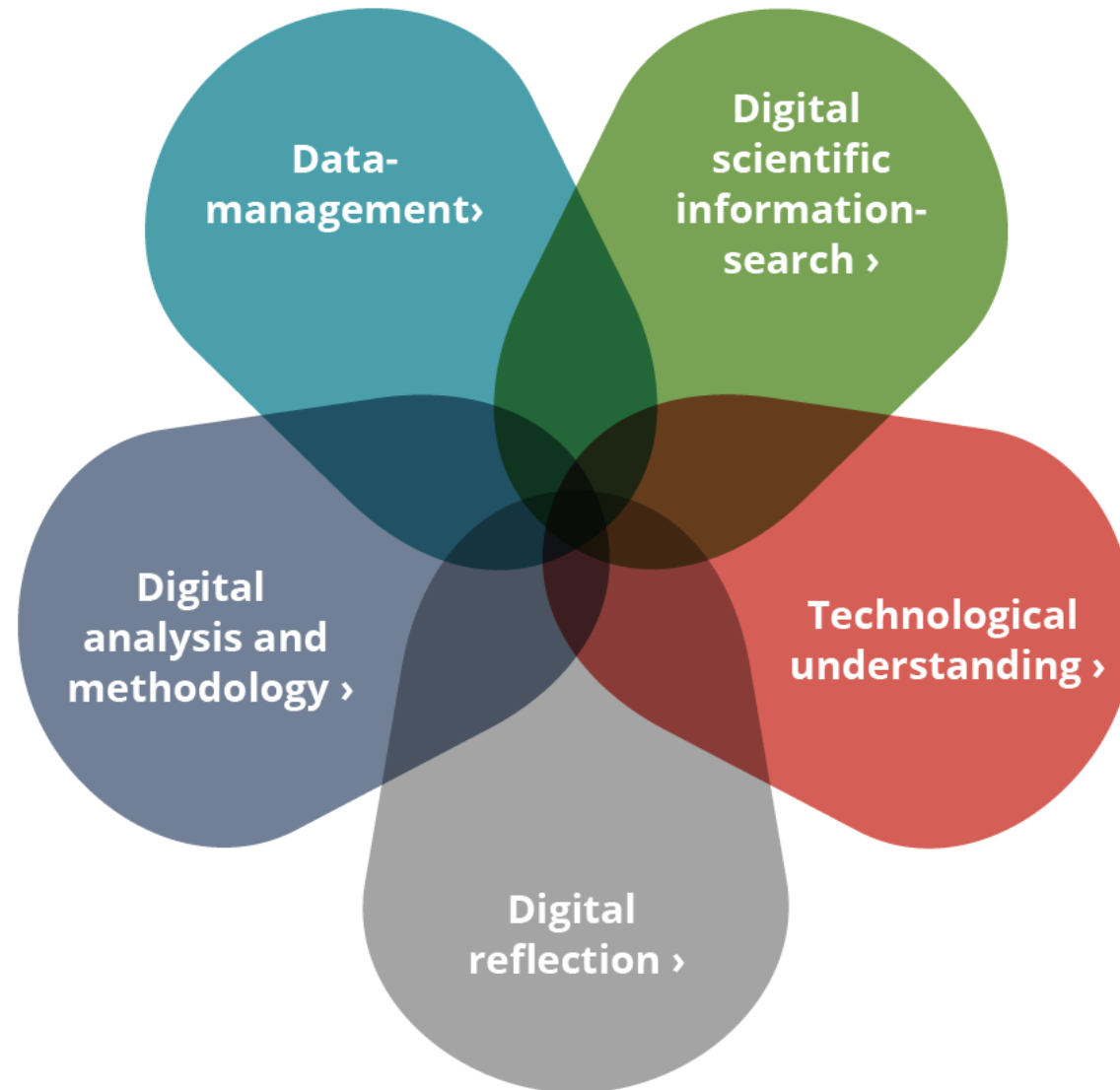


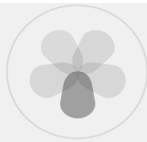

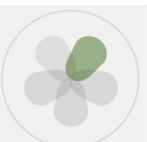


# The UCPH model for students' digital literacy and skills



## Content elements for the five areas of the UCPH model for student's digital literacy and skills

|  <b>Data-management</b>   |  <b>Digital analysis and methodology</b>  |  <b>Digital reflection</b>  |  <b>Technological understanding</b>   |  <b>Digital scientific information search</b>   |
|---|--|---|--|--|
| <p>Students should be able to handle their own data and other people's data in a secure and responsible manner. Including:</p> <ol style="list-style-type: none"> <li>1. Classification of data</li> <li>2. Planning of data management as well as collecting, storing, handling and securing data and databases</li> <li>3. Data structure and data format and ontology</li> <li>4. Legally correct and ethically responsible data management</li> <li>5. Social effects of data sharing and data (re)use</li> </ol> | <p>Students should be given examples of relevant digital tools and how to use them (within their own or other subjects). Including:</p> <ol style="list-style-type: none"> <li>1. Digital tools for data collection, reuse and documentation</li> <li>2. Relevant programming languages and analytical tools</li> <li>3. E-resources and programme-specific tools</li> <li>4. Data analysis and critical approach</li> </ol> | <p>Students should become acquainted with different considerations and perceptions of the importance and consequences of digitalisation in relation to themselves and society. Including:</p> <ol style="list-style-type: none"> <li>1. Critical approach to data, analyses and digital technologies</li> <li>2. Challenges of digitalisation in relation to the role of the professionals, social institutions, social communities and the market</li> <li>3. Ethical values and their significance in a digitised society</li> <li>4. Communication and outreach</li> <li>5. Data to/from social media</li> </ol> | <p>Students should have a basic knowledge of what digital technology is and can be used for. Including:</p> <ol style="list-style-type: none"> <li>1. Function, work and context of technology</li> <li>2. Using and handling data in connection with options for action and problem-solving strategies</li> <li>3. Software: algorithms, artificial intelligence, machine learning</li> </ol> | <p>Students should be able to search for, and in, digital information, assess what is found and account for the process. Including:</p> <ol style="list-style-type: none"> <li>1. Information search</li> <li>2. Source criticism</li> <li>3. Reference management</li> <li>4. Plagiarism, copyright and citation</li> </ol> |

# Questions relating to literacy

Examples of questions that students should be able to answer and/or reflect on in relation to their specific academic skills

| 1. Data-management  | 2. Digital analysis and methodology   | 3. Digital reflection   | 4. Technological understanding  | 5. Digital scientific information search  |
|---|---|---|---|---|
| 1.1 What are data? Which data can and may I use for study purposes?   | 2.1 Which data are relevant within the student's discipline?  | 3.1 What is the significance of digitalisation for academic expertise in a digital society?   | 4.1 How has digitalisation affected the academic/expert field the student works with?   | 5.1 How to identify relevant sources for information search, including using different databases, catalogues (and indices)?   |
| 1.2 How are data classified?  | 2.2. How do different disciplines use digital data and methods, including within the specific subject area? | 3.2 How does digitalisation affect the professional or expert role?   | 4.2 How do relevant digital technologies such as algorithms, search engines and machine learning operate?                                     | 5.2 How to assess the usefulness of the sources found in relation to the issue in question?   |
| 1.3 How to handle different types of data securely and responsibly, for example in data collection, storage, sharing, exchange and reuse? | 2.3 How to work with digital tools and methods in an interdisciplinary manner?                              | 3.3 How does digitalisation affect empirical data and results, including the importance of digital methods when using programs, algorithms, systems, etc. in the collection and processing of data? | 4.3 How can the use of (academically) relevant digital technologies influence and shape contexts (personal, academic and societal)?           | 5.3 Which search strategies and search techniques can be used and developed to search for information relating to studies and the writing of major assignments?   |
| 1.4 How are personal data handled in connection with the programme/surveys?   | 2.4 Which digital tools are or can be useful for the student's dataset? When are which tools used?          | 3.4 How to work with digital tools and methods in an interdisciplinary manner?  | 4.4 What can digital technologies be used for in (your discipline)?   | 5.4 How do you work in a source-critical manner, and what is required of a critical assessment of sources?  |
| 1.5 When are data sensitive and why is it important?  | 2.5 Which tools are available to analyse large amounts of data?   | 3.5 Which ethical questions does digitalisation raise in different academic/societal/personal contexts?   | 4.5 Which skills, options and problem-solving strategies can be attained by using digital technologies (in your discipline)?                  | 5.5 Which tools are available to analyse large amounts of data?   |
| 1.6 What is GDPR (PIXI version)?  | 2.6 How can digital tools affect the collection or choice of data sets?                                     | 3.6 Which data-ethical issues are relevant in relation to the specific subject of the individual?   | 4.6 What are the fundamental differences between different types of software and their structure?   | 5.6 How do algorithms influence the selection of information and, to the extent that it is relevant for the discipline, how do the economic, political and social factors affect the supply of information? |
| 1.7 Where (at UCPH) are the rules for collecting and handling data?   | 2.7 How can data be analysed and communicated (visualised) in an appropriate manner?                        | 3.7 Which data-ethical principles can you use to handle your own ethical considerations, and where will you find them?  | 4.7 Are there any examples of how the development of algorithms, artificial intelligence and machine learning has influenced your discipline? | 5.7 How to work with reference management in order to ensure correct citation and avoid unintended plagiarism?  |
| 1.8 Which tools are available at UCPH for responsible data management?  | 2.8 Where (at UCPH) can you find knowledge about tools for collecting and handling data?                    | 3.8 Are there good examples of intended or unintended societal consequences of digitalisation?  |   | 5.8 Which principles apply to responsible research practice, including plagiarism, copyright, etc.?   |
| 1.9 Do you know of examples of sharing or reusing data and any positive or negative consequences?   |   | 3.9 What does it mean that a digital technology is 'disruptive'?  |   | 5.9 How to ensure the responsible conduct of research (RCR) in the work with digital scientific information search?   |
|   |   | 3.10 Which market mechanisms regulate and drive digitalisation?   |   |   |
|   |   | 3.11 How can/should data be commercialised?   |   |   |
|   |   | 3.12 What does it mean to give informed consent to using personal data?   |   |   |
|   |   | 3.13 How do algorithms/search engines affect the selection of information?  |   |   |
|   |   | 3.14 Which economic, political and societal factors affect the supply of information?   |   |   |