1. Research quality (research competence) (40%)

Qualification	fail	insufficient	sufficient	satisfactory	good	excellent
Dutch grade: default and [interval]	3.0 [0.0, 5.0]	5.0 [5.0, 5.5]	6.0 [5.6, 6.5]	7.0 [6.6, 7.5]	8.0 [7.6, 8.5]	9.0 [8.6,10.0]
Percentage of cohort with grade in this range or higher **(student is in top ... of cohort)**	100%	98%	90%	75%	25%	3%
General description of skill, ability or knowledge	**Does not have the skill or ability.**	**Only shows the skill or ability in basic terms when given a lot of help**	**Shows the skill or ability in basic terms (with a little help)**	**Shows the skill or ability with weekly supervision.**	**Is independently able to show the skill or ability, and has an above average competence in this skill or ability.**	**Is independently able to show the skill or ability, and provides a strong original contribution**
Compentences the student has:						
the capability to (computationally) analyse and interpret data [focus and translation]	Student is not able to perform simple analyses and/or is not able to organise the data and/or interpret the data.	Student is able to organize the data, but is not able to consistently perform simple analyses or interpret the data without help.	Student is able to organize the data and perform basic analyses and interpretation (with a little help).	Student is able to organize the data, perform some basic checks and perform basic analyses.	Student is independently able to organize, analyze and interpret the data, and has performed some advanced analyses on the data.	Student is able to organize the data, perform thorough checks and perform advanced and creative analyses on the data in an independent manner
the ability to check and validate the methodology (e.g. the computational workflow, the model and/or experimental setup) using for example experimental validation, benchmarking approaches, reference data sets and/or scientific literature	Student is not able to validate the methodology, even after feedback of the supervisor.	Student can validate the methodology, but needs a lot of instructions to do so.	Student can do basic validation of the developed methodology with a little help.	Student can do basic validation of the developed methodology.	Student was independently able to validate the developed methodology.	Student was independently able to validate the developed methodology and has suggested a novel idea to do so.
the translational ability to make the connection between the research question and the methodology, and to interpret results [translation]	Student does not understand the connection between the research question and the chosen methodology and/or is not able to interpret the results.	Student only understands the connection between the research question and the chosen methodology and/or is only able to interpret the results with help of the supervisor, or prompting of the examiner.	Student understands the connection between the research question and the chosen methodology in basic terms and is able to interpret the results in basic terms with a little help.	Student understands the connection between the research question and the chosen methodology and is able to interpret the results.	Student can independently understand the connection between the research question and the chosen methodology, is able to suggest additional methodology and is able to interpret the results independently.	Student can independently understand the connection between the research question and the chosen methodology, is able to suggest additional methodology and is able to interpret the results independently; the interpretation of the student is original and helps the supervisor/examiner to see the research in a different perspective.
the knowledge and understanding of the field (bioinformatics for systems biology) and is able to become familiar with specific research topic	Does not have the basic required knowledge, and/or is not able to make themselves familiar with the research topic.	Does not have the basic required knowledge to perform the research, but has made considerable progress during the project.	Has the required knowledge to perform the research in basic terms. And was able to become familiar with the research topic in basic terms.	Has all the basic required knowledge and has made further progress during the project. Has become familiar with the specialised research topic.	Has more than the basic required knowledge and has made further progress during the project. Is able the independently find further sources to obtain required knowledge. The student has a good overview of the field around the research topic by the end of the project.	Has more than the basic required knowledge and has made further progress during the project. Is able to independently find further sources to obtain required knowledge, and is able to connect knowledge sources outside the specific topic of research.
the scientific skills and accuracy to perform the research [programming, model building, statistics, experimental work] [balance]	Student is not able to setup and/or execute the project due to lack of skills.	Student has the skills to perform the research of provided with detailed instructions to some extent, but errors are made often, invalidating (part of) the research	Student has the skills to perform the research if the outline of the research has been developed by someone else. Regular checks may be required by the supervisor.	Student has the skills to accurately perform the research.	Student has the skills to accurately perform the research independently, and makes further progress in developing skills during the project.	Student has the skills to accurately perform the research independently, and makes further progress in developing skills during the project. The execution of the research is flawless.
scientific ideas by showing creativity and originality	Does not show any original contribution, is not able to follow new ideas from supervisors.	Does not show any original contribution, but can follow new ideas from supervisors with some help.	Does not show much original contribution, but can follow new ideas from supervisors.	Makes simple suggestions for methodology and interpretation, and can follow new ideas from supervisors.	Makes some original contributions, was able to independently devise the methodology required. Is able to make new connections when prompted.	Makes a very important original contribution that significantly adds to the value of the performed research. Is able to make new connections when prompted.

2. Attitude and Professional Development (20%)

Qualification	**fail**	**insufficient**	**sufficient**	**satisfactory**	**good**	**excellent**
Dutch grade: default and [interval]	3.0 [0.0, 5.0]	5.0 [5.0, 5.5]	6.0 [5.6, 6.5]	7.0 [6.6, 7.5]	8.0 [7.6, 8.5]	9.0 [8.6,10.0]
Percentage of cohort with grade in this range or higher **(student is in top ... of cohort)**	100%	98%	90%	75%	25%	3%
General description of skill, ability or knowledge	**Does not have the skill or ability**	**Only shows the skill or ability in basic terms when given a lot of help**	**Shows the skill or ability in basic terms (with a little help)**	**Shows the skill or ability with weekly supervision.**	**Is independently able to show the skill or ability, and has an above average competence in this skill or ability.**	**Is independently able to show the skill or ability, and provides a strong original contribution**
The student has:						
the ability to plan a project	The student is not able to plan a project.	The student can only plan a project with continuous prompting, serious delays may have occurred.	The student is able to plan a project with a little help, a little delay may have occurred.	The student is able to plan a project. No delays longer than 10% of the original planned time have occurred.	The student is able to plan a project independently, and has delivered an amount of work above expectations. No delays.	The student is able to plan a project independently, and has delivered an amount of work far above expectations. No delays.
the ability to cooperate with others	The student is not able to cooperate with others and/or does not follow instructions from the supervisor.	The student has trouble to collaborate with others in the research team, but is receptive to feedback on this.	The student is able to collaborate but needs a little guidance.	The student is able to collaborate with members of the research groups, and is able to ask the right questions to the right persons.	The student is able to collaborate with members of the research groups, and is able to ask the right questions to the right persons. The student asks for help exactly at the right time.	The student is able to collaborate with members of the research groups, and is able to ask the right questions to the right persons. The student asks for help exactly at the right time. The student also helps others in the team performing their tasks, making the student a valuable group member.
the ability to respond to feedback	The student does not respond to feedback.	The student does respond to feedback, but only when given small sets of instructions, or repeated instructions.	The student does respond to feedback, but may need to be reminded a second time.	The student responds to feedback by the supervisors.	The student asks independently for feedback on the right moments.	The student asks independently for feedback on the right moments, and will typically improve the research or writing far beyond the feedback provided.
the independence and professionality to perform a (research) project	The student is not able to work in an independent and/or professional manner.	The student has trouble to work in an independent and/or professional manner, but is able to make adaptations upon request (is steerable).	The student is able to work in an independent and/or professional manner with some help from the supervisors.	The student is able to work in an independent and/or professional manner and takes some initiative.	The student is able to work in an independent and/or professional manner, takes initiative, and takes good care of deliverables.	The student is able to work in an independent and/or professional manner, takes substantial initiative, takes excellent care of deliverables and deals with unforeseen circumstances in a professional and careful way.
the ability to provide stewardship for the data, code, model and/or protocol in a (FAIR) manner, using code repositories, data repositories and lab journals.	The student does not have the ability to provide good stewardship.	The student provides some stewardship, but some of the code, data or protocols are not delivered or looked after in a satisfactory manner.	The student provides stewardship with some help.	The student provides good stewardship.	The student provides good stewardship, independently suggesting repositories, protocols and technology to look after the data.	The student provides good stewardship, independently suggesting repositories, protocols and technology to look after the data, and educates others in the team how to look after data, code and protocols.

3. Research Thesis (30%)

Qualification	fail	insufficient	sufficient	satisfactory	good	excellent
Dutch grade: default and	3.0 [0.0, 5.0]	5.0 [5.0, 5.5]	6.0 [5.6, 6.5]	7.0 [6.6, 7.5]	8.0 [7.6, 8.5]	9.0 [8.6,10.0]
Percentage of cohort with grade in this range or higher **(student is in top ... of cohort)**	100%	98%	90%	75%	25%	3%
General description of quality item	**Not present, or not understandable**	**Present but very difficult to understand by the reader**	**A basic description is present**	**The item is present, and easily understood.**	**The item is present, easily understood, and provides insight.**	**The item is present, easily understood, and provides original insight. In addition complex methodology is used.**
The thesis has:						
a clear abstract	Not present, or not understandable.	Present, but it is very difficult to understand the research question.	Present, with a basic description of the research question, the background, and obtained results.	Present, with a basic description of the research question, the background, and obtained results and potential impact.	Present, with a basic description of the research question, the background, and obtained results and potential impact. Provides insight into the problem.	Present, with a basic description of the research question, the background, and obtained results and potential impact. Provides insight into the problem, emphasizes key aspects.
an introduction that sets the context and gives an overview of scientific literature (research question via rubrics)	Not present, or not understandable.	Present, but it does not give an appropriate overview of the current literature, and/or does not introduce the research question	The introduction sketches the context of the research question and the used methodology in basic terms, while reviewing some of the scientific literature in this context. It states the research question explicitly.	The introduction sketches the context of the research question and the used methodology, while reviewing the most important scientific literature in this context. It states the research question explicitly.	The introduction sketches the context of the research question and the used methodology, while reviewing the most important scientific literature in this context. It states the research question explicitly. The introduction provides a helpful insight into the research context, and the available methodology.	The introduction sketches the context of the research question and the used methodology, while reviewing the most important scientific literature in this context. It states the research question explicitly. The introduction provides a helpful insight into the research context and the available methodology, and provides novel connections between the existing literature.
a clear description of the methods	Not present, or not understandable.	Present, but it is very difficult to understand the methodology.	Present, with a basic description of the methodology, and appropriate references.	Present, with a description of the methodology, and appropriate references. The work is reproducible by another MSc student based on the methods.	Present, with a description of the methodology, and appropriate references. The work is reproducible by another MSc student based on the methods. It provides insight in the choices made. A helpful overview of the methdology is available (e.g. in the form of a workflow).	Present, with a description of the methodology, and appropriate references. The work is reproducible by another MSc student based on the methods. It provides insight in the choices made and a good overview. Complex methodology is explained precisely, accurately and insightfully. A helpful overview of the methdology is available (e.g. in the form of a workflow).
a clear description of the results (in the main text)	Not present, or not understandable.	Present but very difficult to understand the results from the text.	Basic results are clearly described in the text.	Full results are clearly described in the text.	Full results are described, and the results are clearly described in the text. The student provides new insights based on the results.	Present, full results are shown, and the results are clearly described in the text. The student provides new insights based on the results. Complex results are precisely and insightfully explained.
a clear representation of the results and data used (e.g in figures and tables)	Not present, or not understandable.	Results and data are present, but difficult to understand from the figures and tables.	Results and data are present in an appropriate amount of figures and tables (<10). The captions describe the figures.	Results and data are present in an appropriate amount of figures and tables (<10). The captions describe the figures. The figures and tables give a full overview of the results.	Results and data are present in an appropriate amount of figures and tables (<10). The captions describe the figures. The figure and tables give a full overview of the results and provide insight.	Results and data are present in an appropriate amount of figures and tables (<10). The captions describe the figures. The shown figure give a full overview of the results and provide insight in an original or creative manner.
a discussion that shows opinion forming	Not present, or not understandable.	There is a discussion, but it does not fully connect to the research or misses the point.	There is a basic discussion present, that shows some opinion forming.	There is a basic discussion present, that shows opinion forming using current literature and results.	There is an insightful discussion present, that shows opinion forming using current literature and results.	There is an insightful discussion present, that shows opinion forming using current literature and results. The students makes links beyond the initial scope of the project.
a scientific writing style and structure	The structure is not present or very unclear and/or the writing style is inappropriate. There maybe many grammar and spelling mistakes.	The writing style is quite informal or the text does not follow an adequate structure for a scientific paper or there may be consistent spelling and grammar mistakes.	There is a basic level of structuring present. The style may be informal, or non specific in some parts. Mistakes in grammar and spelling occur rarely.	A scientific writing style is present, with a clear structuring of introduction, methods, results and discussion.	A scientific writing style is present with clear, specific and concise explanations, with a clear structuring of introduction, methods, results and discussion.	A scientific writing style is present with clear, precise and concise explanations, with a clear structuring of introduction, methods, results and discussion. The readability is excellent, and ready to be submitted to a journal.

4. Presentation (10%)

Qualification	fail	insufficient	sufficient	satisfactory	good	excellent
Dutch grade: default and [interval]	3.0 [0.0, 5.0]	5.0 [5.0, 5.5]	6.0 [5.6, 6.5]	7.0 [6.6, 7.5]	8.0 [7.6, 8.5]	9.0 [8.6,10.0]
Percentage of cohort with grade in this range or higher **(student is in top ... of cohort)**	100%	98%	90%	75%	25%	3%
General description of quality item	**Not understandable**	**Present but very difficult to understand by the audience**	**A basic explanation is present**	**The explanation is present**	**The explanation is present and provides insight.**	**The explanation is present, and easily understood, and provides original insight.**
The presentation contains:						
a clear context	Not present, or not understandable.	Present, but it is very difficult to understand the research question.	Present, with a basic description of the research question, the background, and the obtained results.	Present, with a basic description of the research question, the background, the obtained results and potential impact.	Present, with a clear description of the research question, the background, the obtained results, and the potential impact. Provides insight into the problem.	Present, with a clear description of the research question, the background, the obtained results, and the potential impact. Provides insight into the problem, emphasizes key aspects.
the results clearly presented	Not present, or not understandable.	Present, but the results are presented in such a way that it is unclear what they mean, or how they have been achieved.	Basic results are presented in a understandable way. Some additional clarifications may be necessary after the presentation.	The results are presented in a clear and understandable way.	The results are presented in such a way that the audience gets a good insight into the difficulties and successes of the research.	The results are presented in such a way that the audience gets a good insight into the difficulties and successes of the research. The results are complex in nature, but well explained.
a clear layout for the slides and a clear structure	Not present, or not understandable.	The presentation contains some structure, but does not show a clear story. The slides may not be fully clear.	The presentation contains a basic structure. The slides are clear, with some additional explanation from the presenter.	The presentation follows a clear structure, the slides can be fully understood.	The presentation follows a clear structure, the slides can be fully understood and provide insight due to the layout.	The presentations follows a clear structure, the slides can be fully understood and provide insight due to the layout. An original manner of representing the data is provided and/or a very complex problem is explained in simple terms.
a clear narrative	Not present, or not understandable.	It is difficult to follow the narrative, but in essence a full project was presented.	The narrative is almost clear, and can be followed by the audience, but some additional clarifications are required during or after the presentation.	The narrative is clear, and can be followed by the audience.	The important parts are highlighted, a clear story is present. The methodology is well explained by the presenter.	The important parts are highlighted, a clear story is present. The methodology is complex, but made simple by the presenter. The audience is fully captured by the speaker.
a clear response to questions from the audience (only for supervisor and moderator)	Not present, or not understandable.	The student does try to answer, but does not (fully) answer the questions asked.	The student provides answers to most questions.	The student provides an answer with a clear explanation to most questions.	The student provides an answer with a motivated explanation to every question.	The student provides an answer with a motivated explanation to every question, and shows reasoning beyond the questions asked.