Master of Applied Science & Engineering: Computer Science

Department of Computer Science

Vrije Universiteit Brussel
2019-2020
Master programs in Computer Science

Master of Science in Applied Sciences and Engineering: Computer Science / Master of Science in de Ingenieurswetenschappen: Computerwetenschappen (2 yrs, English)
- Advanced CS programme, in-depth scientific study of the field
- Organised by Faculty of Sciences and Bio-Engineering Sciences

Master of Science in de Toegepaste Informatica (1 yrs, Dutch)
- Applied CS Programme

Master of Science in Applied Sciences and Engineering: Applied Computer Science (2 yrs, English)
- For students without background in Computer Science
- More applied
- Organised by Faculty of Engineering
Organising Departments & Specialisations

- **Department of Computer Science (DINF)**
  - [dinf.vub.ac.be](http://dinf.vub.ac.be)
  - Faculty of Sciences and Bio-engineering sciences (WE)
  - Buildings F and G, 10th floor
  - *Artificial intelligence; Software languages and software engineering; Web and information systems*

- **Department of Electronics and Informatics (ETRO)**
  - [www.etrovub.be](http://www.etrovub.be)
  - Faculty of Engineering (IR)
  - Building K
  - *Multimedia*

- Some courses are organised in collaboration with the **Université Libre de Bruxelles (ULB)**
Profiles and Research Labs

Artificial intelligence
ai.vub.ac.be

Multimedia
www.etrovub.be

Software languages and software engineering
soft.vub.ac.be

Web and information systems
wise.vub.ac.be

Professors of these research labs teach the courses of the corresponding profile.

+ You will most probably do your thesis work in one of these labs.
VIPs

Prof. Dr. Viviane Jonckers
viviane.jonckers@vub.be
Department Chair

Prof. Dr. Bernard Manderick
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Chairman Examination Committee

Prof. Dr. Wolfgang De Meuter
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Reen Tallon
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Trajectory counselor

Marjan Maes
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Internationalisation Support

Kevin Pinte
kevin.pinte@vub.be
Local Coördinator DINF
Enrolment & Becoming a VUB Student


- **Enrol** via the online application form or via the student administration center

  **Deadlines!**

- Get your **student card**

- Create your **NetID**
  - E-mail address
  - Student self-service
  - Online learning platform **Canvas**

- **Register** for your courses:
  - via the student self-service
  - via stbfacwe@vub.ac.be (special cases)

  **Deadlines!**
### Structure of the 2Y MA Programme

**Master of Science in Applied Sciences and Engineering: Computer Science / Master of Science in de Ingenieurswetenschappen: Computerwetenschappen**

**120 ECTS (European Credit Transfer System) ~ 2 Academic Years**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Year</th>
<th>ECTS</th>
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</thead>
<tbody>
<tr>
<td>6 mandatory courses</td>
<td>1 *</td>
<td>30</td>
</tr>
<tr>
<td>research training + thesis</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>mandatory courses within profile</td>
<td>1 + 2</td>
<td>30 or more</td>
</tr>
<tr>
<td>electives within profile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>electives from other profiles, other electives</td>
<td>1 + 2</td>
<td>rest</td>
</tr>
</tbody>
</table>

* You can postpone some of these until Year 2
** If you wish to do more than 120ECTS, you have to pay more and you must(!) pass all subjects

Exam Schedules may play a role in your choice: [we.vub.ac.be](http://we.vub.ac.be)

You can graduate in ((January xor July) or September)

You **must** register for January!
Composing Your MA Programme

Requirements for obtaining the diploma (verified at the end of 2nd year):
You need to pass **120 ECTS** (i.e. 10/20 for all the courses, no exceptions!)
- All **compulsory** courses (= 30 ECTS)
- All mandatory courses of your profile
- At least **30 ECTS** in your **profile** (including the mandatory ones)
- Done a **thesis & research training** (= 6+24 ECTS) in your profile

Typical 1st year:
- Take all/most mandatory courses = 30 ECTS
- Choose other courses, within and/or outside your profile = 30 ECTS
- Profile choice is only preliminary (actual decision in 2nd year)

Electives (all but 6 ECTS) need to come from the CS curriculum:

Some courses have prerequisites **and/or** require prior knowledge
→ read course description;
→ ‘special electives with limited access’ (see below)
Example 1: “I know what I want: XX”

1st year
All mandatory courses: 30 ECTS
All mandatory courses within the XX profile: 24 ECTS
An elective within the XX profile: 6 ECTS
**Total**: 60 ECTS in 1st year

2nd year
Research training and thesis with XX professor: 30 ECTS
Electives related to thesis: 30 ECTS
**Total**: 60 ECTS in 2nd year

- Think about the balance between 1st and 2nd semester
- Think about prerequisites and/or prior knowledge
- Make sure chosen courses don’t overlap in the timetables
- Look at the exam schedules (available on we.vub.ac.be)
- Postpone courses to the 2nd year if necessary
- Don’t take too much course work in 4th semester
### Example 2: “Can’t decide just yet…”

#### 1st year
- All mandatory courses: 30 ECTS
- Some mandatory courses within the YY profile: 18 ECTS
- Some mandatory courses within the ZZ profile: 12 ECTS
  - **Total:** 60 ECTS in 1st year

#### 2nd year
- Research training and thesis with ZZ professor: 30 ECTS
- Rest of mandatory courses within the ZZ profile: 6 ECTS
- Electives based on personal preferences: 24 ECTS
  - **Total:** 60 ECTS in 2nd year

- Think about the balance between 1st and 2nd semester
- Think about prerequisites and/or prior knowledge
- Make sure chosen courses don’t overlap in the timetables
- Look at the exam schedules (available on [we.vub.ac.be](http://we.vub.ac.be))
- Postpone courses to the 2nd year if necessary
- Don’t take too much course work in 4th semester
Certain **Master electives** were already taken by many students in their Bachelor. They obviously cannot choose them again ⇒

“Electives conditional to the agreement of the examination committee”

**However**, in case you never took the ones in blue, you “must” take those in year 1 of your MA programme (depending on your specialisation):

- **Artificial intelligence**
  - Machine learning
  - (Techniques of artificial intelligence)

- **Multimedia**
  - Multimedia processing tools

- **Software languages and software engineering**
  - Higher Order Programming (∼ Structure & Interpretation of CPs)
  - (Interpretation of computer programs 2)

- **Web and information systems**
  - Web Technologies
Message to ALL students who did NOT do their bachelor at VUB

Make an appointment with Kevin Pinte
kevin.pinte@vub.be

To check background knowledge for the master courses
The Web and Information Systems specialisation will be re-oriented into a Data Management and Analytics specialisation.

However, there are bridging rules

Option 1
- In 2020-2021 you can continue and graduate in the original Web and Information System specialisation.
- In case you are not ready with the program after 2 years you can still defend a thesis and graduate in 2021-2022.

Option 2
- In 2020-2021 you can switch and graduate in the new Data Management and Analytics specialisation if you choose your courses well this year.
Message to ALL students who plan to do the Web and Information System specialisation

Make an appointment with Kevin Pinte
kevin.pinte@vub.be

To advise on the course selection in the context of a programme change in 2020-2021
Registering for Courses

Via the student self-service
Cf. student.cumulus.vub.ac.be
Check Deadline!

Problems?
Check https://student.vub.be/en/course-registration and/or
Contact stbfacwe@vub.ac.be if problems persist

Deviations from default curriculum
Application form (e.g., ‘special electives with limited access’)
https://we.vub.ac.be/node/1628/

Trajectory Counselor:
Ms. Reen Tallon or Marjon Blondeel (stbfacwe@vub.ac.be)
1st semester:
1 week without classes (ULB)
13 weeks of classes
2 weeks winter holiday
1 extra week for studying
3 weeks of exams

1 week without classes

2nd semester:
n weeks of classes
2 weeks spring holiday
13-n weeks of classes
2 weeks for studying
4 weeks of exams

2nd Exam Session
4 weeks of exams

<table>
<thead>
<tr>
<th>Van - t.e.m.</th>
<th>Activiteiten</th>
<th>Week</th>
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</thead>
<tbody>
<tr>
<td>16/09/19</td>
<td>Lesvrije week (A) / Ontvaalweek voor nieuwe studenten (a)</td>
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<tr>
<td>22/09/19</td>
<td>20.09.19 ACADEMISCHE OPENING</td>
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<td>23/09/19</td>
<td>Ma 23.09.19 Aanvang colleges</td>
<td>2</td>
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<tr>
<td>29/09/19</td>
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<td>19/01/20</td>
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</table>

Wintervakantie
Wo 25.12.19 Wettelijke feestdag
Do 26.12.19 Academisch verlof
Vr 27.12.19 VUB gesloten
Di 31.12.19 Wettelijke feestdag
Wo 01.01.20 Wettelijke feestdag

Blokkweek (b)
Ma 13.01.20 Opening zittijd eerste semester
## Academic Calendar

### Einde eerste semester - Aanvang onderwijs evaluatie 1ste semester

<table>
<thead>
<tr>
<th>Week</th>
<th>Event</th>
<th>Code</th>
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<tbody>
<tr>
<td>10/20/20</td>
<td>Aanvang colleges tweede semester</td>
<td>22</td>
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<tr>
<td>16/02/20</td>
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<td>17/02/20</td>
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<td>24</td>
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<td>01/03/20</td>
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<td>30/03/20</td>
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<td>29</td>
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<tr>
<td>05/04/20</td>
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</tbody>
</table>

### Einde tweede semester - Aanvang onderwijs evaluatie 2de semester

<table>
<thead>
<tr>
<th>Week</th>
<th>Event</th>
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<tbody>
<tr>
<td>06/07/20</td>
<td>Zomervakantie</td>
<td>43-48</td>
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<tr>
<td>16/08/20</td>
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<tr>
<td>17/08/20</td>
<td>Ma 17.08.20 Opening 2de zittijd</td>
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<td>23/08/20</td>
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<td>24/08/20</td>
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<tr>
<td>06/09/20</td>
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<td>51</td>
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<tr>
<td>07/09/20</td>
<td>Za 12.09.20 Sluiting 2de zittijd voor alle faculteiten + IDLO</td>
<td>52</td>
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<tr>
<td>13/09/20</td>
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<tr>
<td>14/09/20</td>
<td>Lesvrije week [a]</td>
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<td>20/09/20</td>
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<tr>
<td>21/09/20</td>
<td>Ma 21.09.20 Aanvang colleges</td>
<td>2</td>
</tr>
<tr>
<td>27/09/20</td>
<td>Di 22.09.20 Academische opening</td>
<td></td>
</tr>
</tbody>
</table>

(a) Periode waarin er geen examens, lessen of andere onderwijsactiviteiten doorgaan, met uitzondering van onthaal- en voorbereidingsactiviteiten en pretoetsen tijdens de lesvrije week van het eerste semester (definite OER 2018-2019). Deze week kan gebruikt worden voor administratieve afhandeling van dossiers en deliberaat. Uitgezonderd voor Brufface-studenten.

(b) Periode, voorafgaand aan de examenperiode, waarin - behoudens de uitzondering hierna vermeld - geen examens of andere vormen van evaluatie gebeuren en geen lessen gegeven worden. Maximum 50% van elke blokperiode kan besteed worden aan examens, dat wil zeggen: * ½ week (2e helft) van de blokweek (week 17) na de wintervakantie; * 1 week (de 2e blokweek) van de blokperiode (week 37-38) voorafgaand aan de tweede examenperiode van de eerste zittijd. Het is de periode waarin studenten
## Time Tables


### HOC = lecture

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<tbody>
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</tbody>
</table>

### WPO = lab

### D.3.12 = Building.floor.room

### Dutch 101:

- **Ma = maandag = Monday**
- **Di = dinsdag = Tuesday**
- **Woe = woensdag = Wednesday**
- **Do = donderdag = Thursday**
- **Vrij = vrijdag = Friday**
**Exams (1/2)**

**Type of examination/evaluation** specified in course description:  
http://www.vub.ac.be/en/study/applied-sciences-and-engineering-computer-science/#programme (scroll to the bottom and select appropriate program)  
Carefully read course descriptions!

**Depending on the course:**  
Written or oral (or both) ?  
Open or closed book ?  
Project(s)?  
Written Assignments?

**Exam Schedules:**  
Read emails + **Canvas** messages **carefully.**
Exams (2/2)

An academic year has 2 exam “sessions” (~ 2 attempts)

1st exam session:
1st exam period in January (1st semester courses)
2nd exam period in June (2nd semester courses + whole year courses)

2nd exam session:
(all courses, unless description explicitly says there is no 2nd session!)

Scores announced at end of exam session
score ≥ 10/20 → course passed, you obtain the ECTS
score < 10/20 → course failed

I failed a course
redo the exam in 2nd session
take the course (or alternative) in the 2nd year
(you can do a 5th semester if necessary, requires extra enrolment)

You must register to finish in January!

Rescheduling in case of Force Majeure:
Only allowed in specific situations (www.vub.ac.be/en/regulations)
If you get ill, always ask your doctor for a certificate & submit it @4F
Facilities: WiFi

**VUBnet**
University-wide hot spot provided by university
Use VUB NetID

**IG-Airlines**
Best option in building E computer rooms
Use VUB NetID

**Eduroam**
Hot spot at many universities (both in Belgium and abroad)
Use VUB NetID
Append `@vub.ac.be` to username when not at VUB / ULB
Facilities: Student Association

InfoGroep
www.infogroep.be
Building E, 1st floor

Their Services
Maintain building E computer rooms
 Windows / Linux and Mac OS X
 For lab sessions and individual use
 Use your VUB NetID
 Supply copies of course notes, slides, ...
 Have some books at discount rates
 Can provide help with certain computer related issues
 Nerdy stuff & Integration

They invite you to their informal reception
Check the time schedule - week 3 or 4
Facilities: canvas

canvas.vub.be

VUB’s Learning Platform

Use your VUB NetID

Automatic access to workspaces for registered courses

Announcements by professors & TAs

Download Documents (course notes, slides, ... )

Uploading & Handing in assignments

Registering for oral exam slots

...
Library access is free
Buildings B and C, 1st floor
Use your student card to borrow books
Online access to scientific journals!

Buy course material (e.g., books)
Standaard Student Shop, building B,
ground floor
bol.com
amazon.co.uk
VUB is a democratic university
I.e., student participation @ all managerial levels
Not always equally interesting/relevant

Studentenraad (Dutch)
https://student.vub.be/studentenraad#nieuws

International student platform (English)

Opleidingsraad / Programme Board
If you are interested please contact the programme director

Other boards and councils
Faculty, PR, Department, ...
Getting Information

About a specific course
Teaching assistant, professor, https://canvas.vub.be

Timetables, exam schedules, forms, ...
Faculty of Science and Bio-Engineering Sciences
we.vub.ac.be
Room F.4.107 (secretariat “4F”)

Exceptions to curriculum, special electives
Reen Tallon or Marjon Blondeel, stbfacwe@vub.ac.be

Internationalisation (e.g. Erasmus)
Marjan Maes, Marjan.Maes@vub.be

Remaining Questions (after using the above 4!)
Kevin Pinte kevin.pinte@vub.be (local coordinator)
This presentation

You can find this presentation here:

tiny.cc/master-computer-science