Technische Universität München

Department Chemie

Organisch-Chemisches Forschungspraktikum
Praktikumsleiter Dr. Stefan Breitenlechner

Evaluation Internship/Lab Rotation/Research project[1]

Surname: _____

First name: _____

Reg. number: _____

Eingang Bewertungsbogen: _____

Eintrag in TUM-Online: _____

Subject:
☐ Forschungsprakt. Org. Chemie 1 (CH3032)
☐ Forschungsprakt. Org. Chemie 2 (CH3033), nur bei erstem Studienschwerpunkt OC/BC
☐ Wahlfachbelegung

Group/Company: _____

Project adviser: _____

Training period: _____

Topic: _____

Project abstract

	Evaluation adviser	Eval. course instr.
<u>Practical part</u>		
– Practical competence / lab work	/ 10 points[2]	n/a
– Comprehension, analytical thinking, proactivity	_____ / 10 points[2]	n/a
– Extent of the practical work	_____ / 10 points[2]	____ / 10 points
– Documentation (labbook) and organisation	/ 10 points[2]	____ / 10 points
<u>Cooperation</u>		
– Motivation, interest	/ 5 points	n/a
– Social aspects (team spirit, etc.), reliability	/ 5 points	n/a
<u>Project report (theorical part)</u>		
– Review of the scientific background	/ 10 points[2]	____ / 10 points
– Presentation of results	/ 10 points[2]	____ / 10 points
– Conclusions, proposals for new approaches, etc.	/ 10 points[2]	____ / 10 points
– Description of the experiments / reproducibility	/ 5 points	____ / 5 points
– Quality of the evaluation of analytical data (if applicable)	/ 10 points[2]	____ / 10 points
– Bibliography (general scientific quality, formal aspects)	/ 5 points	____ / 5 points
TOTAL	/ 100 points	____ / 100 points

[1] Please send this document to Dr. Stefan Breitenlechner – LSt. OC 1, TUM – Lichtenbergstr. 4 – D - 85747 Garching – Germany or as digital copy (PDF) to stefan.breitenlechner@tum.de

[2] Please give an explanation/justification on the next page if you give a top rating (10 Points).

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Evaluation for _____, _____ MTK _____

Additional comments to the evaluation of the practical part
(for criteria rated with 10/10 points, otherwise optional)

Additional comments to the evaluation of the project report
(for criteria rated with 10/10 points, otherwise optional)

_____, _____
(Date) (Signature project adviser)

Please note

- Please print the two pages of the form on one sheet of paper („duplex“).
- The final grades (100 Pkt.) will be calculated based on an equally spaced scale (until 95 points: *excellent*, until 90 points: *very good*, until 80 points: *good*, …, until 50 points: *sufficient*).
- Please give an explanation/justification on the next page if you give a top rating to allow for a well founded confirmation of the given rating.
- A number of evaluation criteria are formally assigned to the project report, although they are to a significant amount a direct result of the practical part. In particular, the points "conclusions" and "analysis of the analytical data" should therefore be considered with reference to the entire internship.
- The extent of the practical work must be clear from the documented results in the report. If only few, presentable results were achieved, for example because the goal of the research internship was the optimization of a method, then the scope must be made comprehensible by documenting the individual experiments.
- The labbook must be shown to the course instructor upon submission of the report for evaluation (will be handed back).
- The report must include an overview of the theoretical background of the project. Depending on the task, this part covers between at least 5 pages and 10 pages. In addition to the scope, the correctness, an adequate amount of literature references and the adherence to the rules of good scientific practice are included in the evaluation.
- The results and conclusions must be discussed clearly and comprehensibly. The evaluation should be based on the completeness of the facts (**all** results have been discussed, not just those that fit the conclusions) and, as appropriate, the soundness of the arguments and a comparison with results known from the literature.
- The experimental part of the project report must contain - as far as applicable - all information required for an exact repetition of the experiments in a comprehensible, technically correct language. This includes the specification of methods used (literature precedence) as well as exact quantities (also to solvents, extraction media, adsorbents, etc.). Experimental data should be evaluated in such a way that it substantiates the obtained results. For the synthesis of compounds, this means that NMR data are not only reported, but fully evaluated. As far as possible, a comparison of the data obtained with literature data should be carried out and an appropriate reference given.
- The evaluation of the literature survey itself is part of the points "presentation of the research area", "conclusions [...]" as well as references to methods (experimental details) and precedence for analytical data (see above). By contrast, the evaluation of the bibliography should rate the scientific standards as well as formal aspects (formatting, completeness of the citations, etc.). Quotes from tertiary literature such as (internet) dictionaries or textbooks as well as from newspapers are only useful in certain cases (e.g. introduction). But also the exclusive citation of secondary literature (reviews) is usually questionable.