Agenda/Preparation of the inter-university meeting UGent/VUB
Master of Science in Biomedical Engineering

Academic year 2017-2018

December 7th, 2017

Meeting location: VUB campus Etterbeek, Pleinlaan 9, Vergaderzaal Morse & Bell

Present: Patrick Segers, Johan Stiens, Jef Vandemeulebroecke, Klaus Bacher, Mathias Polfliet, Stefaan Vandenberghe, Bart Jansen, Eown Van Wittenberghe, Richeek Dey, Pascal Verdonck (via telecon), Maaike Op de Beeck (via telecon), Aldo Scafoglieri (via telecon), Laurens Raes (via telecon), Laure Van De Steen (via telecon), Annelies Coene (via telecon), Jade Paret (via telecon), Laurens Parmentier (via telecon), Liesbet Deconinck (via telecon)


1. Formal approval of the minutes of the meeting of October 2nd, 2017

Pieter Rombouts was apologized for the meeting of October 2nd. No other comments have been received. The minutes are formally approved with this correction.

2. Final composition of the program board 2017-2018

Chair: Patrick Segers and Johan Stiens
ZAP: Klaus Bacher, Roel Van Holen, Carlos De Wagter, Peter Dubrueil, Pieter Rombouts, Stefaan Vandenberghe, Pascal Verdonck, Nico Buls, Erik Catrysse, Iris De Graeve, Aldo Scafoglieri, Michel Sonck, Jef Vandemeulebroecke, Dirk Verellen
OAP: Amélie Chevalier, Mathias Polfliet (secretary)
Students: Liesbet Deconinck, Hannah Notebaert, Laurens Parmentier, Laure Van De Steene, Sebastian Amador, Ine Dirks, Richeek Dey, Kato Thibaut
Advising members (ZAP/GP/OAP): all lecturers in biomedical engineering program
Advising OAP: Annelies Coene
Advising Students: Jade Paret (EMBIEN), Laurens Raes (EMBIEN), Charlotte Thyssen (EMBIEN)

3. Announcements/communications

3.1. Lecturers/switches

From genome to Organism: Prof. Filip De Keyser has informed the board that he will stop his academic career and that this will be the last academic year. Filip has checked internally in his department for candidates to take over from him, and it is likely that Fransiska Malfait will become the course
The board thanks Filip for his most valuable contribution to the program and his course, which has systematically been greatly appreciated by the students.

**Biomechanics:** Matthieu De Beule will terminate his academic activities by 2018-2019. In a transition phase, Patrick Segers will take over the coordination of the course, but the longer term plan is that the course will be taken over by a newly recruited biomechanics professor at UGent in 2019. There is a meeting scheduled with Carlos Rodriguez @VUB to discuss his potential involvement. Johan Stiens notes that Bernardo Innocenti from ULB can be contacted to provide complementary teaching. Patrick Segers suggests that also Nele Famaey from KULeuven could be solution to lecture soft tissue biomechanics and finite element solutions.

3.2. **Francqui visiting professor Jay Humphrey (Yale university)**

Jay Humphrey is a top researcher in soft tissue biomechanics and mechano-biology who will be in Belgium March 12-15 (the first 3 days in Gent, the last 2 in Leuven) within the context of a successful Francqui professor application (joint application UGent and KULeuven). His commitment includes 10hrs lecturing (spread over Gent-Leuven). Besides an inaugural talk on Tuesday, March 13th, the plan is to directly involve prof. Humphrey in Biomechanics and have him lecturing on Monday 12th and Tuesday 13th on FE modelling and soft tissue biomechanics. This might require some rescheduling of the program to fit the calendar of Jay Humphrey. If this is taught in the multimedia-room, the lectures could also be recorded.

3.3. **Calendar - planning**

To allow for a better planning, we aim to schedule OCs and important events well in advance to allow people to attend.

<table>
<thead>
<tr>
<th>OC meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon 02/10/2017 (noon-2pm)</td>
</tr>
<tr>
<td>ThU 07/12/2017 (noon-2pm)</td>
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<tr>
<td>Thu 01/03/2018 (noon-2pm)</td>
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<tr>
<td>Wed 16/05/2018 (noon-2pm)</td>
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<tr>
<td>(with Video conferencing)</td>
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<tr>
<td>VUB</td>
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<tr>
<td>VUB</td>
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<tr>
<td>UGent</td>
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<tr>
<td>VUB</td>
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<tr>
<td>Thesis defense</td>
</tr>
<tr>
<td>Wed 27/06/2018</td>
</tr>
<tr>
<td>Thu 28/06/2018</td>
</tr>
<tr>
<td>VUB</td>
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<tr>
<td>UGent</td>
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<tr>
<td>Events</td>
</tr>
<tr>
<td>National Day on Biomedical Engineering</td>
</tr>
<tr>
<td>Fri, 01/12/2017</td>
</tr>
<tr>
<td>Brussels</td>
</tr>
<tr>
<td>MEDICA</td>
</tr>
<tr>
<td>15/11/2017*</td>
</tr>
<tr>
<td>Düsseldorf</td>
</tr>
<tr>
<td>Biomedical Industry Day</td>
</tr>
<tr>
<td>Wed, 14/03/2018</td>
</tr>
<tr>
<td>Pand (Refter), Gent</td>
</tr>
</tbody>
</table>

* It is noted that 15/11 is a holiday at UGent (but not at VUB). Participation to the site visit will therefore be on a voluntary basis, but we obviously hope that all students will make use of the opportunity offered.

Feedback on the NDBME is provided by some of the student representatives and is generally positive. Especially the parallel sessions were much appreciated.

The students also appreciate MEDICA. However, they note that to spend four hours in Düsseldorf a total travel time of ten hours is needed which is cumbersome. Alternatively, one could spend the night but this seems unviable due to financial restrictions.
We need to start preparing the Biomedical Industry Day, and in particular determine the list of companies we would like to have present. It would be good to have different companies compared to last year.

In 2019 the biomedical industry day will be organized by VUB. Johan Stiens is currently looking for a suitable location.

3.4. Erasmus

There appears to be a large interest in Erasmus exchange in 2018-2019. At UGent, questions were received for the following exchanges:

- NTNU: Sander Walraet, Arthur Van Den Broucke, Liesbet Deconinck
- Politecnico di Milano: Jordi Martens, Tim Bomberna, Hannes Vermander
- Cuba: Maarten Roose, Louise Missault
- RWTH Aachen: Renee Coryn
- EPFL: Sarah Vandenbulcke

Omkar Dicholkar also expressed his interest to do his master thesis abroad.

At VUB, the following students showed interests in an Erasmus exchange: Muhama Amani, Kato Thibaut, Selene De Sutter, Pauline Martens, Matthijs Bart Sevenois and Sebastian Amador Sanchez. A list of Erasmus destinations for both UGent and VUB is shared as an addendum. It is noted that students from both universities should be able to benefit from the bilateral agreements at both universities. Klaus Bacher will look into contacts with Lund University to possibly setup a bilateral agreement for Erasmus exchanges.

3.5. Towards new academic calendar?

UGent (and KULeuven) is quite intensely thinking about a new structure for the academic year and calendar, with the intention to start earlier (September 1st) and turn Christmas/New year period into a real holiday period rather than study period. The new rectoral team at UGent expressed their strong support. It is clear that it will be critical for our inter-university master that if this re-organization eventually gets reality, it happens at both of our universities.

3.6. Appearance of course name in Dutch/English in Minerva (UGent)

One of our international students in Gent pointed out an inconvenience in the use of Minerva. Despite use of the English version of Minerva, most course names appear in Dutch, which is mostly confusing. After contacts with the helpdesk, it appears that the appearance of the name of the course depends on the language that lecturers have selected upon creation of the course site in Minerva.

To correct this, it appears that course-sites would need to be re-created, which is highly inconvenient. When we provide a list of courses to be switched, however, the help-desk is willing to do this for us. Unless there would be any objection, Patrick Segers will provide the list with all courses that are taught in English in our program, so that these appear with the English name in the curriculum of our students on Minerva.
3.7. Reimbursement of travel expenses students

Johan Stiens urges the program board to reconsider on the changes to the reimbursement of travel expenses and proposes a higher reimbursement limit for VUB students as they have to travel more often.

Patrick Segers notes that several different options exist to for the reimbursement limits. However, as the money to reimburse travel expenses is going to run out relatively soon, such an option would only have a short-lived effect. Alternatively, it is possible to increase the tuition fee for international students (in line with all other master programs) and use part of this money to reimburse students. This might solve the issue of the limited amount of money used to reimburse the travel expenses, but not the original issue of the reimbursement limits.

The program board makes no formal decision on this matter.

4. Toetscommissie

The toetscommissie is yet to have its first meeting. It is emphasized that the main idea of an assessment of the way we organize our exams is not out of bureaucracy, but is a genuine attempt to reflect on the best possible ways to test whether students have acquired the competences we wish them to acquire. Furthermore, it can be extremely useful to see how colleagues organize exams. Peter Dubruehl will be contacted and reminded of his responsibility herein.

5. Benchmarking exercise

Frans Van de Vosse (TU Eindhoven) and Alberto Redaelli (Politecnico di Milano) will visit us Jan 16-18 (with bulk of the program on the 17th) for a benchmark exercise. Johan Stiens will not be available. Pascal Verdonck will organize the program. This exercise will prove especially useful for the implementation of the bachelor program.

6. Program changes/new courses

6.1. Follow-up on meeting of Oct 2nd

The following changes will be implemented from 2018-2019 on:

- “Neuro modulation and Imaging” changed into “Technology in clinical neuroscience”
- Neuro-engineering cluster: The neuro-engineering track has been redefined and will consist of the following 6 courses (for a total of 18 credits)
  - Advanced Image and Signal Processing (E092841; 3 credits)
  - Nuclear Magnetic Resonance Imaging Technology (E027761; 3 credits)
  - Neuro-physiological Signal Processing and Network Analysis (E900436; 4 credits)
  - Translational Neuroscience (3 credits)
Neural Interfaces, Neuromodulation and Minimally Invasive Neurotechnology (3 credits)

Auditory Computation, Modeling and Devices (3 credits)

(Other courses that are now listed under “neuro-engineering” have been moved to the general biomedical engineering elective courses).

- “Micro- and nano device” cluster: Two new courses:
  - Biomedical Devices (4 credits) (NN @ VUB, J. Stiens)
  - Architecture and Fabrication of Biomedical Microsystems (3 credits)

As appointing lecturers is done by departments at UGent, the OC cannot formally assign lecturers, but it is clear that those responsible for outlining the courses will lecture them.

6.2. Computer Assisted Surgery

Computer Assisted Surgery was listed as an elective course offered via ULB/VUB. It turns out that this course is no longer offered or available for our students, and it has been removed from the list of elective courses. The student representatives wonder whether students that elected this course were made aware of these changes. Patrick Segers is almost certain that this is not an issue at UGent-side, but will double-check. Johan Stiens will check for the VUB.

7. Biomedical Engineering track in the bachelor program: status

The faculty boards at UGent (16/11/2017) and VUB (23/10/2017) have agreed to the principle of a BSc in Biomedical Engineering track.

The most important general principles:

- The track consists of 30 domain specific credits (out of 180), in essence the contents of the 1st semester of master 1
- The other 150 credits are found in existing bachelor curriculum of existing bachelor programs
- The contents and weight of the 30 credits is equivalent at UGent and VUB, but practical implementation will be in line with local rules and regulations (e.g. UGent has year 1 in common with all bachelors; VUB has first 4 semesters in common bachelor program).

At VUB, implementation would be possible from 2019-2020; at UGent, the timing will be set by an overall restructuring of all bachelor programs, and start will likely be 2020-2021.

The program board suggests to set-up a meeting with the module coordinators to work out the program changes. It is suggested these meetings to start in Spring 2018.

Once these changes have been implemented, it would require changes to the inter-university master agreement. No decision has been made on the language of the teaching. Legally, no more than 18% of the teaching at bachelor level can be performed in English (about 33 credits). Teaching in English would probably get more support at VUB than at UGent.

8. Individual student affairs
Nazanin Mir Derikvandi: Nazanin Mir is a student who started the 1st year of the International MSc in Biomedical Engineering (CEMACUBE) in 2016-2017. Students are allowed to start after a screening by RU Groningen, coordinator of the program. Nazanin failed too many courses and had to leave the program; following the consortium agreement, these students can then resume in the local program, which is what Nazanin Mir did. It was already during the program board meeting of October 2nd that this may be problematic for Nazanin Mir, who clearly lacks the necessary mathematical background, and that she would give it a try in the 1st semester and re-evaluate in January whether or not she will continue her studies. In the meantime, it has also become clear that she does not have the required IELTS language certificate. It is clear that this is a clear failure of the screening procedure, but at the same time, the student has failed to comply with strict and straightforward modalities. The student has informed Patrick Segers that she will re-take the language exam in February.

Johan Stiens suggests to bring all data on this student to the next program board such that an informed advice can be given on this decision.

A student representative informs which measures have been taken to prevent such cases in the future. Patrick Segers notes that for the next selection round, students will have to present the results of a GRE test which will test the mathematical and logical reasoning skills of applicants. Richeek Dey points out that he has taken such a test. We will be more vigilant in double-checking the background of students coming from other universities in the international master.

The program board notes that it might be useful to institute a GRE for the students in the regular master program, but this will only be applicable to students coming from universities outside of the Lisbon agreement.

9. Timetables/Exam calendar

Following the positive experience with and feedback on the new teleclassing solution (at Ugent, the teleclassing infrastructure at campus Sterre is used; at VUB, ...) in Biomedical Imaging, Mathias Polfliet has taken the initiative to explore the possibility of expanding the use of teleclassing in other courses and received positive answer from Carlos De Wagter who will make use of teleclassing for Human and Environment, Safety and Regulations from UGent to VUB. In the newly created course “Health information and Decision Support”, Jef Vandemeulebroucke has also volunteered to teach in teleclassing from VUB to UGent. All other relevant teachers have been contacted and none replied. The first deadline for room scheduling (1st of December) has passed.

Jef Vandemeulebroucke proposes that a small study group be set up to reorganize and, more specifically, optimize the timetables.

10. BEAM/company visits

- Students will visit Cochlear within the context of Design and Technology of Artificial Organs (Ma2): Wed 13/12/2017. In principle, students will also visit ORSI (Medical Equipment). Students also visited GE (Medical Imaging) and another visit to Aqtor is planned.

- BEAM is also in contact with the biomechanics lab at KULeuven to organize a possible visit. It is suggested to couple that to a visit to Materialise.
The program board also hopes to see more active participation from VUB students in BEAM.

11. Varia

11.1 Matlab summer course?

Matlab is being used in several course modules but several of our incoming students have no background at all in Matlab. In September a 9-hour introductory course of Matlab is organized at VUB by Bart Jansen. However, this introductory course mainly focuses on the basic of programming for those who have no experience. Patrick Segers was contacted by one of the UGent students (Laurens Raes) who suggested to do something similar on UGent side and volunteered to play an active role in this.

The program board suggests these sessions be organized in parallel at UGent with BEAM playing a role therein.

11.2 “Jokerweek”- event?

At UGent, the architecture department organize a yearly one-week event where all the students are actively involved in a project that spans a week (the “Jokerweek”). Students work together on common assignment and projects, which then culminates in an exhibition or closing event. Though intense and hard work to have it organized, the Jokerweek is one of the spearheads of the program and highly appreciated by the students and staff. It also gives a visibility of the architecture in the city.

At UGent, the director of education is reflecting on whether such a similar event cannot be implemented on a faculty level, and would like to have the feedback and position of the different program boards on such an initiative.

The program board agrees it to be a good initiative. However, it seems practically unfeasible to implement due to the inter-university nature of the master. Additionally, the board expresses the concern that a week-long event might take too much time away from the planned classes.

Currently, our community building events are the Biomedical Industry Day and National Day on Biomedical Engineering; we also have project-related compulsory courses in the program (‘Biomedical Product Development’ and ‘Hospital Project’).

11.3 Follow-up on course specifications (ECTS-fiches)

Patrick Segers has been notified by our students that there has been only a minimal follow-up on the exercise done by our students to screen all course descriptions. All lecturers are urged to have a look at the document in appendix 2 and update the course description at their earliest convenience.

11.4 BEST student course in Biomedical Engineering @ VUB.

BEST, Board of European Students of Technology (Headquarters Rond Point Schuman 6, 1040 Brussels, Belgium). A BEST Course on Technology aims at increasing and widening the professional
knowledge of the participant in a certain field of technology about modern technical applications of technology and the latest research achievements for a total of 22 students.

Provisional date: 12-07-2018 till 20-07-2018 (which coincides with the ‘Gentse Feesten’, the UGent is closed).

Johan Stiens is currently constructing the programme and looking for teachers to help him out.

11.5 Radiochemistry.

The student representatives note that Radiochemistry remains an issue. It is only being taught in Dutch. Patrick Segers will try to schedule a meeting with Filip Devos.

11.6 Work load second half of first semester.

The student representatives note that at VUB side the workload in the second half of the semester is quite high. It would in particular be a task for the Toetscommissie to map the project load of the students.

11.7 Hospital Project

The student representatives note that at VUB side the workload for the hospital project is too high for some students. Bart Jansen and Jef Vandemeulebroucke promise to better delineate the workload with the hospital supervisors.

11.8 Michel Sonck

It is at present unclear whether Michel Sonck will remain a guest lecturer at VUB in the future. There were some difficulties to have his courses scheduled this year, but an arrangement has been made between Michel and the students.

11.9 Registration of VUB students at UGent

The student representatives note that the UGent inscriptions for VUB students was delayed (which was due to illness of the person responsible on UGent side)Johan Stiens and Patrick Segers urge the students to contact them ASAP with these kind of organisatorial issues to alleviate them more rapidly.
### Appendix 1 – Active Erasmus agreements

<table>
<thead>
<tr>
<th>Institute</th>
<th>Country</th>
<th>nr students</th>
<th>nr months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghent University - biomedical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instituto Superior Politécnico José Antonio Echeverría (CUJAE)</td>
<td>Cuba</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>RWTH Aachen University</td>
<td>Germany</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Trinity College Dublin</td>
<td>Ireland</td>
<td>6</td>
<td>6</td>
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<tr>
<td>Politecnico di Milano</td>
<td>Italy</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Università degli Studi di Pavia</td>
<td>Italy</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Rijksuniversiteit Groningen</td>
<td>Netherlands</td>
<td>7</td>
<td>12</td>
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<tr>
<td>Norwegian University of Science and Technology</td>
<td>Norway</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Czech Technical University, Prague</td>
<td>Czech Republic</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Ecole Polytechnique Fédérale de Lausanne</td>
<td>Switzerland</td>
<td>3</td>
<td>5</td>
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<tr>
<td>VUB - biomedical</td>
<td></td>
<td></td>
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<tr>
<td>Lund University</td>
<td>Sweden</td>
<td>2</td>
<td>10</td>
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<tr>
<td>RWTH Aachen</td>
<td>Germany</td>
<td>1</td>
<td>6</td>
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<tr>
<td>NTUA Athens</td>
<td>Greece</td>
<td>2</td>
<td>10</td>
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<tr>
<td>University of Patras</td>
<td>Greece</td>
<td>2</td>
<td>6</td>
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<tr>
<td>Rijksuniversiteit Groningen</td>
<td>Netherlands</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Universitat Politecnica de Valencia</td>
<td>Spain</td>
<td>2</td>
<td>10</td>
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<tr>
<td>VUB – open for all engineering disciplines</td>
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<tr>
<td>Marseille</td>
<td>France</td>
<td>2</td>
<td>10</td>
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<tr>
<td>Ecole Polytechnique Fédérale de Lausanne</td>
<td>Switzerland</td>
<td>2</td>
<td>10</td>
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<tr>
<td>Politecnico di Milano</td>
<td>Italy</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>ULB</td>
<td>Belgium</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>
Appendix 2 – Course descriptions
**Course Specifications:**

All UGENT version were found through:


All VUB versions were found through:


**Compulsory Ugent:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomedical Imaging [en]</td>
<td>Not filled in: Examination methods in case of permanent evaluation, Calculation of the examination mark. But there are several lab sessions with a report which compose ¼ of the points for this course. Also on VUB file.</td>
</tr>
<tr>
<td>Quantitative Cell Biology [en]</td>
<td>Wrong &quot;Extra information on the examination methods&quot;: &quot;During examination period: written closed-book exam complemented with oral examination.&quot; There was no oral examination.</td>
</tr>
<tr>
<td>Technology and Design of Artificial Organs [en]</td>
<td>There was no group work this year, exam was also open book.</td>
</tr>
</tbody>
</table>
| From Genome to Organism [en]                  | Examination methods in case of permanent evaluation is not filled in, but in the Extra information on the examination methods it says personal scientific essay yields 30%  
   I think the essay should be mentioned under “Evaluation methods” and “Examination methods in case of permanent evaluation”. And the 30% should be mentioned under “Calculation of the examination mark” . |
| Biomechanics [en]                             | Not filled in: Examination methods in case of permanent evaluation but there is a project for 9/20 mentioned in “Calculation of the examination mark”  
   Perhaps the fact that the project is in abaqus can be mentioned as well. |
Wrong examination methods: "During examination period: oral closed-book exam, written preparation". This was changed last minute this year because we're such a large group. Remark that they shouldn't forget to change it for next year.

<table>
<thead>
<tr>
<th>Course</th>
<th>Examination Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modelling of Physiological Systems [en]</td>
<td>Open book examination, a presentation was given by students that I think it had no scores but it is written it has 20%, there were no midterm examination but it is stated in course discription</td>
</tr>
<tr>
<td>Compulsory VUB</td>
<td></td>
</tr>
<tr>
<td>from genome to organism VUB</td>
<td>Theoretical questions 80%, ECG lab questions 20% but fiche mentioned Oral Exam determines 75% of the final mark. PRAC Practical Assignment determines 25% of the final mark.</td>
</tr>
<tr>
<td>Bioelectronics VUB</td>
<td></td>
</tr>
<tr>
<td>Modeling in physiological systems VUB</td>
<td>Open book, close book, half open half close book, one presentation, exercises, 3lab reports</td>
</tr>
<tr>
<td>Neuromodulation &amp; imaging VUB-fiche</td>
<td>It says the exam determines 100% of the final mark while there are also reports that determine the mark</td>
</tr>
<tr>
<td>Medical equipment VUB-fiche</td>
<td>It doesn't mention the exam is written</td>
</tr>
<tr>
<td>Elective Ugent</td>
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<td>--------------------------------------------------</td>
</tr>
<tr>
<td><strong>Biostatistics [en]</strong></td>
<td>&quot;end-of-term evaluation and continuous assessment&quot; I assume the continuous assessment means the exercise we have to hand in? Because this makes it sound like we're evaluated on our presence in class</td>
</tr>
<tr>
<td><strong>Polymers for Bio-related Applications [en]</strong></td>
<td>We were not allowed to take this course, as it is the exact same as the part polymers in biomaterials. Since biomaterials is an obligatory course in the first master why is this in the courses?</td>
</tr>
</tbody>
</table>
| **Advanced Image and Signal Processing [en]** | “Beeldregistratie en multimodale beeldvorming”
One random dutch sentence in contents. Calculation of exam mark should include the amount of points for the presentation and the amount for the matlab report you have to write. |
| **Technology of Radiotherapy [en]** | I did not have to write a report, but make a presentation (in a group of 2), so they should either stick to the report or change the info. |
| **Radiochemistry** | Totally wrong: not filled in: Keywords, Position of the course, Initial competences, Learning materials and price, References, Course content-related study coaching, Evaluation methods, Examination methods in case of periodic evaluation during the first examination period, Examination methods in case of periodic evaluation during the second examination period, Examination methods in case of permanent evaluation, Calculation of the examination mark |
|  | content: |
|  | • part taught by A Hermanne |
|  | • Production of radio-isotopes -Cyclotron physics |
|  | • Artificial radioisotopes: neutron rich- neutron poor; reactor production, fission |
|  | • products, accelerator production, specific activity, contaminants, cross sections |
| From Medical Image to Computational Model [nl, en] | Random dutch sentence: "Stromingsmechanica"  
The ratio project, exam is not given (presentation) |
| Computer Assisted Surgery [en] | Missing in UGENT version:  
- Lecturers in academic year 2016-2017  
- Keywords  
- Position of the course  
- Initial competences, Conditions for credit contract  
- Final competences  
- Learning materials and price, References  
- Course content-related study coaching  
- Evaluation methods |
<table>
<thead>
<tr>
<th>Course</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculation of the examination mark</td>
<td>VUB version can't be found</td>
</tr>
<tr>
<td>(they speak of an assignment that needs to be</td>
<td></td>
</tr>
<tr>
<td>defended and an oral exam)</td>
<td></td>
</tr>
<tr>
<td>Physics and Chemistry of Nanostructured Materials [en]</td>
<td>Missing:</td>
</tr>
<tr>
<td></td>
<td>• Final competences</td>
</tr>
<tr>
<td></td>
<td>• how the oral presentation and project grades combine to a final</td>
</tr>
<tr>
<td></td>
<td>point</td>
</tr>
<tr>
<td>Nuclear Magnetic Resonance Imaging Technology [en]</td>
<td>Calculation of the examination mark does not specify the amount</td>
</tr>
<tr>
<td></td>
<td>gained by the project (practical session matlab) and the points</td>
</tr>
<tr>
<td></td>
<td>gained by the exam</td>
</tr>
</tbody>
</table>

### Elective VUB

<table>
<thead>
<tr>
<th>Course</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement Techniques in Nuclear Science [en]</td>
<td>In Ghent version no mentioning of lab session</td>
</tr>
<tr>
<td>VUB</td>
<td>In VUB version also not.</td>
</tr>
<tr>
<td></td>
<td>This year due to time lack it will probably be cancelled. But she mentioned it could count for point</td>
</tr>
<tr>
<td>Nuclear Physics [en]</td>
<td>Ghent version doesn't give the amount of point gained by the practicum</td>
</tr>
<tr>
<td>VUB</td>
<td></td>
</tr>
<tr>
<td>Nuclear Reactors and Cyclotrons [en]</td>
<td>Ghent version is as good as blank, VUB version is more complete</td>
</tr>
<tr>
<td>VUB</td>
<td></td>
</tr>
<tr>
<td>Medical Dosimetry [en]</td>
<td>Ghent version is wrong:</td>
</tr>
<tr>
<td>VUB</td>
<td>Initial competences: is this a list of courses?</td>
</tr>
<tr>
<td></td>
<td>Because the names don't match. + Radiological techniques and Technology of radiotherapy are given in the samen semester.</td>
</tr>
<tr>
<td></td>
<td>If interaction of radiation and matter refers to radiobiology: problem for me didn't take it because it overlapped with biomechanics</td>
</tr>
<tr>
<td></td>
<td>No final competences are filled in</td>
</tr>
<tr>
<td></td>
<td>VUB version is correct</td>
</tr>
<tr>
<td>Biomedical Robotics [en]</td>
<td>Missing in UGENT version:</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Vub</td>
<td>Lecturers in academic year 2016-2017,</td>
</tr>
<tr>
<td></td>
<td>Keywords,</td>
</tr>
<tr>
<td></td>
<td>Position of the course,</td>
</tr>
<tr>
<td></td>
<td>Initial competences,</td>
</tr>
<tr>
<td></td>
<td>Conditions for credit contract,</td>
</tr>
<tr>
<td></td>
<td>Final competences,</td>
</tr>
<tr>
<td></td>
<td>Evaluation methods</td>
</tr>
</tbody>
</table>

VUB version better

<table>
<thead>
<tr>
<th>Virtual Reality [en]</th>
<th>Missing in UGENT version:</th>
</tr>
</thead>
<tbody>
<tr>
<td>VUB</td>
<td>Lecturers in academic year 2016-2017,</td>
</tr>
<tr>
<td></td>
<td>Keywords,</td>
</tr>
<tr>
<td></td>
<td>Position of the course, Initial competences,</td>
</tr>
<tr>
<td></td>
<td>Conditions for credit contract, Final competences,</td>
</tr>
<tr>
<td></td>
<td>Learning materials and price,</td>
</tr>
<tr>
<td></td>
<td>References,</td>
</tr>
<tr>
<td></td>
<td>Course content-related study coaching</td>
</tr>
<tr>
<td></td>
<td>Evaluation methods,</td>
</tr>
<tr>
<td></td>
<td>Examination methods in case of periodic evaluation during the first examination period,</td>
</tr>
<tr>
<td></td>
<td>Examination methods in case of periodic evaluation during the second examination period,</td>
</tr>
<tr>
<td></td>
<td>Examination methods in case of permanent evaluation</td>
</tr>
</tbody>
</table>

VUB version: 
There is mentioning of a project: make an
<table>
<thead>
<tr>
<th>Micro and Nanobiotechnology [en]</th>
<th>VUB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missing UGENT version:</td>
<td></td>
</tr>
<tr>
<td>• Lecturers in academic year 2016-2017,</td>
<td></td>
</tr>
<tr>
<td>• Keywords,</td>
<td></td>
</tr>
<tr>
<td>• Position of the course,</td>
<td></td>
</tr>
<tr>
<td>• Initial competences,</td>
<td></td>
</tr>
<tr>
<td>• Evaluation methods,</td>
<td></td>
</tr>
<tr>
<td>Under “Examination methods in case of periodic evaluation during the first examination period” there is written Oral examination but the “Calculation of the examination mark” only mentions a presentation on 100% of the final mark.</td>
<td></td>
</tr>
<tr>
<td>The VUB version states that all powerpoints are shared through Pointcarre but do UGENT students have access?</td>
<td></td>
</tr>
<tr>
<td><strong>Technological Processes for Photonics and Electronics [en]</strong></td>
<td><strong>Embedded Bioelectronics Systems [en]</strong></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td><strong>VUB</strong></td>
<td><strong>VUB</strong></td>
</tr>
<tr>
<td><strong>Missing UGENT version:</strong></td>
<td><strong>Missing UGENT version:</strong></td>
</tr>
<tr>
<td>• Lecturers in academic year 2016-2017</td>
<td>• Keywords</td>
</tr>
<tr>
<td>• Keywords</td>
<td>• Position of the course</td>
</tr>
<tr>
<td>• Position of the course</td>
<td>• Contents</td>
</tr>
<tr>
<td>• Contents</td>
<td>• Initial competences</td>
</tr>
<tr>
<td>• Initial competences</td>
<td>• Conditions for credit contract</td>
</tr>
<tr>
<td>• Conditions for credit contract</td>
<td>• Final competences</td>
</tr>
<tr>
<td>• Final competences</td>
<td>• Learning materials and price</td>
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<tr>
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<tr>
<td>• Examination methods</td>
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<tr>
<td>• Examination methods in case of periodic evaluation during the first examination period</td>
<td>• Examination methods in case of periodic evaluation during the second examination period</td>
</tr>
<tr>
<td>• Examination methods in case of periodic evaluation during the second examination period</td>
<td>• Examination methods in case of permanent evaluation</td>
</tr>
<tr>
<td>• Examination methods in case of permanent evaluation</td>
<td><strong>VUB version:</strong></td>
</tr>
<tr>
<td>• Calculation of the examination mark (there is mentioning of a project)</td>
<td><strong>VUB version:</strong></td>
</tr>
</tbody>
</table>

**VUB version complete**
There is mentioning of a project: “group project aims to build an embedded bioelectronics systems” but the exam determines 100% of the final mark

<table>
<thead>
<tr>
<th>Neuro-physiological Signal Processing and Network Analysis [en]</th>
<th>Missing in UGENT version:</th>
</tr>
</thead>
<tbody>
<tr>
<td>VUB</td>
<td>• Lecturers in academic year 2016-2017</td>
</tr>
<tr>
<td></td>
<td>• Keyword</td>
</tr>
<tr>
<td></td>
<td>• Position of the course</td>
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<tr>
<td></td>
<td>• Contents</td>
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<td>• Conditions for credit contract</td>
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<td>• Final competences</td>
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VUB version:

Under “Additional info with regard to grading” there is mentioned Oral examination (75%) and participation in the interactive classical (25%) but I think this should be mentioned under “Grading” where it now states “Exam determines 100% of the final mark”