

To secure constructive alignment for the course “Biodiversity in Urban Nature”

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This project wants to discuss the following topics: If there is alignment between intended learning outcomes, the choice of the teaching methods, assessment method and if this is reflected in the exam result and student evaluations of the course.

Intended learning outcomes of “Biodiversity in Urban Nature” (BUN)

When the course has been completed, the participants are expected to have achieved the following:

Knowledge:

- Identification of elements and conditions that promote and increase diversity of mammals, birds, reptiles, amphibians, insects and other arthropods, plants including trees and fungi in the urban environment
- Expected consequences on diversity of practical actions taken
- Interactions between plants, herbivores and organisms on other trophic levels
- Methods on quantification of biological diversity

Skills:

- Able to suggest which actions that in a given situation will result in increased, reduced or orientated development in the biological diversity.

- Able to explain relationships and interactions among organisms in a given location and situation and the reasons for absence or presence
- Ability to analyze and evaluate the potential for development in biological diversity among organisms in a given locality
- Measures to put up a goal for development of diversity in a given area and for evaluation and documentation of fulfillment of the ambition.

Competences:

- Transform theoretical knowledge to practical action in a situation given limited frames
- Judge biological elements, potential, and possible developmental issues of nature areas in urban environment
- Discuss biological aspects in connection to management and mediating biological issues of nature in urban environment – authenticity, aesthetic values, aspects of recreation and first-hand nature experiences

Teaching methods

Teaching was organized as a combination of lectures, excursions, practical exercises and seminars/colloquia on essential papers. Group work was focused on specific selected topics and one major exercise was writing an essay about a specific case, theme or topic. Lectures included several invited guest lecturers: Specialists that gave first hand presentations from their field of work and answered questions from students in relation to their subject of expertise.

Assessment method

Assessment was made as a summative assessment – a final examination at the end of the course.

The examination was intended to be a combination of oral, practical and portfolio exam since the essay was the background for part of examination.

Description of examination: The individual oral exam lasts about twenty-five minutes. It consists of a short (eight minutes) presentation of the topic of the essay followed by questions on this (eight minutes). In addition the student will draw a question in relation to lectures and exercises (eight minutes). Weight: Group essay: 34%. Individual oral presentation of essay: 33%. Oral examination on drawn, general question: 33%.

Course

The practical part of the course was carried out according to the course plan (Appendix A) through nine weeks in September to November 2012.

The course description is available at

<http://kurser.kvl.dk/presentation.aspx?coursecode=LNAK10099>

and general information on the course can be found in Appendix B. It was the first time this course was given and I was in principle the sole person responsible for how it went. In practice I had a very good assistance from my PhD student, without whom it would have been much more difficult – if possible at all - to run the course. There was a lot of practical confusion with registration of the participants on the course homepage Absalon and with finding a suitable room for the teaching. I had put a limit of thirty participants in the course description. But this limitation did not work. Forty-one students tried to register, but several were manually deleted by the administration. However, there was never achieved a updated list on Absalon of the students that actually attended the course. And the class room given to us in advance had a limit of twenty-four persons. And if you had twenty-four persons in that room there was no space for making group work etc. So the group had to find new rooms for every lesson. At the end twenty-seven students had followed the course and passed the exam.

Reflections on compulsory readings

For each course day two papers of compulsory reading was up-loaded for the students to read in advance. The papers were chosen of course as an introduction to the topic of that day. If we could find a review paper, this was preferred, otherwise we used papers presenting results from good, specific scientific study. The part of the compulsory papers was organized at the beginning of the lecture. This was decided after another experience: If you start the lectures at 8:00 in the morning, only a minor proportion of the students will be there. From 8-9 there were self-study of the papers of that day in the class or at home. I or my assistant would be around for answering questions part of the time. The students were separated in two parts, A or B reading and preparing presentation of either of the two papers for the day. From 9-9:15 they should discuss the papers in each of the groups (A and B), and 9:15-9:30 A should inform B about the content of their paper. From 9:30-9:45 B should inform A, and finally 9:45-10 we would all discuss the clues of the papers in common. Then there was a break from 10-10:30

when the lecture(s) of the day began. The students were well prepared the first several days. However, they then being less careful in their preparation, probably because no-one had been appointed as responsible for presenting the results of the group. I tried to prepare some specific questions for the students where the answers could be found in the text in the papers. This worked a lot better. When I had the supervised lecture it was suggested that I prepared some more general questions like “What was the key messages?”, “What in that paper made you wonder?”, “Do you know any examples...?” I am sure I will use this in addition to appointment of responsible group rapporteur in future courses.

In the process of alignment of structure from intended learning outcomes through teaching methods to evaluation reading and discussing scientific papers is essential. Especially if you have constructed the context in which the answers to relevant questions could be drawn from the text in the paper, you have created a situation where deep and durable learning is difficult to avoid! Several of the students expressed that they liked this part – reading relevant and contemporary scientific papers – was new to them but had given them new insight into what research actually is.

Reflections on exercises

Learning outcome is much better when students work practically with and exploit the knowledge found in literature and given in lectures. It was the intention that all lectures and excursions should involve exercises. Most did but not all. Especially when you have invited specialist – we had twenty in all on this course – you cannot always control what they present or do during their presentation. So, in several occasions the external, invited speakers gave a traditional oral lecture. However, as was discovered by the evaluation at the end of the course, the students did appreciate this as long as it was a good presentation. After all several of the invited speakers were very good at making oral presentations that was provocative, gave an good overview or in other ways fitted very well into the course program.

The exercises were of different types: Some were practical. E.g. testing the use of a practical method measuring the flora diversity following a method description or theoretical by drawing a garden plan that favors wild bees. Another example was the classification of the parks visited during a whole day excursion and using a modified version of “The Singapore Index”.

The students responded very positively to doing exercises, but negatively if the time for presenting and consolidating the results was too limited. This of course will be anticipated in future courses.

In the process of constructive alignment exercises are of course essential since it is the ultimate learning by doing situation that is created.

Reflections on excursions

There was arranged several excursions during the course. Both short excursions on campus or in the vicinity of the institute and whole day excursions by bike and a single excursion by bus. The idea behind the excursion in this particular course is of course that you should see what the situation and solutions could look like in practice. The students like excursions very much. The risk is that they just feel they are good entertainment. It is of course no problem that the learning is entertaining as well, but you should secure the learning process by linking what you see during excursion to the more theoretical part by governing the attention to the particular aspects you want. This could be achieved by attaching an exercise to the excursion – e.g. filling out a classification table of what you see or ask them to prepare a follow-up presentation addressing specific topics.

In the process of alignment excursions are very useful since the student here could see how theory works in practice and if you arrange meeting with experts on site, it could be persons that has the same task that could be the future task of the students. In this way you could stimulate engagement in learning: They could see the relevance of what they learn. It could be useful in their future position.

Reflections on lectures

At their best lectures – oral presentations - should be the situation where you mediate an overview of the topic you want to be part of the learning. It is often claimed – also during the KNUD course discussed - that traditional oral lectures does not promote learning. However, some – if not all – of the students expect to get at least some lectures pulling together essential knowledge from a larger area in an easy consumable way. They eagerly took notes and were willing to learn and repeat what you tell them.

It is however essential to include both problem-oriented teaching and student-orientated teaching in your presentation. When you have a lot of

external, invited speakers you may not always be able to govern their presentations. However, both when you introduce the topic and when you wrap up the presentation or put it into the context of the whole course you may start by addressing the student with questions like “Why is this important? What would you do if you were in a situation...? What is the connection between what you have just heard and what you saw the other day at...?”.

Lectures should consist of several teaching elements – and oral presentations should vary as well with situations where learning is among the students, between teacher and students and in the single students alone giving them time for reflection.

At this BUN course several of the guest lecturers were excellent speakers and teachers involving the students and engaging them. Some were more average. In all cases it is the task as course responsible to put the contributions into the context and considering keeping up the intended learning outcome throughout the course.

In the process of alignment referring to common goals and making cross references to literature and excursion sights is the glue that makes the different topics of the course fit and stick together.

Reflections on essays

The one larger assignment during this course of course had much attention from the students from the first day. It was stressed that the aim of the course was not only to learn the theory behind but also to be able to exploit that knowledge in practice. Therefore they would in their essay be evaluated on their ability to actually include solutions and actions that they have heard, read about or in other ways achieved knowledge of during the course. The restrictions on this assignment were specified very detailed and given to the students at the very beginning of the course (Appendix C).

We were a bit in doubt how early in the course we should draw more attention to the fact that they should write this assignment and when they should decide which topic to write about. Too much focus too early could disturb concentration on other important topics.

Reflections on exam

I am very happy that we had three parts or steps contributing to the final score. Even though I had stated that they should put more focus on the

course and on the process than on the exam, of course they had much focus on the final examination. The questions they could draw as part of the examination were put on Absalon some weeks before the exam (Appendix D). And they were told that they were allowed to bring notes and other aids to the exam. But it was underlined that since they had only eight minutes they should concentrate on the essential issues on each topic. Bring only 3-5 key words, they were advised.

In practice this secured that all students had read through the compulsory papers, hand-outs and notes from lectures before the exam. All except one had prepared notes for each of the exam topics. This actually secured that they each had gone through all the teaching material and extracted the essential clues for each question. Since the questions or topics included all the course topics, it had made the students actively use the material. The scores reflect this positive effect: six students received the grade 12, twelve students received the grade 10, eight students the grade 7 and one student received a 4. Most of the essays had very high quality.

The writing of the essay demanded a lot of efforts by the students since they had lessons almost until just before the exam. I have considered if it would have been more smooth if there had been more but smaller assignments spread out during the course. My conclusion so far is that the limited time frame only allows one major assignment, and that is valuable for the students to have one chance to choose a topic and go a bit deeper into describing and solving a problem in a practical context. The very good essays produced by most of the students support this conclusion, I think. Another consequence of forcing the students to choose and work more detailed with a topic is that they might consider pursuing this topic in a master study.

After the examination the students were given comprehensive comments on their essay as well as their performance at the exam and during the course. It was stressed what was their strong sides that they could exploit ahead and which skills had a potential for improvements.

Reflections on student evaluations

Since it was the first time the course was run, it was decided to elaborate a bit on the course evaluation part. Two evaluation forms were made in addition to the valuation form on Absalon (truth is I was not aware of the latter until after we had made our own forms). In addition we held an oral

evaluation at the end of the course, but before the exam. In addition several – almost all – students after the examination spontaneously expressed their gratitude about the course.

Unfortunately only seventeen, respectively fifteen, filled out the evaluation forms (Appendix E). However, all evaluations pointed in the same direction: Strengths: Almost all students felt they have had learning outcomes corresponding to what was intended or better. Improvements are needed on the practical execution – especially they complain that the compulsory literature was available with very short notice before the lectures. This was absolutely right and explainable by the fact that this was the first time the course was given, and preparation of the course took place during the course. When you select the readings for the next topic you have to read ten times as many papers as the students before you can select and upload the right papers. However, the student at the same time complements the selection of papers as being good and relevant. Of course improvement of this point is easily achieved the next time the course is run.

Two or three students expressed major disappointment at the evaluation. They were all having a landscape architect background and had expressed uncertainty about reading science papers and species identification. More careful adjustment of expectations will be given at the introduction in order to address this.

Reflections on peer supervision (by other KNUD participants)

Two fellow participants, Thomas Lundhede and Morten Ingerslev attended part of the course. They both commented the engagement and active participation of the students during the lessons they were involved in. The reflections made in connection to the practical supervision have been expressed in the reflection paper given to Michael Drastrup from CURAGO.

Overall reflections and perspectives

The students were kept busy with relevant material and learning activities throughout the course. More of them expressed that they have felt the nine weeks as a continuous “learning travel” or “learning camp” that went by very swiftly and “suddenly was over”. One advantage was that it was a non-obligatory course, so you should and could expect engaged students. However, it is still possible to lose them or disappoint their expectations.

The students had a very different background: landscape architects, biologists, nature resource management. In following courses I will encourage group work across and mixing people with different background.

I think the practical attitude with mixture of theory, exercises and excursions (Explain – Show – Train) to a great extent secures achievement of the alignment from intended learning outcomes through teaching methods to evaluation – and hopefully even longer. The results - as far as the exam – supports this. Time will show the students have brought something with them that they will implement in their future working life.

A Biodiversity in Urban Nature – Course plan, 29 October 2012

Week	Date	Time	Topic	Teachers/Guest lecturer(s)	Room	0
36	04-sep	09:00-12:00	Presentation, introduction, expectations	HPR, Andy		
	06-sep	08:00-09:00	Self-study, compulsory papers:			
		09:00-10:00	Student seminar 1	HPR, Andy		
		10:30-12:00	Nature Quality analysis in Urban Nature	Anna Bodil Hald		
		13:00-16:30	Excursion: Assistens cemetery	Anna Bodil Hald		
37	11-sep	08:00-09:00	Self-study, compulsory papers:			
		09:00-10:00	Student seminar 2	HPR, Andy		
		10:30-12:00	Invasive species: bridgeheads, co-drivers of urban biodiversity? Introduction to essay	HPR, Andy		
	13-sep	08:00-12:00	Excursion: Nordhavn, Kildevæld, Ryvang, Beauvais, Lersø park	HPR, Andy,		
		13:00-17:00	Excursion: Nordhavn, Kildevæld, Ryvang, Beauvais, Lersø park	HPR, Andy, + Ayla Gretoft, Susanne Henriksen		
38	18-sep	08:00-09:00	Self-study, compulsory papers:			
		09:00-12:00	The Value of Nature Ethical, historical, cultural and economical	Mickey Gjerris, Thomas Lundhede, Torben Dam	Von Langen, R23	
	20-sep	08:00-09:00	Self-study, compulsory papers:			
		09:00-10:00	Student seminar 3	Andy	A1-01.02	
		10:30-12:00	Use of stormwater for enhancement of urban biodiversity	Rosalina M Wenningsted-Torgard		
		13:00-17:00	Ecological processes in urban environments, urban-rural gradients Corridors, patches, island biogeography and biodiversity Salt, alternatives and impacts of eutrophication on diversity	Andy Morten Ingerslev		
39	25-sep	08:00-09:00	Self-study, compulsory papers:			
		09:00-10:00	Student seminar 4	HPR, Andy	A1-01.02	
		10:30-12:00	Urban Forestry Permaculture in Urban Nature?	HPR,		
	27-sep	08:00-09:00	Self-study, compulsory papers:			
		09:00-10:00	Student seminar 5	HPR, Andy	A2-70.04 (3-14)	
		10:30-12:00	Dangerous trees and endangered fungi - restrictions and regulations Practical methods for enhancing diversity of faunal elements Managing insects of dead wood in urban areas	Iben Thomsen HPR Mikael Sørensen		
		13:00-17:00	Tree and shrub species selection - importance for fauna. Butterflies and other insects Excursion/exercise	Per Stadel Nielsen, Mikael Sørensen		
40	02-okt	08:00-09:00	Self-study, compulsory papers:			
		09:00-10:00	Student seminar 6	HPR, Andy	Von Langen, R23	
		10:30-12:00	Plantlife: selecting suitable plant species for Urban areas Native seeds, plants and trees. Flora falsification	Mona Cøhr Bjørn Ulla Pinborg		
	04-okt	08:00-09:00	Self-study, compulsory papers:			
		09:00-10:00	Student seminar 7	HPR, Andy	Von Langen, R23	
		10:30-12:00	Urban birdlife - how to improve abundance and diversity?			
		13:00-17:00	Excursion:	Knud Flensted, DOF		
41	09-okt	08:00-09:00	Self-study, compulsory papers:			
		09:00-10:00	Student seminar 8	HPR, Andy	Von Langen, R23	
		10:30-12:00	Enhancing diversity of bees in an urban setting	Erica Juel Ahrenfeldt		
	11-okt	08:00-09:00	Self-study, compulsory papers:			
		09:00-10:00	Student seminar 9	HPR, Andy	A1-01.02	
		10:30-12:00	Green roofs and walls	HPR		
		13:00-17:00	Green roofs and walls Excursion - to be confirmed	Ulrik Reeh, Dorthe Rama		
42	16-okt	08:00-12:00	Holiday week: no lectures			
	18-okt	08:00-17:00				
43	23-okt	08:00-09:00	Self-study, compulsory papers:			
		09:00-10:00	Student seminar 10	HPR, Andy	Von Langen, R23	
		10:30-12:00	Maintenance of Urban Nature - a neglected issue Self-sustaining urban nature, short and long-term costs	Jesper Baungaard, HedeDanmark		
	25-okt	08:00-09:00	Self-study, compulsory papers:			
		09:00-10:00	Student seminar 11	HPR, Andy	A1-01.02	
		10:30-12:00	Urban wildlife: mammals in Urban Nature Hedgehogs, wild boar, bats, foxes etc.	Hans Baagøe		
		13:00-17:00	Essay self study/group work		Von Langen, R23	
44	29-okt		Deadline Essay			
	30-okt	08:00-09:00	Self-study, compulsory papers:			
		09:00-10:00	Student seminar 12	HPR, Andy	A1-01.02	
		10:30-11:00	Urban Agriculture - an overview	Henrik Vejre		
		11:00-12:00	Asian Longhorn Beetle - impacts on urban trees Grey squirrel in GB and in Italy Evaluation, information about exam	Riccardo Favaro HPR and Riccardo Favaro HPR, Andy	A2-84.12 (3-20)	
	01-nov	13:00-17:00				

B General course information

MSc Studies, Block 1, 2012/13

Biodiversity in Urban Nature • General Information

Version 03.09.2012, may be subject to change.

Home Page

Updated information about the course and further materials will be made available on the course home page through Absalon, accessible via your personal login to KUnet (<https://intranet.ku.dk/>).

Electronic materials include further background reading, compulsory papers to be presented at seminars, and presentations (ppt) given at lectures by teachers and guests lecturers.

Location

All teaching takes place at the Forest & Landscape, Rolighedsvej 23, Auditorium A3-21.02(4-03), ground floor in the front building. Teaching is scheduled for Tuesday morning and Thursday all day. Exact times vary from week to week, so please check the detailed programme (Absalon).

Text Book and Examination Requirements

We will not be using a text book as such; rather compulsory and suggested reading for each week will be posted on the course home page under the relevant "Week" folders.

Furthermore, scientific papers will be discussed at each of the seminars and will contribute towards the curriculum for examination requirements (see below, passing the exam).

Main Teachers

For more information on contact to the teachers and their profiles, please see the Department's home page at <http://www.sl.life.ku.dk/>. Furthermore, messages to the teachers can be sent through Absalon.

Initials Name

HPR, Hans Peter Ravn, hpr@life.ku.dk

ANDY, Andrew Gordon Howe, andy@life.ku.dk

Guest Lecturers

Additional materials from guest lecturers will be made available through Absalon; please keep yourself updated.

Compulsory Elements of the Course

Attending seminars

Attendance and active participation (see below) in minimum 80% of the seminars and exercises is required. To this purpose an attendance list will be kept on the dates when these lessons are scheduled (this implies that two absences are allowed).

Format of and active participation in seminars

A very important part of the course is presenting and discussing original scientific papers in the format of informal student seminars and subsequent plenum discussions. Seminars will take place in the morning session (9:00 – 10:00) and lay the foundation for the day's theme. Seminars will be based on two articles (original papers or reviews).

- Participants will be divided into two groups (A and B) on September 4. Students will prepare their assigned paper (i.e. paper A or paper B) at home or in self-study time; see *How to summarize a scientific paper* below for ideas.

- On the morning of the seminar students who have prepared paper A will be grouped with someone who has prepared paper B; those who have not prepared in advance can read before joining the plenum discussion or alternatively pair up underway. Groups will mostly likely rearrange between courses!
- The first 5 - 10 min are used on paper A e.g. participant A explains the paper including its main message(s) for participant B. Participant B then has 5 min to ask questions/discuss paper A.
- Roles are then reversed; the informal group process lasts for approx. 30 min.
- Subsequently there will be a plenum discussion of the theme for 15 - 30 min. This time is for specific questions to the papers, recapitulation and general discussion of the theme. The papers will be made available on the projector during the plenum discussion.

The issues brought up here will help forming ideas that can be further elaborated in the essay projects.

Handing-in an Essay

By the end of the course students will in groups of two to four persons carry out a theoretical project on a topic within the course curriculum. Alternatively, a project can be done individually, but this is discouraged. The topics are formulated by the students and approved by the teachers.

The final formation of groups and choice of topics takes place Thursday 4 October, at which time (part of the afternoon session) groups will present their topics and intended work making it subject to discussion and mutual critique in a plenum setting.

Each project results in a written essay. Please refer to the section "*How to Summarize a Scientific Paper*" for some good advice on the structuring. Strict size limits for the essay are 5-8, 8-10, 12-15 and 16-20 pages of text including references for groups of one, two, three and four students, respectively.

Deadline for handing-in the essay is Monday 29 October at 12:00. As part of the essay each contributing student gives an individual title for the oral presentation to be given during the exam in the week after.

These titles should be related to and cover different aspects of the essay topic.

More details, including the compulsory standard cover page to be used for the essay will be posted on the course home page under week 45.

Passing the Exam

The oral exams take place Tuesday 6 and Thursday 8 November 2012; two students are examined per hour. The exam is individual and there will be no preparation time.

First, the student gives an oral presentation lasting 8 minutes on the title handed in on Monday 29 October. Subsequently, the student will be examined in the course curriculum using the topic of the essay and presentation as the starting point. Additionally the student will draw a general question from the topics covered by the curriculum. The presentation and the examination will be graded jointly following the 7 grade scale with participation by an internal/external examiner (censor).

For the assessment, equal weight is given to the written and oral parts. Re-examination, if needed, is scheduled for the end of January 2012 by appointment.

More details on the exam (times, location etc.) will be posted at the course home page under week 45.

How to Summarize a Scientific Paper (adapted from Jes S e Pedersen, Dept. of Biology, Uni. Cph)

Most scientific papers comprising the compulsory and recommended readings will contain sections that you do not or only partly understand. This is not your fault, both as we ask you to read and digest this material in a very short time and as the papers were usually written by specialists for a readership of specialists. There is a fundamental difference between textbook chapters that have been designed to be pedagogical in a course (but at the expense of remaining superficial and often somewhat outdated) and publications from the primary literature that often represent the most recent and intellectually stimulating insights (but at the expense of being pedagogical).

This course in Biodiversity in Urban Nature offers you a mix of these two essential sources of information, but focuses on the latter. The challenge of digesting an advanced scientific paper illustrates what you may be confronted with in future job situations, where you are bombarded with information at various level of detail and sophistication, and where your director or department head may ask you to boil it all down to a sensible and concise piece of advice that (s)he needs for a specific deadline.

The main message is, therefore, not to give up, because you can get pretty far in just a few hours: continue reading, skip problematic sections, and see whether you can still keep track of the main issues.

After you have read the paper, try to write down a series of key words that would summarize:

1. The main question that the paper aimed to address.
2. The main results that were obtained.
3. The conclusions that these results allowed.

Then evaluate, possibly guided by a question or objective posed in connection to the paper, how you are going to put the topic in a wider context, as this is what you need to do in your introduction. Try to answer questions such as:

1. Why is this topic generally interesting?
2. Why is it important scientifically and relevant in an applied context?

From here on the optimal procedure depends on whether you are preparing a short talk (aim for ten minutes) or a short essay (about five pages), so we will deal with them separately.

How to present things as a 12 Minute Talk: we will not be using the twelve minute format, but these ideas will help you prepare for a shorter presentation (5-10 min). Note, we will not be using powerpoint for the informal student seminars.

Much of the sorting and digesting of information that you need to do when preparing an oral presentation is similar to that needed when preparing an essay (see below), but there are also a number of important differences. First, you should realize that you are now constrained by time and not by writing space. Speaking is a much more spontaneous and improvised activity than writing, so you need to control different things. Second, organize and make good use of display items (PowerPoint slides). Remember though, that your display items only support what you have to say and that they are not a replacement for what you say. You have to explain what you show, and that takes some time, so you will also have to be critically selective when organizing display items.

Subdivide your 12 minute time-slot in pretty much the same way as when planning the paragraphs for an essay. Present the Introduction as a list of (maximally 5) bullet points and try to limit the text per bullet points to a single line that is just informative enough to keep you and the audience on track. If at all possible, also present a picture of the organisms, habitats or landscapes that you are talking about (use the internet to search for images). The core slides should be designed by using a selection of (but not necessarily all!) the figures from the paper. Using tables is less pedagogical, unless they are really small and clear. Display items for discussion and conclusions can also benefit from a picture or two (especially if you now apply insights from the paper to another organism, habitat or landscape.)

To have time for some discussion after your talk, it is essential that you stick to time (12 min max.). Therefore, practice your presentation at least once before you give it.

Student Essays: How to write things up in 5-8 pages

Realize that the space you have is very limited. Thus, every sentence should be carefully considered and have an explicit purpose. Remember that you have to rely exclusively on written communication (there is hardly room for figures or diagrams, and you cannot use gestures or voice tricks that would help you through an oral presentation). As a rule of thumb, reserve 1 page for your Introduction, 3 pages for the core of your essay and 1 page for discussion and conclusions. This basic page allotment can guide the number of pages a larger group would use.

Given these space constraints, we then arrive at something like the following structure:

Cover page:

Essay title and full reference of the paper i.e. your name(s), the date and the name of the course as well as the title of each student's exam presentation. It is compulsory to use the standard cover page that can be downloaded from the BUN home page (under week 45).

Introduction:

Why is the topic/assignment interesting? Why is the topic/assignment important/relevant and what is the objective of your essay.

Core:

Group the keywords of your notes. If these are really clear-cut and different, consider using subheadings for each of them (but keep them brief and to the point). Note that a main purpose of this core section is to present the material in a more pedagogical way than the original papers did. This may well mean that you only use a selection of the issues taken up in the papers, and that you may want to deal with them in a different order. Inserting a single small figure may be appropriate, but remember that there is a trade-off with writing space and that such a figure will need a number and a short text legend.

Discussion and conclusions:

Here you will have to communicate the insights that you have summarized in the core part of your essay. Remember your assignment, the objectives formulated at the end of the introduction, and the notes that you made when studying the material and discussing the issues in your group. Once more, try to structure your keywords in groups that are to become internally consistent paragraphs, and make sure that the most important things end up in the concluding paragraph, as the reader will expect to find a "bottom line" take home message there.

C Information on essay

BUN: Information on the compulsory essay

The following repeats but also supplements the information on the essay given in the General Information.

- The essay is written in groups of two to four students. Exemptions can be granted for essays by individual students.
- The essay has a compulsory cover page which states the essay title, names of contributing students, date and name of the course, and – importantly – the titles of each student's oral presentation. This compulsory title page will be posted on the course home page.
- The essay can be in English or Danish.
- The main text is in font size 12 p and 1.5 line spacing is applied. Smaller font size and line spacing can be applied for the list of references, but should not compromise legibility.
- Figures and tables are allowed and encouraged; but remember that they take up space.
- Strict size limits for the number of pages are:
 - (1 student → 5-8 pages)
 - 2 students → 8-10 pages
 - 3 students → 12-15 pages
 - 4 students → 16-20 pages
- The page limit includes figures, tables, and references. However, the compulsory cover page is an extra page that is not included.
- Print hard copies on one side only.
- Four identical and printed copies of the essay are handed in (for the examiners, the internal/external examiner, and the archive). Only hard-copies are allowed, i.e. no electronic files. Keep copies for yourselves as well.
- Staple each essay copy in the upper left corner (= hæftet med hæfteklamme). No other way of binding or additional cover is allowed, i.e. no plastic pocket, folder, dossier, paper clips, glued binding etc. This is to ease further handling of the essays.
- The essay copies are handed in by depositing them in Hans Peter Ravn's pigeonhole/open mail compartment, Rolighedsvej 23, Frederiksberg.
- Deadline for handing in the essays is **Monday 29 October 2012 at 12:00.**

D Exam questions

BIODIVERSITY IN URBAN NATURE, Questions for final evaluation (exam):

Value of Nature and Social aspects of urban nature,

Importance of plant selection in the urban environment,

Dead wood, hazard trees and fungi

Urban bird life,

Water retention and biodiversity,

Living roofs and walls,

Mammals in the city,

Connectivity of urban nature,

Urban soils in relation to diversity,

Urban butterflies and moths,

Urban beetle life,

Introduced and invasive species in cities,

Quality of nature – how to measure,

Urban forests,

Urban gardening/agriculture – effects on biodiversity,

Urban bees,

Costs of establishment and maintenance of urban nature.

E Course evaluation

Slutevaluering

Page 1 of 5

Statistik

Resultater: LNAK10099 Biodiversity in Urban Nature

Statistik Skema A

29 kunne besvare dette evalueringsskema

15 har besvaret dette evalueringsskema

51,72 % svarprocent: (15/(29)) * 100

Skema A: Skema A: Kursusevaluering

1 Hvad har været din personlige arbejdsindsats i kurset, inklusiv undervisning, i forhold til kursets normering (7,5 ECTS/blok= halvtidsarbejdsuge) (15 ECTS/blok= halvtidsarbejdsuge)

For lav(t)		0	0,00
		2	13,33
Tilpas		12	80,00
		1	6,67
For høj(t)		0	0,00

2 I forhold til mine egne forudsætninger oplevede jeg det faglige niveau som værende

For lav(t)		1	7,14
		4	28,57
Tilpas		6	42,86
		3	21,43
For høj(t)		0	0,00

3 Jeg fik en god introduktion til kurset

Helt uenig		1	6,67
		1	6,67
Neutral		2	13,33
		8	53,33
Helt enig		3	20,00

4 Jeg synes, at kursusaktiviteterne støttede opnåelsen af de kompetencer, der fremgår af kursusbeskrivelsen (se teksten ovenfor skemaet)

Helt uenig		1	6,67
		1	6,67
Neutral		4	26,67
		7	46,67
Helt enig		2	13,33

5 Jeg mener, at undervisningsforløbet lagde op til min aktive deltagelse

Helt uenig		0	0,00
		2	13,33
Neutral		2	13,33
		5	33,33
Helt enig		6	40,00

6 Jeg har fået et udbytte, der svarer til min indsats

Helt uenig		1	6,67
		1	6,67
Neutral		5	33,33
		5	33,33
Helt enig		3	20,00

7 Jeg synes samlet set, at kurset var godt

Helt uenig		1	6,67
		3	20,00
Neutral		1	6,67
		6	40,00
Helt enig		4	26,67

Skema A: Engelsksprogede kurser

1 Jeg synes, at undervisningen blev formidlet på et godt engelsk

Helt uenig		0	0,00
		3	20,00
Neutral		0	0,00
		6	40,00
Helt enig		6	40,00

2 Jeg mener, at mine engelskkundskaber er tilstrækkelige til, at jeg fik det fulde udbytte af kurset

Helt uenig		0	0,00
		0	0,00
Neutral		1	6,67
		4	26,67
Helt enig		10	66,67

3 Jeg oplevede, at der blev skabt mulighed for samarbejde mellem danske og udenlandske studerende

Helt uenig		0	0,00
		0	0,00
Neutral		4	28,57
		3	21,43
Helt enig		7	50,00

4 Rie, ros, kommentarer - OBS! Kommentarer til individuelle undervisere gives i skema B (15 besvarelser)

- struggled with Danish plant species classification with no background knowledge
- Mere struktur og fast tidsplan vil hjælpe kurset. Desuden en intensivering af undervisningen i starten, således der er bedre tid til at skrive opgave det sidste stykke tid. Underviseres begejstring for emnet og positivitet gjorde at man følte sig taget seriøst og at man fik lyst til at deltage aktivt.

Skema A: Øvrige kommentar til kurset

1 Jeg har følgende kommentarer til lærebogsmaterialet (15 besvarelser)

- Alt for dårligt tilrettelagt! Kan ikke passe at materialet sommeget først står til rådighed dagen før og det så forventes at man har læst og forstået materialet til at kunne deltage i en faglig snak og diskussion morgenen efter.
- Ikke alle artikler var lige relevante. Når klassen opdeles i hold A og B når der skal læses artikler, synes jeg det er lidt problematisk at alle tekster er en del af pensum. Hvis der lægges op til at man kun skal læse den ene tekst har man i princippet kun læst halvdelen af pensum.
- Articles were well sources and interesting
- the papers used were interesting, it would be nice to have them earlier
- Good literature/papers, however some were very detailed and specific and difficult language.
- readings were relevant and interesting
- The course needs a literature plan in the beginning of the course
- I really liked the papers we read. They were current and up to date.

Student evaluation, BIODIVERSITY IN URBAN NATURE, Sept-Nov 2012

Intended learning outcomes:

"When the course have been completed, the participants are expected to have achieved the following -

Knowledge:

- Identification of elements and conditions that promote and increase diversity of mammals, birds, reptiles, amphibians, insects and other arthropods, plants including trees and fungi in the urban environment
- Expected consequences on diversity of practical actions taken
- Interactions between plants, herbivores and organisms on other tropic levels
- Methods on quantification of biological diversity

Skills:

- Abel to suggest which actions that in a given situation will result in increased, reduced or orientated development in the biological diversity.
- Abel to explain relationships and interactions among organisms in a given location and situation and the reasons for absence or presence
- Ability to analyse and evaluate the potential for development in biological diversity among the organisms in a given locality
- Measures to put up a goal for development of diversity in a given area and for evaluation and documentation of fulfilment of the ambition.

Competences:

- Transform theoretical knowledge to practical action in a situation given limited frames
- Judge biological elements, potential, and possible developmental issues of nature areas in urban environment
- Discuss biological aspects in connection to management and mediating biological issues of nature in urban environment – authenticity, aesthetical values, aspects of recreation and first-hand nature experiences"

AVERAGE OF 17 RESPONSES

<i>Please indicate with an 'X' the answer that best represents your opinion (only one 'X' per row)</i>	1 Strongly agree	2 Agree	3 Neutral	4 Disagree	5 Strongly disagree	Don't know
1. I experienced a good correspondence between the teaching and the course objectives (as indicated above)		2,3				
2. I think that the practical execution of the course was successful (facilities, equipment, information dissemination etc.)				3,5		
3. I experience a good coherence between the various course elements (lectures, practical work, etc.)			2,6			
4. I experience the course as relevant to my personal educational objectives		1,9				
5. In cases where I needed feedback on my work (presentations, assignments, papers, reports) I was able to adequately get such feedback from the teachers		2,1				
6. For me, the teaching material is adequate for this course.		2,5				

what's NPJ aim!
between
3-4?

7. Compared to my background knowledge I experience that the academic level of the course is:

1	2	3	4	5	
Far too low	Low	Adequate	High	Far too high	Don't know

8. I experience the work load of the course as:

1	2	3	4	5	
Much too low	Somewhat low	Adequate	Somewhat high	Much too high	Don't know

9. 7.5 ECTS-points: In this course, for me the average work load per week was (including classes, preparation, written assignments etc.):

1	2	3	4	5	6
Under 10 hours	10-15 hours	15-20 hours	20-25 hours	25-30 hours	Over 30 hours

this surprised
me.
- sometimes
we hardly
gave them
a chance!

10. If you have further suggestions for improving the course – or other comments and/or elaborations on your answers above (please refer to question number):

Biodiversity in Urban Nature: Course evaluation scheme

Your background (LA, BIO, NIM a.o.):

Topic no. Topic	Relevance 1-5	Topic treatment 1-5	Comments
1 Nature Quality	3,8	3,3	→ review
2 Invasive species in the urban environment (Andy/Hans Peter)	4,8	3,5	
3 Value of Nature	4,4	4,4	
4 Waterscapes to promote biodiversity (with Rosalina W.-T.)	4,5	3,9	
5 Habitat patches, networks, urban-rural gradients & biodiversity (with)	4,4	4,2	
6 Urban soils and salt (with Morten I.)	4,2	4,4	→ moderate focus + stronger governance.
7 Hazard trees and endangered fungi (with Iben M. T.)	4,2	3,1	→ possible to work with practitioners?
8 Flora selection for insect fauna (Per S. N.)	4,5	4,6	
9 Native plants & seeds/flora falsification (Ulla P.)	3,1	2,8	→
10 Plantlife: selection of flora for urban areas (Mona C. B.)	4,2	3,4	
11 Native plants & seeds/flora falsification (Ulla P.)	4,4	3,3	
12 Plantlife: selection of flora for urban areas (Mona C. B.)	4,4	3,3	

Topic no. Topic	Relevance		Topic treatment		Comments
	1-5	1-5	1-5	1-5	
13 Urban bees: enhancing diversity in an urban setting (Erica J. A.)	4,2	4,0			
	3,8	3,8			
14 Green roofs & walls (Hans Peter)	4,8	4,1			
15 Maintenance of urban nature (Jesper B.)	4,4	3,5			
16 Urban mammal wildlife (Hans B.)	4,6	3,9			
17 Urban agriculture (Henrik V.)	4,1	4,2			
Excursions	Excursion to Assistens cemetery (Anna B. H./H.P./Andy)				
	3,4	3,1			
	4,4	3,6			
	4,3	4,2			
	4,6	4,4			
	4,9	4,5			

← 4th rd. 1000

Were there any topics you would liked to have seen included which were not? (please name)

Were there any topics you considered irrelevant (which could be omitted)?

Which element(s) of the course made the greatest impression on you?

Which element(s) of the course made the least impression on you?

Can you name ways/contexts you will use what you learned during the course in the future?

Would you recommend BUN to other students?

Do you have other suggestions for improving the course and/or elaborations on your answers above (please refer to the topic number)

All contributions to this volume can be found at:

http://www.ind.ku.dk/publikationer/up_projekter/2013-6/

The bibliography can be found at:

http://www.ind.ku.dk/publikationer/up_projekter/kapitler/2013_vol6_bibliography.pdf/