

## **Faculty of Biological and Environmental Sciences**

### **Instruction for a master's thesis based on relevant literature or other scholarly source material**

#### **A master's thesis based on relevant literature or other scholarly source material**

A master's thesis in the form of a literature review may be a systematic review of scholarly publications or a meta-analysis used to answer research questions set in advance. A systematic review is based on data collected from relevant literature in a reproducible manner. A meta-analysis is a statistical examination of the results of several studies focused on the same question. The structure of a literature review does not differ essentially from that of a regular master's thesis. In other words, it describes the background and objectives of the thesis as well as the methods used to collect and analyse the data, and summarises and examines the results obtained. It does not differ essentially from a regular review, which in content and conclusions usually reflects the expert views of the writer.

The research questions and/or hypotheses of a master's thesis written in the form of a literature review as well as the methods of collecting and analysing data must be outlined in the thesis plan. This type of master's thesis should comply with the PRISMA guidelines, which are described online and published in several scholarly series (<http://www.prisma-statement.org/>; original references: <http://www.prisma-statement.org/PRISMAStatement/PRISMAStatement.aspx>, see, e.g., [BMJ 2021;372:n71. doi: 10.1136/bmj.n71](#)). Key documents associated with the PRISMA guidelines include the PRISMA Statement as well as the following:

- 1) The Checklist, which should serve as the thesis structure, and
- 2) the flow diagram, which describes the collection, inclusion and exclusion of data as a process that can be replicated (this should preferably be presented also as a figure in the methods section of the thesis).

A master's thesis can also be based on existing datasets (e.g., publication databases, databases of long-term monitoring studies, biobanks, collections of the Finnish Museum of Natural History). The use of existing datasets may shorten the time required to collect and analyse the data examined in the thesis, which must be taken into account when drawing up the thesis plan to ensure that the work as a whole corresponds to the scope required of a master's thesis.