



TOEGEPASTE INFORMATICA

TOEGEPASTE  
INFORMATICA

**howest**  
we develop people

## BACHELOR - BRUGGE Campus Rijselstraat

Gefascineerd door een wereld die meer en meer digitaal wordt? Toegepaste Informatica biedt de ideale opleiding om te specialiseren in web & native mobile apps, webontwikkeling, big data, Internet of Things, IT architectuur, bedrijfsprocessen, cyber-security, embedded development en ethical hacking.

### Bovenop een stevige basis IT, kies je vanaf het tweede jaar topics uit een keuzetraject:

- **ICT consultant:** je adviseert bedrijven bij het implementeren van de nieuwste technologieën
- **Software & Systems Engineer:** je ontwikkelt web, mobiele en IoT oplossingen
- **Computer & Cyber Crime Professional:** je organiseert de cybersecurity en rekt af met cybercrime

## Je komt terecht in volgende beroepen

Informaticus is een knelpuntberoep. Tal van jobkansen dus, zoals: Web & Mobile developer, Business Intelligence consultant, Netwerk & System engineer, Forensics Expert, Penetration Tester, Risk & Security consultant, IT consultant, ERP consultant, Data privacy officer, ...

## Troeven

Je kan zowel in een grote multinational als een kleine KMO functioneren. Veel studenten komen uit andere provincies bij ons studeren. Niet enkel voor onze unieke keuzetrajecten, vele praktijkprojecten en werkcolleges op maat, maar ook omdat we de reputatie hebben bij het werkveld om een kwalitatief diploma af te leveren.



**Tip:** voor onze andere opleidingen binnen **Design & technologie** neem een kijkje op **howest.be**



**Volg ons op facebook**  
[www.facebook.com/HowestTI](https://www.facebook.com/HowestTI)

### Meer info:

ti@howest.be  
[www.howest.be/toegepaste-informatica](http://www.howest.be/toegepaste-informatica)  
@howestTI  
050 38 12 77

2017-2018

## ICT CONSULTANT

UNIEK!

|                              | SEMESTER 1  | SEMESTER 2  | SEMESTER 3   | SEMESTER 4   | SEMESTER 5  | SEMESTER 6   |
|------------------------------|---|---|--|--|---|--|
| ICT INFRASTRUCTURE           | <ul style="list-style-type: none"> <li>/ Desktop and mobile operating systems (3 SP)</li> <li>/ Hardware (3 SP)</li> </ul>                                      | <ul style="list-style-type: none"> <li>/ Computer networks (6 SP)</li> </ul>  |  | <ul style="list-style-type: none"> <li>/ Server operating systems concepts (3 SP)</li> </ul>   |   | <ul style="list-style-type: none"> <li>/ Internship and bachelor thesis (27 SP)</li> <li>/ Seminars, study visits and challenges (3 SP)</li> </ul> |
| INFORMATION MANAGEMENT       | <ul style="list-style-type: none"> <li>/ Databases (3 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ Analysis and modeling techniques (3 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ Information modeling (2 SP)</li> <li>/ Advanced SQL (2 SP)</li> <li>/ Webservices and information exchange (2 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ Big data, business intelligence and NoSQL (3 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ CMS (3 SP)</li> <li>/ Knowledge management and document management systems (3 SP)</li> </ul>   |  |
| SOFTWARE DEVELOPMENT         | <ul style="list-style-type: none"> <li>/ Programming (6 SP)</li> <li>/ Logics and problem solving (3 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ Object oriented programming (6 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ Secure object oriented architectures (6 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ .NET Technology (3 SP)</li> <li>/ Software implementation and change management (3 SP)</li> </ul>       |   |  |
| ICT MANAGEMENT               | <ul style="list-style-type: none"> <li>/ Digital economics (2 SP)</li> <li>/ Digital business management (2 SP)</li> <li>/ Process management (2 SP)</li> </ul> |   | <ul style="list-style-type: none"> <li>/ Statistics and decision making (4 SP)</li> <li>/ Privacy and IT law (2 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ Supply chain / ERP (4 SP)</li> <li>/ ICT strategy and planning (3 SP)</li> <li>/ CRM (2 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ IT governance (2 SP)</li> <li>/ IT entrepreneurship (2 SP)</li> <li>/ Professional communication (2 SP)</li> <li>/ Business process modeling and software (2 SP)</li> <li>/ WMS / MES (2 SP)</li> <li>/ Advanced ERP (2 SP)</li> </ul> |  |
| WEB AND MOBILE               | <ul style="list-style-type: none"> <li>/ HTML, CSS and JavaScript (6 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ Server-side scripting (2 SP)</li> <li>/ Web and mobile UI (2 SP)</li> <li>/ Web pentesting (2 SP)</li> </ul>       | <ul style="list-style-type: none"> <li>/ Java web technology (3 SP)</li> <li>/ Advanced JavaScript (2 SP)</li> <li>/ User experience design (2 SP)</li> <li>/ Business solutions and digital marketing (2 SP)</li> </ul> | <ul style="list-style-type: none"> <li>/ Advanced server web (2 SP)</li> <li>/ Mobile web apps (2 SP)</li> <li>/ Smart devices (2 SP)</li> </ul> | <ul style="list-style-type: none"> <li>/ Security management, threat and risk management (3 SP)</li> </ul>  |  |
| PROJECTS AND BACHELOR THESIS |   | <ul style="list-style-type: none"> <li>/ Project management (2 SP)</li> <li>/ Project communication (3 SP)</li> <li>/ Programming project (4 SP)</li> </ul> | <ul style="list-style-type: none"> <li>/ Programming project (3 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ International project (3 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ IT project (6 SP)</li> <li>/ International communication (3 SP)</li> <li>/</li> </ul>  |  |

2017-2018

# SOFTWARE & SYSTEMS ENGINEER

|                              | SEMESTER 1  | SEMESTER 2  | SEMESTER 3  | SEMESTER 4  | SEMESTER 5  | SEMESTER 6   |
|------------------------------|---|---|---|---|---|--|
| ICT INFRASTRUCTURE           | <ul style="list-style-type: none"> <li>/ Desktop and mobile operating systems (3 SP)</li> <li>/ Hardware (3 SP)</li> </ul>                                      | <ul style="list-style-type: none"> <li>/ Computer networks (6 SP)</li> </ul>  |   | <ul style="list-style-type: none"> <li>/ Server operating systems concepts (3 SP)</li> <li>/ Windows Server lab (3 SP)</li> <li>/ Linux Server lab (3 SP)</li> </ul>                  | <ul style="list-style-type: none"> <li>/ VMware, cloud computing and security (3 SP)</li> <li>/ Windows and Linux Server advanced (3 SP)</li> </ul>         | <ul style="list-style-type: none"> <li>/ Internship and bachelor thesis (27 SP)</li> <li>/ Seminars, study visits and challenges (3 SP)</li> </ul> |
| INFORMATION MANAGEMENT       | <ul style="list-style-type: none"> <li>/ Databases (3 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ Analysis and modeling techniques (3 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ Information modeling (2 SP)</li> <li>/ Advanced SQL (2 SP)</li> <li>/ Webservices and information Exchange (2 SP)</li> </ul>                               | <ul style="list-style-type: none"> <li>/ Big data, business intelligence and NoSQL (3 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ CMS (3 SP)</li> </ul>  |  |
| SOFTWARE DEVELOPMENT         | <ul style="list-style-type: none"> <li>/ Programming (6 SP)</li> <li>/ Logics and problem solving (3 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ Object oriented programming (6 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ Secure object oriented architectures (6 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ .NET Technology (6 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ Foundation .NET (3 SP)</li> </ul>  |  |
| ICT MANAGEMENT               | <ul style="list-style-type: none"> <li>/ Digital economics (2 SP)</li> <li>/ Digital business management (2 SP)</li> <li>/ Process management (2 SP)</li> </ul> |   | <ul style="list-style-type: none"> <li>/ Statistics and decision making (4 SP)</li> <li>/ Privacy and IT law (2 SP)</li> </ul>  |   | <ul style="list-style-type: none"> <li>/ IT governance (2 SP)</li> <li>/ IT entrepreneurship (2 SP)</li> <li>/ Professional communication (2 SP)</li> </ul> |  |
| WEB AND MOBILE               | <ul style="list-style-type: none"> <li>/ HTML, CSS and JavaScript (6 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ Server-side scripting (2 SP)</li> <li>/ Web and mobile UI (2 SP)</li> <li>/ Web pentesting (2 SP)</li> </ul>       | <ul style="list-style-type: none"> <li>/ Java web technology (3 SP)</li> <li>/ Advanced JavaScript (2 SP)</li> <li>/ Advanced web Topics (2 SP)</li> <li>/ User experience design (2 SP)</li> </ul> | <ul style="list-style-type: none"> <li>/ Advanced server web (2 SP)</li> <li>/ Mobile web apps (3 SP)</li> <li>/ Native mobile apps (2 SP)</li> <li>/ Smart devices (2 SP)</li> </ul> | <ul style="list-style-type: none"> <li>/ Frameworks and cloud development (4 SP)</li> <li>/ Internet of things (2 SP)</li> </ul>                            |  |
| PROJECTS AND BACHELOR THESIS |   | <ul style="list-style-type: none"> <li>/ Project management (2 SP)</li> <li>/ Project communication (3 SP)</li> <li>/ Programming project (4 SP)</li> </ul> | <ul style="list-style-type: none"> <li>/ Programming project (3 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ International project (3 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ IT project (6 SP)</li> </ul>   |  |

2017-2018

# COMPUTER & CYBER CRIME PROFESSIONAL

UNIEK!

|                              | SEMESTER 1  | SEMESTER 2  | SEMESTER 3  | SEMESTER 4   | SEMESTER 5  | SEMESTER 6   |
|------------------------------|---|---|---|--|---|--|
| ICT INFRASTRUCTURE           | <ul style="list-style-type: none"> <li>/ Desktop and mobile operating systems (3 SP)</li> <li>/ Hardware (3 SP)</li> </ul>                                      | <ul style="list-style-type: none"> <li>/ Computer networks (6 SP)</li> </ul>  |   | <ul style="list-style-type: none"> <li>/ Server operating systems concepts (3 SP)</li> <li>/ Windows Server lab (3 SP)</li> <li>/ Linux Server lab (3 SP)</li> </ul> | <ul style="list-style-type: none"> <li>/ VMware, cloud computing and security (3 SP)</li> <li>/ Windows and Linux Server advanced (3 SP)</li> <li>/ Network and CCNA security (3 SP)</li> </ul> | <ul style="list-style-type: none"> <li>/ Internship and bachelor thesis (27 SP)</li> <li>/ Seminars, study visits and challenges (3 SP)</li> </ul> |
| INFORMATION MANAGEMENT       | <ul style="list-style-type: none"> <li>/ Databases (3 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ Analysis and modeling techniques (3 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ Information modeling (2 SP)</li> <li>/ Advanced SQL (2 SP)</li> <li>/ Webservices and information exchange (2 SP)</li> </ul> | <ul style="list-style-type: none"> <li>/ Network and systems penesting (3 SP)</li> <li>/ Forensic analysis (3 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ Security management, threat and risk assessment (3 SP)</li> <li>/ Cryptography (3 SP)</li> </ul>   |  |
| SOFTWARE DEVELOPMENT         | <ul style="list-style-type: none"> <li>/ Programming (6 SP)</li> <li>/ Logics and problem solving (3 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ Object oriented programming (6 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ Secure object oriented architectures (6 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ .NET Technology (3 SP)</li> <li>/ Practical reverse engineering and malware analysis (3 SP)</li> </ul>                      |   |  |
| ICT MANAGEMENT               | <ul style="list-style-type: none"> <li>/ Digital economics (2 SP)</li> <li>/ Digital business management (2 SP)</li> <li>/ Process management (2 SP)</li> </ul> |   | <ul style="list-style-type: none"> <li>/ Statistics and decision making (4 SP)</li> <li>/ Privacy and IT law (2 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ Cybercrime (3 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ IT governance (2 SP)</li> <li>/ IT entrepreneurship (2 SP)</li> <li>/ Professional communication (2 SP)</li> </ul>                                     |  |
| WEB AND MOBILE               | <ul style="list-style-type: none"> <li>/ HTML, CSS and JavaScript (6 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ Server-side scripting (2 SP)</li> <li>/ Web and mobile UI (2 SP)</li> <li>/ Web penesting (2 SP)</li> </ul>        | <ul style="list-style-type: none"> <li>/ Java web technology (3 SP)</li> <li>/ Advanced JavaScript (2 SP)</li> <li>/ Web security and HoneyPot (4 SP)</li> </ul>      | <ul style="list-style-type: none"> <li>/ Mobile web apps and security (3 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ Emergent security technologies (3 SP)</li> </ul>   |  |
| PROJECTS AND BACHELOR THESIS |   | <ul style="list-style-type: none"> <li>/ Project management (2 SP)</li> <li>/ Project communication (3 SP)</li> <li>/ Programming project (4 SP)</li> </ul> | <ul style="list-style-type: none"> <li>/ Programming project (3 SP)</li> </ul>  | <ul style="list-style-type: none"> <li>/ International project (3 SP)</li> </ul>   | <ul style="list-style-type: none"> <li>/ IT project (6 SP)</li> </ul>   |  |