

## Abstract

The goal of this thesis is to provide basic information on forensic ballistics and 3D printed weapons. The thesis is based on the analysis of Czech and international monographies and articles and provides insight into the legislative regulation of firearms in selected countries and the Czech Republic. The thesis is split into seven thematic chapters.

The first chapter introduces the reader to the concept and function of forensic ballistics, generally defines the objects of its investigation and describes its various categories. The following chapter focuses on the history of forensic ballistics, both abroad and in Czechoslovakia. This chapter describes interesting cases and personalities who helped form forensic ballistics.

The third chapter defines the objects of investigation in more detail. Firearms, ammunition, objects struck by bullets, and other tangible and intangible objects are described in more detail.

The next two chapters focus more closely on the work of the ballistics expert, with chapter four describing ballistic marks. It outlines where to find them, how to locate and secure them, and the role played by the Ústřední sbírka balistických stop (Central collection of ballistic marks) and the Centrální registr zbraní (Central registr of fireamrs). In contrast, chapter five deals with individual and group identification of firearms.

The sixth and quite extensive chapter is devoted to 3D firearms. First, the 3D printing itself is briefly defined, then the origin of 3D firearms, their relatively short history, resolution, and the most famous models. Furthermore, crimes committed with 3D firearms are described.

As the thesis was commissioned at the Faculty of Law, chapter seven is devoted to the legislation of firearms in the Czech Republic and in the selected countries. Within the frame of the Czech Republic's legislation, the process of adoption of Council Directive 91/477/EEC on control of the acquisition and possession of weapons and the subsequent amendment of the Charter of Fundamental Rights and Freedoms are mentioned.

The conclusion of the thesis returns to the aim of the thesis, evaluates the findings, provides the pitfalls of the regulation of 3D printers, and outlines the future direction of forensic ballistics.