

# HFT Stuttgart Library

## Tutorial for database research General Pointers

### First-time user questions

#### Why use databases?

The databases provided by the library record scientific technical information on numerous subjects that are relevant for your studies.

Our databases contain, above all, articles from books and periodicals, but also theses and dissertations, surveys, written conference material, legal texts and standards. In short: a large amount of documents to use for your assignments, papers and theses.

#### Why is this better than using a common search engine like Google?

Our databases only record scientifically examined documents. Popular search engines like Google index all content available online, including a vast amount of articles written by laypersons, so you mostly don't know how reliable the information you get actually is.

So while the search interfaces of the databases are, for the most part, a lot more complicated (but also powerful!) than a search engine's simple search box, the results are "content you can count on".

These tutorials explain the various interfaces in detail and are aimed at making your research successful.

If, however, you still have trouble finding what you are looking for, don't hesitate to approach one of the librarians. We are glad to help.

#### What kinds of databases are there?

The two main types are:

- **Full text database:** Results from these databases provide the full text of an article to view or download.
- **Bibliographic database:** These databases don't provide full texts but citations / references. This bibliographic data is usually comprised of information on title and author of the article, the medium in which it was published, document numbers like ISBN and ISSN, keywords describing the article and an abstract describing the full text briefly. By means of this data you can find the full text in the catalogs of libraries, document delivery services or book sellers.

# Considerations before searching

If you don't know what exactly you wish to find...

...**write down** things that characterize what you are looking for, for example:

- Subjects found documents should be about
- Words that titles or abstracts should contain
- Dates: are you looking for very recent information or facts that have been established some time in the past?

...**search broadly**. Use:

- Truncations (see below)
- Operators (see below)
- Features of specific databases to refine your query after the first search

## Search strategies

You can enter words and terms describing the subject you are looking for into search boxes. These terms can be modified or combined in certain ways to broaden or narrow down your result list.

### Truncations and wildcards

You can often get a more diversified result list by truncating, i.e. putting a certain wildcard character in front, into or at the end of a search term.

That way, you will also find words that contain your term **as a part** or are a **modified version** of your word, i.e. plural, conjugation or declension.

There are wildcards that substitute **any number** of characters, **including zero**...

Examples: `manage*` finds „manage“, „manages“, „managers“, „management“ etc.  
`*endable` finds „sendable“, „extendable“, „dependable“ etc.  
`con*tr*ct*` finds „construction“, „contractor“, „constrictable“, etc.

...and wildcards that substitute **exactly one** character.

Examples: `manage?` finds „manages“, „manager“, „managed“ etc.  
`??flection` finds „reflection“, „inflection“, „deflection“ etc.  
`pri?e` finds „price“, „prize“, „pride“ etc.

You can also combine both wildcards:

Example: `comm?n*r` finds „communicator“, „commander“, etc.

➔ *The tutorials for specific databases available on the website explain if and on what conditions it supports truncations and which wildcard characters may be used.*

### Operators

You can combine two or more search terms with so-called (boolean) operators in order to in- or exclude certain documents. Usually, these operators are:

- **AND**
- **OR**
- **(AND) NOT**

**AND** (in some German databases: **UND**) is used to find documents where, for example, the title contains all search terms, but not necessarily in a specific order. Combine, if possible, with a truncation to also find titles containing a modification of a search term.

For example: `manage* AND financ* AND sustainab*`

Use **OR** (in some German databases: ODER) to find documents containing at least one of your search terms. This is useful if you are looking for documents characterized by different words that basically mean the same thing.

For example: `masonry OR brickwork`.

**NOT** (in some German databases: NICHT) is used to exclude a context in relation to your search term that would describe a different subject area than the one you are looking for. If you are, for example, looking up emission standards for machinery, you might come across some results about emission banking. You can eliminate these results by excluding some terms related to the second, "unwanted" context.

For example: `emission* NOT bank*`.

**Combine operators (and truncations) to search for precise subject matters.** If you are looking for information on organic chemistry and need to exclude organic farming, this would be your input:

For example: `organic* AND chem* NOT farm* OR food*`

➔ *The tutorials for specific databases available on the website explain if and which operators can be used.*

### Phrase search

To find a specific expression, i.e. two or more terms in a certain order, you can enclose the query between characters - usually quotation marks - to define a phrase.

Example: `"law of nature"`

This kind of query will only return documents containing your expression **exactly as you entered it**.

**This can be very useful when looking up an author.** Keep in mind, though, that not all databases record names like one would assume. Sometimes the last name is put first, sometimes a middle name is recorded or left out and sometimes only initials are registered.

To include every possible spelling, you can usually combine operators and phrase search.

Example:

`"Jeff Smith" OR "Smith, Jeff" OR "Jeff P. Smith" OR "Smith, Jeff P." OR "J. P. Smith" OR "Jeff Patrick Smith" etc. ...`

Databases that allow a combination of phrase search and truncation make this job easier:

`"J* Smith" OR "Smith, J*"`

This, however, will also find authors named Smith whose first names happen to start with J such as John, James, Jacob etc.

➔ *The tutorials for specific databases available on the website explain if phrase search is supported and what characters are used to enclose the phrase.*