections, see Figure 1. The left section 1 allows users to define new courses, the middle section 2 allows the composition of a study program from defined courses and the right section 3 provides the statistical data and compliance of the designed program with the requirements.

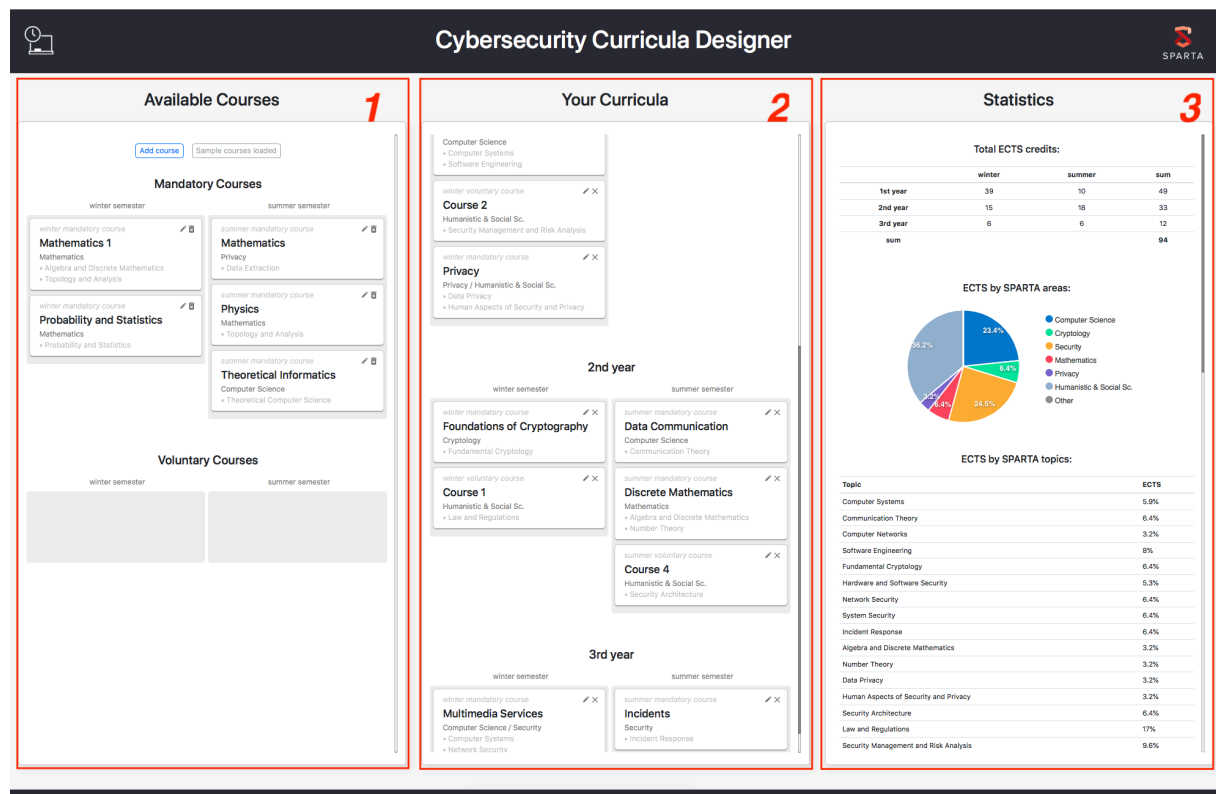


Figure 1: Designer GUI.



*This project has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement SPARTA No 830892.*

## Adding Courses

The left section 1 allows users either to load sample courses from a good-practice curriculum (button “Load sample courses”) or define own courses using the button “Add course”. When adding courses (see Fig. 2), users must fill in data about the course, i.e. the name, type, semester, whether it includes a practical training, number of ECTS credits and Topics, that the course covers. For a detailed description of SPARTA Topics, see D9.2 (<https://www.sparta.eu/assets/deliverables/SPARTA-D9.2-Curricula-descriptions-PU-M18.pdf>).

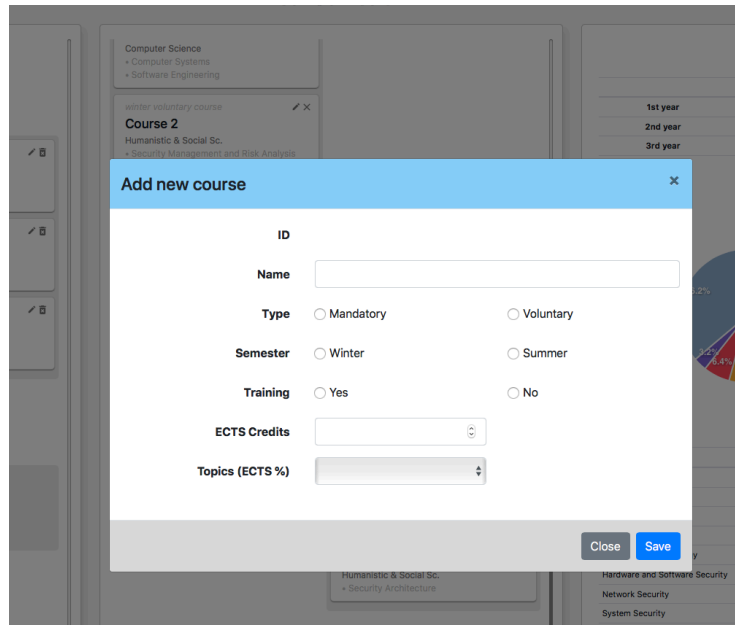


Figure 2: Adding courses.

## Composing Programs

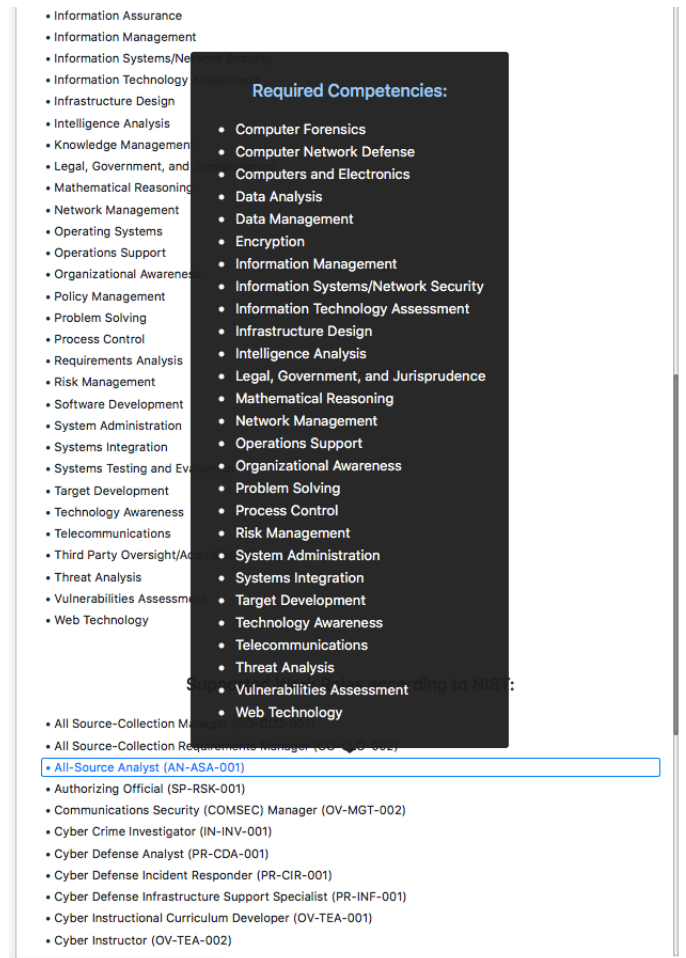
When courses are added, the study program may be composed by simply dragging the course box into the middle section, to the area representing a particular semester (summer/winter, year 1 ,2, 3). The app automatically checks the semester and does not allow insertion into a wrong semester. The final program can be exported to a json format for a future work. *Be careful, reloading page causes loss of all courses and program, unless saved using the export button!*

## Reading Analytical Data

In the right section 3 (see Fig. 3), statistical information about the study program is displayed. This information includes distribution of credits in semesters, distribution of ECTS credits to SPARTA Areas and SPARTA Topics, supported NIST NICE Competencies, and, most importantly, NIST NICE Work Roles supported by the study program. The Work Role is considered supported if required competence is covered in at least one subject. You can display the necessary Competencies of a particular Work Role by hovering with your mouse over the Work Role. The information is dynamically updated as the study program is being created.



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**Figure 3: Program analysis – supported Work Roles.**

### Contact Information

The tool was designed and implemented within the SPARTA project (<https://www.sparta.eu>). Currently, the app is maintained by the Brno University of Technology. For more information, please contact [crypto@fec.vutbr.cz](mailto:crypto@fec.vutbr.cz).



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