Academic Consultancy Training in Remote Sensing and GIS Integration Course 2017

Course guide

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Introduction

Visualizing, analyzing and solving real world problems by means of geographic data and geomatic technology. That is in short what professionals in the geo-information work field do. Even more, doing geo-business is not something that you will do by yourself but you will work in a team with different experts and you will work for a client with specific requirements on the end-product they would like to see. The Academic Consultancy Training (ACT) module within the RS and GIS Integration Course (GRS60312) provides students the possibility to work in a team on a “real world” project for an external client in multi-disciplinary teams. Since students differ in interests and backgrounds, the course offers a variety of projects for which you can apply as if it were your first job.

In the Masters (and sometimes in the bachelors) you have been trained academic skills. This course trains the application of the Master level academic skills in an almost professional setting of a small consultancy team working for a true client on a real work assignment. To strengthen the professional skills needed for such team work, brief training sessions on working in projects and on communication are integrated in the course. This Academic Consultancy Training module is part of the RS and GIS Integration Course (RGIC). This course is planned in the sixth period of the academic year. The course is scheduled as 8 weeks full day course with approximately 23 full days for the ACT module.

This course guide provides you with all the organisational information needed during the course and prior to the course when registering and applying for a function in a project team.

1 Course outline

1.1 Registration

Students need to register for the RS and GIS Integration Course (GRS60312) four weeks before the start of the sixth period via EduWeb. The registered student will be notified by the course coordinator and they will be send information on the course content and the preparatory work they need to do before starting the course.

In the case the registration deadline has passed, contact the course coordinator.

1.2 Project selection and application

Why apply?
One of the objectives of this ACT module is to approximate a real work environment. This means you have to apply for a job in a project. Based on the application you will compete with others for a position in that project. Both the availability of places in a project team and the quality of your application letter will guide us in assigning students to the different projects.

How?
Write a to-the-point application letter. A covering e-mail should at least indicate the projects of your first, second and third choice with motivation and you should also indicate which team function you prefer (first and second choice). The application letter should provide the argumentation why you are the best candidate for the project team of your first choice. Indicate both your specific disciplinary competences relevant for the project and the competences you have relative to working in teams. Before writing the letter, carefully read the extra information on application letters. The available projects for a period can be found on the RGIC web-site.

When?
Four weeks before the start of the ACT module you will be notified by e-mail that you can apply for a job in one of the projects.

Where?
Send your e-mail with selected projects and team function to the course coordinator Lammert Kooistra (e-mail: lammert.kooistra@wur.nl) and attach the application letter and curriculum vitae as a Word document. When the e-mail or letter do not provide the appropriate
information your registration is not considered final and you will be asked to make adaptations. **Send the application letter before Friday April 28, 2017 (23:00) to the course coordinator.**

### 1.3 Assignment of projects

Based on all the application letters the course coordinator will assign projects to teams of 5 to 6 students. It’s not possible to grant every individual his or her first choice project. When the first, second or third choice can not be granted the period coordinator will contact the student to propose another project.

The assignment of the team functions is based on the first or second choice indicated in the application letter. In case more students are interested in the same function the arguments supporting the choice are considered.

The composition of the teams will be presented during the first day of the RGIC course on Monday May 15, 2017. The team composition is then final. Team functions may be re-assigned during the course in consultation with your team coach.

### 1.4 Preparation and start of the course

We expect you to read all the information in this course guide prior to the start of the course. Background information for the communication skills training and the project management training is available through the RGIC website. Also this material should be read before starting the course.

**An introduction lecture to the course is scheduled on Monday May 15, 2017, at 8:30 in lecture room C0093 in the GAIA building.** Monday afternoon May 15, 2017, the project teams will have a first meeting with their team coach. All scheduling information including venues, starting times etc. can be found in the [course schedules](#).

### 1.5 Training Project Management Skills (PMS)

During the execution of the project your team will need to plan and manage a small project. There are three scheduled sessions in which you will be taught some theoretical background on working in projects and during which you will be able to work with the team on formulation of the project proposal and will receive feedback on the latter. See the [PMS-guide](#) for more detailed information.

### 1.6 Training Communication Skills (TCS)

There are a number of skills needed for successful team work. Training on the following skills is provided during one half day session in the first week and half day session in the fourth week of the ACT-course: Communication and meeting skills, Negotiating skills, Problem solving skills, Team roles and personal qualities.

The TSC is especially helpful in becoming more aware of your communicative behaviour and it will assist you in formulating and achieving your learning outcomes. It also will provide you some excellent opportunities to practice. See the [TCS-guide](#) for more detailed information.

### 1.7 Project proposal

At the start of the project each team will have to establish a project proposal. (See chapter 5.1). The basis for the project proposal is the project description on the [RGIC web-site](#). One of the first team actions is to set a date for a first interview with the commissioner (your coach should also be present). It is important to prepare this interview well and the first SPM training session specifically supports this.

Not all parts of the proposal will be sent to the commissioner. A detailed planning with individual tasks is not relevant to a commissioner, but essential for the teams’ own functioning and monitoring. Such a detailed planning should be an appendix to the proposal. In this appendix each team should take into account the re-exams and other obligations of the team members.

The final product should be well defined in the project proposal to avoid discussions later.
A draft project proposal will be discussed in week five with your coach for valuable feedback on strong and weak points. You should also submit the proposal to your expert for suggestions and feedback on the content of the proposed work. The input from the PMS teacher, the expert and the coach are used to draw up the final project proposal.

The final project proposal needs to be formally approved by the commissioner by signing for agreement, on the front page of the proposal. Herewith the project proposal becomes the final project proposal. This proposal is send to the PMS teacher and coach who will then give their mark for this proposal.

The project proposal is also meant as a check during the further execution of the project whether everything goes as planned or whether adjustments have to be made. In the latter case a renewed negotiation with the commissioner may be needed.

1.8 Personal assessment skills and interviews
An essential professional skill is the ability to assess the work and functioning of yourself and your team members. Such an assessment is needed to improve your functioning and to facilitate resolving problems in an organisation. Every student keeps track of his or her personal functioning in a self assessment dossier. A self assessment dossier consists of: Application letter, Expectation paper, Final reflection paper. The dossier and the functioning of each student will be discussed during the performance interviews. In the course schedule you find the timing of the interviews and the delivery dates of the papers.

1.9 Working on the project
During execution of the project, the teams can use the PC rooms PC093 (starting week 4)/PC095/PC096. The work on the project starts with the establishment of the project proposal but often you will feel you really start once the project proposal is final and can be executed. Execution has to start no later than in week 5, but may start earlier. The team will have to establish a working regime in which team meetings become less frequent and sub-teams or individuals work on assigned tasks. The project proposal of each team should take into account the re-exams and other obligations of the team members on the basis that each student works full time so 40 hours per week. Keep an eye on the course schedules for planned meetings and deadlines. These always take priority over team planning.

1.10 Finishing the project and final presentation
A final presentation to your commissioner and coach will be scheduled during the last week. This presentation is the moment you will `sell’ your results to your client. Therefore it is advisable to rehearse the presentation early during the last week together with some other groups where you can learn from each other and give each other feedback. You may ask your expert to join during the presentation. The location of the presentation will be discussed during the course. In order to allow the commissioner, coach and expert to read and assess the final product, it has to be ready and handed in to the team coach, expert, and commissioner on Tuesday July 4, 2017 before 17.00. The nature of the product is determined in the project proposal. In most cases it will be a report, but it could also be a web-site, a demonstration CD or another product, or combinations of these.

1.11 Final team and personal assessments
After the final presentation the team assessment will be based upon the team process and a number of products. The exact date and timing of this final assessment during the last week of the period is left to the coach and the team. The coach will help you to analyse the team process and team products. The expert, the coach and the commissioner will assess the final product. The project proposal is assessed by the PMS-teacher and the coach. The coach will assess the process. The students assess each other, based upon the following set of mutual assessment criteria:
• Communication
  – Internal
  – external
• Persuasion
• Stimulation
• Team thinking
• Motivation
• Collaboration
• Keeping of appointments
• Listening
• Output orientation
• Awareness of the procedural side of team work
• Contribution to the end product
  – Contribution within own expertise field to relevant parts
  – Contribution to integration of parts to a complete product
  – Critical reflection on balanced contributions of all parts to the end product

Individually each student will write his or her final reflection paper and hand in the self assessment dossier to the coach. A final performance interview is scheduled during the last week of the period. See Chapter 6 for the way the final mark is calculated.

2 Course functions

2.1 Team functions: Project manager, Secretary, Controller, Project member

Project manager
The project manager is responsible for the general coordination and functioning of the project team, for defining the project goals and for the contacts with the commissioner and third parties. The project manager will usually chair the group meetings with the commissioner
Specific skills: communication and interpersonal skills. Management and judgement skills.

Secretary
The secretary is responsible for the planning and preparation of team meetings (together with the project manager) and for the minutes and follow-up of meetings. The secretary is also responsible for administration, correspondence and public relations.
Specific skills: communication skills, organisational skills.

Controller
The controller is responsible for planning, budgeting and controlling of both the team work and the project.
Specific skills: Skills in financial book keeping and planning. He/she is able to keep track of the project’s actual and planned progress and persuade team members to deliver or the team to revise the planning. Experience with Excel.

Project member
Together with the other group members they are responsible for general and specific tasks, like exploring available sources of information and the correct selection and analysis of relevant data (e.g. from libraries and the internet).
Specific skills: Good assessment ability regarding the quality and relevance of information. Experience with analysing and presentation techniques (e.g. SAS, Genstat, Excel, PowerPoint, GIS and RS packages).
2.2 Coach
The main task of a coach (or process coach) is to support and guide the team and each individual to function well and at an academic level. You can expect the following:

- The coach will organize the first meeting of the team.
- The coach will attend at least one meeting and/or working session a week during project execution.
- The coach will be present during the first meeting with the commissioner. It is up to the team and the coach to discuss whether presence during later meetings is necessary.
- At the end of each PMS training session the coach will join the follow-up meeting and the coach will be present during the feedback session on the project proposal.
- The coach will perform two individual interviews with each team member: starting interview and final performance interview.
- The coach is available for all questions or issues related to the team functioning.
- Be aware that your coach is often not an expert in the fields relevant to your project. If the coach is also an expert make consultation appointments next to coaching appointments to avoid a mix up of process coaching and content advising.
- Being present during a meeting does not imply that the coach will tell you what to do. The coach will observe, make notes and discuss the observations after the meeting to help the team with self-reflection and functioning.

2.3 Expert
In addition to the process coach each team is assigned a content coach or expert from within Wageningen University who will assist the team. In case the team has a very good reason to replace the assigned expert with another expert this is possible, provided this replacement takes place before the project proposal is finished. The expert (the assigned or the replacement) should be consulted on the project proposal prior to submitting the final version to the commissioner. The team has a total of 6 hours of consultation with the expert at its disposal. The expert will also read and give feedback on the draft product and finally the final product will be assessed for its quality by the expert. The coach will consult the expert on the final mark.

2.4 Commissioner
The commissioner will often be your direct contact person in an organisation. After a while though you may recognise that next to that person there are others of this or other organisations who are also stakeholders in the project. Trying to get a clear picture early is essential for your team. At times, also, your contact person may be overruled by someone else in the commissioning organisation when it comes to financial arrangements or access to sensitive information.

2.5 Course coordinator and examiner
The course coordinator is responsible for organisation of the course throughout the year. She or he can be contacted when you are uncertain about the organisation of the course.

Questions about subjects that have not been specifically assigned to other staff members she or he can answer.

The general coordinator does not independently determine the marks of students or teams, even though s/he is formally the examiner. In principal coaches and the teachers of PMS assign the marks to the team. In exceptional cases the examiner may revise the mark after consulting the teachers.

In all cases where students cannot pass the course as they have been given an insufficient mark the examiner will either assign additional work or will decide the course has to be taken once again later.

Any requests for an exemption should be addressed to the examiner after due consultation with your study advisor.
3 Course Schedules

3.1 Time schedule
For the ACT part of RGIC a detailed time schedule is available on the RGIC web-site. Several meetings are already planned and take priority over team planning:

- The kick-off meeting
- The communication skills workshops
- The working in projects workshops
- The first meeting with the commissioner has been arranged by your coach

The project team and the individual students are responsible for planning of all other meetings and activities, including meetings with the expert and a final presentation at or with the commissioners’.

3.2 Available rooms and computer facilities
During execution of the project, the teams can use the PC rooms PC0095/PC0096. Teams have to share the available facilities and therefore are responsible for appointments about the use of these shared facilities.

4 Products (individual)

4.1 Self-assessment dossier
To structure the monitoring of your progress on the aims of the course and your self-defined additional learning outcomes we want each student to keep a dossier. You will hand in elements of the dossier to your coach or the teacher of communication skills as indicated below or as they request. The coach will give you feedback that should help you to assess and monitor your progress. Your dossier should at least contain the following items:

- Application letter
- Expectation paper
- Final reflection paper

There are two scheduled interviews in which you discuss (elements from) the dossier with your coach. These are individual interviews. In addition you may ask others to give feedback on elements from your dossier (i.e. a fellow student, a teacher of communication skills or working in projects).

4.2 Application Letter
You are requested to apply with motivation for the project of your first choice and for the team function of your first choice. You have to write a short application letter (including a curriculum vitae) in correct English (2 A4 in total including CV). In an accompanying email you should also indicate the projects of your second and third choice and the team function of your second and third choice as we will no be able to place everyone in the project and team function of their first choice.

Based on all the application letters and the expertise needed for the different projects the course coordinator will compose teams of 5-6 students for the different projects. When writing the application letter consider the project of your first choice as the first job you want to apply for. Ask yourself questions like:

- what do I have to offer to the team I will work with, so which expertise do I have that will be needed for the execution of this project. The expertise you have to offer should clearly have disciplinary or project content aspects as well as process aspects.

In addition to what you know and have already learned there will obviously be things you want to learn. This will be part of your expectation paper. Remember that this course is inappropriate to obtain disciplinary knowledge in any field in which you have no background.

The coach will give feedback on the letter, to help you improve your application letters for future jobs. Assessment criteria for application letters and CV:
• Does the letter follow the above mentioned points?
• Is the letter attractive, well-organised, compact and written in correct English?
• Is there a personal touch that attracts attention?
• Is there a good motivation for the project and team role (positive choice, linked to appropriate personal skills and knowledge and to learning objectives)?
• Do first and last sentences attract attention through their focus and formulation?
• Is the CV complete yet concise; with focus on relevant expertise and experience?

Guidelines on how to write an application letter (sometimes called a cover letter) and curriculum vitae (CV) can be found on the Internet.

4.3 Expectation paper
You will have to write an expectation paper (minimum three A4) before the end of the first week of the RGIC course. Send the expectation paper to your team coach and set a date and time for the personal starting interview with your coach.

The expectation paper should contain at least a short self-assessment focussing on the questions:

What do I know and do I not know about myself in relation to:
• Functioning in a team
• Communication with a client or commissioner
• Oral presentation skills
• Communicating about my own functioning in a team
• Communicating about the functioning of a colleague in a team
• Written reporting of meetings
• Chairing of meetings
• Functioning in multidisciplinary or multicultural teams
• Writing of reports with a team
• The disciplinary content needed for the execution of this project

What are your expectations (hopes and fears) about the team functioning?

What are the five personal learning outcomes you want to reach in the domain of personal skills? These will have to be formulated in such a way that they are specific enough to enable both you and your coach to assess the progress later during the course. Information on how to formulate learning outcomes is given in the communication skills training in week 1.

4.4 Final reflection papers
When the final (team) product has been sent to the commissioner and the coach, you are asked to write your final reflection paper for this ACT (min 4 A4). In the first week of the course you have defined learning outcomes, formulated expectations, wrote reflections on specific events and made a mid-term reflection paper. At the end of the course it is time to lean back and reconsider the full period. Things have turned out easier or more difficult. You have discovered unexpected strong points or interests in skills you would like to improve. You have to write a final reflection on the full period, reflecting on all outcomes you defined and considering what progress you have made during this period. Include mutual assessment in your final reflection paper.

In your paper you will reflect on:
• All issues mentioned in the expectation paper
• Your formulated learning outcomes
• Specific events and actions you took related to the events
• Experiences in the communication skills workshops
• All other issues relevant for your functioning and the functioning of the team
• Each of the team members (for this the format of the mutual assessment is used)
• Finally, experiences from companies and organisations visited during excursions: which opportunities do you see for your future career and which hurdles also in relation to your development during this course.
4.5 Interviews
During the course the coach will perform two (individual) interviews with each of the students: a starting, a midterm and a final performance interview. You can always ask team members to attend the interview.

Starting interview
The expectation paper and the application letter will be discussed during your starting interview with your coach (week 2) you are requested to make a short note of the interview containing the decisions taken and appointments made. Add this note to your self assessment dossier.

Final performance interview
Starting point of this second (performance) interview is the final reflection paper and the self-assessment dossier. At the end of the interview the coach will inform you about the final mark.

Proposed checklist for a performance interview
- Personal learning outcomes
  - learning outcomes defined in the expectation paper
  - reasons why the individually set learning outcomes are or are not achieved
- Organisation of the work and contents of the function
  - defined working goals and planning (deadlines)
  - definition of tasks
  - allocation of tasks within the team
- Individual functioning
  - number and type of activities that should be done
  - results
  - tasks not (successfully) executed
  - activities for the coming period
- Communication
  - developments within the team
  - stimulation and coaching of team members
  - (functional) relationships with other team members
  - work deliberations
  - management of the project team
  - collaboration with team members
- Giving and receiving feedback
  - timeliness and appropriateness of given feedback
  - way in which feedback was used to improve the own functioning

5 Products (team)

5.1 The project proposal
The project proposal generally contains the following sections:
- Executive summary (Everything a director should know about your project)
- Project definition (What is the project all about?)
- Project management (How are you going to manage the project?)
- Budget (What are the costs?)
- Specific conditions (What specific conditions apply?)

For the team functioning and monitoring two annexes are also needed which will be used to assess the feasibility and quality of the project proposal:
- A stakeholder analysis
- A detailed Gantt-chart and log-frame.
During the “Project management” (PMS) workshops a more detailed template will be given. The draft project proposal is assessed by your PMS lecturer, the coach and the expert. After feedback a revised version is communicated with the commissioner. The final project proposal needs to be handed to the PMS lecturer and the coach who will give a mark. The final project proposal will of course also be submitted to the commissioner (for signature) and the coach. For the deadlines see the course schedule.

5.2 Final product
The final product will be a report, and/or a CD, a web-site, or any other product agreed with the commissioner and an oral presentation.

You could consider the following as the minimum criteria for the final product or output:

- Is the information in the final product (e.g. Report, business plan, prototype software) presented in an appropriate well-organised way, is it easy to read/use and well formulated?
- For written products: Is the division into chapters, sections and sub-sections logical? Is the use of appendices correct and supportive, is the executive summary correct and useful and finally is the explanation of the organisation in the introduction clear and supportive?
- Are the organisation and the language of the final product a reflection of the way the product will be used by the commissioner?
- Are the problem definition and the choice of methodology clearly presented?
- Are all recommendations clearly stated in the final product?
- Are all conclusions and recommendations supported by the provided information, and have all presented findings been translated into conclusions or recommendations?

The team together with the course coordinator arranges date and time of this oral presentation during the second half of the last week. In principal the presentation will be organised at the commissioners’ office, but when the commissioner prefers this to be in Wageningen the course coordinator can help to find a venue. The presentation is compulsory for the whole team and the coach. In cases the expert may be able to be present.

Checklist for a successful presentation:

- Make use of professional presentation software (e.g. PowerPoint)
- Practice your product presentation (see below)
- Representative appearance
- Imagine potential questions

The coach will assess the quality of the presentation also based on the extent to which the feedback is used for improvements. There are venues planned for the rehearsal, teams should arrange with whom they rehearse and during which time slot.

Keep in mind that the standard presentation you may use for your thesis or during teaching is inappropriate for most commissioners. You have come with an answer to a problem or question they have presented to you a few weeks earlier. So what is the solution or answer? Why is this the best solution/answer? And what are the next steps the commissioner may need to make? The technical details of your methodology and an extensive introduction into the problem the commissioner already knows are irrelevant, unless at the end of the presentation questions relative to your methodology are posed. So prepare slides on all of these issues but select carefully what to present and what to have as additional information during discussions. Do not exceed 30 minutes for the presentation and allow ample time for questions. The total length should be known to your commissioner well in advance so all those present will know what to expect.

Next to the presentation, also a poster will be prepared which presents the main outcomes of the project. This project is intended for explaining the project to broad public and also should provide an appealing presentation and visualization for the intended target audience.
6 Mark

The final mark for the ACT module of the RS and GIS Integration course is calculated as follows:

- Written self assessment  (passed (Go) or failed (No Go))
- Project proposal (15%)  (coach 50% + SPM teacher 50%)
- Product (42.5%)  (50% - expert, 25% coach, 25% commissioner)
  **Note:** The oral presentation and poster are part of the final product and are included in the mark of the coach.
- Process (42.5%)  (50% coach, 50% mutual assessment team)
  **Note:** The mark of the coach is leading for the average mark of the students’ mutual assessment and when students are treated unfairly (too high or too low grades) during the mutual assessment, the coach may overrule such mutual assessments.

All parts – written self assessment, project proposal, product, process – have to be sufficient (5.5 at least) to pass the course.

6.1 Mutual assessments

As an element of training professionalism students are requested to assess each others performance. This is a formal way of giving feedback on each others functioning next to the informal feedback given during meetings, coffee breaks etc. The exact format for the mutual assessment is explained by the coach and during the communication skills workshops.

6.2 Insufficient marks

**Insufficient written self assessment:**
When the final reflection paper is insufficient you may be requested to improve it on the basis of clear indication as to what parts are insufficient. In principal this is done under supervision of your coach and/or the communication teacher. If the revision takes too long you will be sent to one of the course examiners.

**Insufficient project proposal:**
When the project proposal is insufficient the team will have to improve it at the risk of a delay in project execution and thus an unfinished project at the end of a period.

**Insufficient product or contribution to the product:**
When the product is insufficient this is a team responsibility. Depending on the exact shortcomings the product will have to be upgraded or members of the team will have to follow the course again, but assigned to different new teams in a later period of their choice. When a product will have to be upgraded this will have to be done within three weeks after the end of a period or the team will have to redo the course. Alternatively the product can be sufficient but the contribution of one or more individual members insufficient in the eyes of both the team members and the coach. In such a situation the concerned student(s) should be warned in advance so they may improve their input. In case the situation continues the student(s) will be send to one of the examiners. The examiner will either arrange an additional assignment or may require the student to redo the course.

**Insufficient process**
An individual student may have contributed too little or even negatively to the group process. In this case the student will be sent to one of the examiners, who may give an additional assignment or may decide the student has to redo the course.

7 Financial Procedures
Every project team has a financial controller.
The financial controller of each team will be informed about the financial procedures in a meeting in week 1 (see course schedule).

8 Who to contact

For general questions please contact the coordinator of the RS and GIS Integration Course: Lammert Kooistra (e-mail: lammert.kooistra@wur.nl; tel 0317 481604).