

# Faculty of Science Work Programme Internationalisation 2018-2021

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## 1. Management summary

In November 2017 the faculty board appointed two working groups: Internationalisation in Research and Internationalisation in Education. The assignment was to evaluate which internationalisation goals the faculty of Science has realised in the period 2015-2017, what is open to improvement and to formulate an implementation programme 2018-2021 for internationalisation.

### Evaluation 2015-2017

The faculty of Science appointed a coordinator internationalisation and set up a monthly internationalisation consultation with domain representatives chaired by the coordinator. The internationalisation coordinator is the faculty liaison in the monthly meetings of UU and faculty internationalisation coordinators.

Internationalisation actions have resulted in

- an international research community. The faculty invested in framework conditions for selecting, recruiting and binding international talent. All institutes/groups collaborated with international partners. Almost all publications were with international colleagues.
- attracting international talent in master's education. The Graduate School of Life Sciences (GSLs) and the Graduate School of Natural Sciences (GSNS) met the 20% target of international 1<sup>st</sup> year master's students.
- an executed language policy: English information, directives/procedures and English-spoken receptions/information sessions.
- additional investment in networks and partners to facilitate student and staff mobility. The number of students going on exchange increased both incoming and outgoing.
- better facilitated exchange in Bachelor's education. A flexible curriculum and an increased number of English taught Bachelor courses including two minors are in place. An English taught interdisciplinary Life Science Bachelor programme was explored and is planned to start in September 2020.

A point of improvement in attracting talent or improved mobility is the lack of facilities e.g. housing, scholarships, courses open to exchange, strong competition and workload of staff. Staff plays a key role in intensifying international cooperation and setting up networks of preferred partners. More information at faculty level on existing research cooperation is also helpful.

### Deliverables 2018-2021

Prioritised deliverables were selected based on defined criteria and discussions with stakeholders. Both working groups concluded that investing in improved facilities requires ongoing action. Attention should be paid to intercultural skills of both students and employees and to the international dimension in education. Identified top priorities and deliverables are:

- selecting, attracting and binding excellent international staff at senior level
  - an ISD packages used throughout the faculty for international staff recruitment including a tailor-made offer

### HIGHLIGHTS IN 2017

Faculty of Science has 29% international employees

17/18: GSLs and GSNS both 23% international 1<sup>st</sup> year students

All faculty communication is in English or bilingual

From 14/15 to 16/17 outgoing student exchange increased 55% and incoming 17%

In 17/18 119% more undergraduate English taught courses compared to 14/15

2018: 2 English taught minors

2020: English taught Life Science interdisciplinary Bachelor

- A plan how to handle the needs of new international staff
- All information available in English and Dutch
- attracting the excellent international student.
  - Start English taught interdisciplinary Life Science Bachelor programme in September 2020.
  - Increase English taught Bachelor courses by 30% in 2021

See page 7 for the Work Programme Internationalisation 2018-2021 deliverables.

## 2. Introduction

Internationalisation is embedded in the faculty's research and education strategy as a means to improve quality by enhancing the international dimension. The faculty of Science educates students to be an international competent member of society. Research at the faculty of Science is of high international standard.

The faculty aims to attract talent globally -from students to professor-, working and learning together in a diverse community. Moreover intercultural competences and international learning or work experience help to strengthen social and personal skills (K.I. van der Zee, 2000) and enhance employability (Jones, 2013).

Utrecht University wants to put more effort into becoming an international university. The Executive Board of Utrecht University approved an Internationalisation Implementation Plan 2016-2020 aimed at coordinating initiatives on a corporate level. The Executive Board requested faculties to make a Work Programme Internationalisation and invest in a faculty coordinator responsible for the faculty internationalisation programme.

This paper describes which internationalisation goals the faculty of Science has realised in the period 2015-2017 and what is open to improvement. A Work Programme Internationalisation 2018-2021 with defined deliverables is formulated, strongly embedded in the Strategic Plan 2017-2021.

## 3. Evaluation 2015-2017

A Work Programme Internationalisation 2015-2017 was presented in November 2015. This work programme was based on 3 aims of the Strategic Plan 2013-2017:

- an international student community especially in graduate education;
- education in an international context and preparation on an international labour market;
- research in an international environment together with world leading partners and researchers.

In 2016 the faculty of Science appointed an internationalisation coordinator. In a complex organisation such as the faculty of Science, coordinating internationalisation means fine tuning at various levels. A monthly internationalisation consultation with domain representatives (Human Resources, Communication & Marketing, Research & Valorisation, Student Affairs and Governance Support) was set up, chaired by the internationalisation coordinator. The internationalisation coordinator is the faculty liaison in the monthly meetings of UU and faculty internationalisation coordinators.

Fine tuning the UU Internationalisation Implementation Plan 2016-2020 with the Work Programmes Internationalisation of faculties has proven to be an obstacle. To tackle this challenge a Taskforce Internationalisation started in May 2018 to prepare an advice for the Executive Board how to continue. The faculty of Science is represented by prof. dr. Andries Meijerink.

### 3.1 Education: evaluation 2015-2017

The main goals were an international student community especially in Master's education and education in an international context to better prepare students for the (international) labour market. A detailed evaluation of actions to achieve these goals including key figures is given in Appendix 1.

The Under Graduate School (UGS) is responsible for the Bachelor's education including the internationalisation. The UGS investigated an English taught Life Science Bachelor programme. This interdisciplinary and international programme, planned to be in place in 2020, aims to establish a diverse international community and work together with international partners, preferably Copenhagen and University College London.

The Master's education is organised in Graduate Schools. The School of Pharmacy (SoPh) is tailored for the Dutch labour market. The Graduate School of Natural Sciences (GSNS) and the Graduate School of Life Sciences (GSLs) both worked on enhancing their international community.

SoPh mainly focussed on intercultural competences of staff and students. SoPh participated in the development of EU2P, a joined online international Master's programme.

The GSLs started a new Master's programme Bio Inspired Innovation. The GSLs indicator of 20% international first year master's students in 2017 was met. Although the number of international applicants grows steadily the indicator for 2021 is set on 20%. The GSLs experienced capacity problems in courses as well as research projects and focussed on courses offered via online education. The GSLs also invested in more online visibility of the Life Sciences and the preparation of their Master's students for the (international) labour market.

The GSNS focussed on recruitment of international students. The indicator of 20% international first year master's students in 2017 was met, the indicator for 2021 is set on 25%. Together with C&M the school invested in a recruitment officer and a marketing strategy for Natural Sciences. Part of the strategy is to set up agreements with preferred partner universities and invest in structured mobility. Two programmes made an agreement with a preferred partners to achieve more (structured) mobility, if needed within the major of the programme.

The UGS established a flexible curriculum in all programmes. The UGS programmes facilitate exchange outside the major of the programme, mostly in the third year. The UGS steadily increased the number of English taught Bachelor courses from 27 courses in 14/15 to 58 courses in

#### HIGHLIGHTS

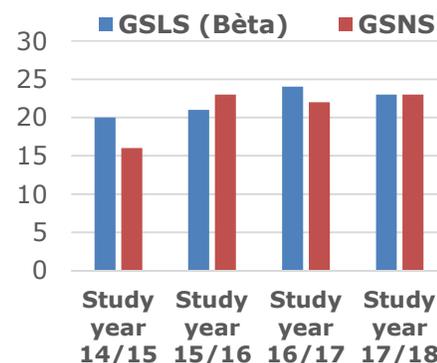
55% more outgoing students in 16/17 compared to 14/15

119% more undergraduate English taught courses in 17/18 compared to 14/15

Two English taught minors in 2018 and an English taught interdisciplinary Bachelor programme Life Science in 2020

Faculty of Science online courses  
 - Massive Open Online Course Future food  
 - Small Private Online Course Bio Inspired Innovation

% non NL study starters



17/18. On top of this two English taught interdisciplinary minors are in place in 2018.

All GSLS Master's programmes had a flexible curriculum. Students went abroad for a minor research project or writing assignment. GSNS Master's programmes worked on more flexibility in the curriculum. Depending on student's choices, a mobility window is present in most programmes. In GSNS programmes students can go abroad during the master's thesis, do an internship abroad or follow courses abroad. The School of Pharmacy strongly encouraged their students to do a research project abroad.

Key figures on incoming and outgoing exchange are given in Appendix 2. The 55% increased mobility abroad in 2016/2017 compared to 2014/2015 was mainly due to more Chemistry, Pharmacy and Biology students doing a research project abroad. The data on exchange were based on registration via de Science International Office, for outgoing students meaning an approved study abroad request in Osiris.

Science International Office and Communication & Marketing visited selected universities. This is a strategic means to enhance connections with partners of high quality, with sufficient English taught courses and willingness to make agreements for multiple programmes or structured mobility within programmes. All these investments aim to facilitate exchange without study delay.

Points of improvement were discussed and reconciled with the faculty of Science liaison in the task force.

- In English taught programmes -Bachelor or Master- selecting talent whilst simultaneously ensuring a diverse student population is important. Good facilities such as housing, scholarships, flexibility in programmes are needed to attract international students. Selecting talented students also requires time investment. Alumni are seen as our best ambassadors. Investing in an alumni network is valuable but requires attention.
- Teaching staff plays a key role in enhancing the international dimension in education. The high workload and limited course capacity drives the cost-benefit analyses to the core business of the mainly Dutch students in the programme. The presence of international and/or exchange students as well as teaching in English are prerequisites but do not automatically enhance the international dimension of education. International insight and knowledge in the curriculum together with handling diversity help student's to develop their identity in a globalising world. The international dimension in education is a challenge for the upcoming period.

### **3.2 Research: evaluation 2015-2017**

Selection and recruiting national and international talent is the core of research in an international environment with world leading partners and researchers. A suitable framework of conditions for selecting, recruiting and binding international talent must be in place.

With 29% international employees the faculty of Science is characterized as an international faculty. The number of international employees differed per category, 45% of PhD candidates were internationals and even 61% of the post docs. The function profile assistant professor, associate professors, and professor were less international but numbers are increasing (see table 1). The diversity in our international staff varied widely. Within the

#### **HIGHLIGHTS**

29 % of the employees have a non Dutch nationality

All groups have collaborations with international partners

All information for employees is in Dutch and English

faculty 56 nationalities were represented. There were ten nationalities with more than 10 employees within our faculty (see Appendix 3).

Academic staff was scouted and recruited internationally. In general interest of internationals in our research positions was adequate. The number of applicants did not pose a problem. At the next level appointing PhD's and post docs was not a problem, however appointing international senior staff was more difficult. This problem is related to strong (inter)national competition, a different policy on the 'ius promovendi' for assistant and associate professors, lack of start-up packages and the salary boundaries on the one hand. On the other hand moving to another country impacts strongly on family members (housing (there are no guesthouses), job prospective of the partner, schooling of the children). The faculty used the International Service Desk (ISD) to welcome senior academic staff. The faculty assumed the cost of the landing module and Visa fees. A faculty policy on this is needed.

<b>2017</b>	
<b>PhD candidates</b>	45%
<b>Post docs</b>	61%
<b>Junior academics</b>	22%
<b>Senior academics</b>	14%
<b>Professors</b>	13%

Table 1 Non Dutch nationality Referred to function profile (31-12-2017)

Supporting staff was generally recruited nationally. However several of these job offers were open to employees that were not actively managing the Dutch language (yet). Recruitment of Non Dutch supporting staff is open to improvement. Acquiring a work permit is more difficult for this category.

In research English is the operating language. The large number of international post docs and PhD's at research groups automatically promotes the use of the English language in almost all conversation. Information for employees was made available in the Dutch and the English language -e.g. website, intranet and B updated- as well as directives and procedures. Information sessions and receptions are done in English. Training in the English language was also offered to supporting staff. Press releases are actively communicated to international press in line with the faculty's press policy.

The vast majority of the academic staff had a short term or longer term international experience. A small number used the opportunity for a sabbatical abroad. At home their research takes place in an international environment. These conditions serve as a good base to establish an intercultural community with intercultural skills. Points of interest are communication in the social schedule, intercultural skills of the incumbent management and culture shock of new recruits. Intercultural skills are essential to function in a diverse environment. More attention should be given to intercultural skills of employees. Investing in intercultural skills of the incumbent management is a step forward. Awareness of a possible culture shock at both sides and how to communicate in the social schedule should be points of interest worthy of attention at management level.

All institutes and groups collaborated with international partners. Almost all publications were together with international colleagues. Because of the differences within the disciplines, the collaboration took place within the institutes, groups or at individual level. If relevant the UU university partners were used. All academics have an international network but little is known about e.g. the frequency of international visits or the use of a sabbatical for a longer visit to the international partner.

The Natural Sciences deans (NATU) of the LERU-partners meet twice a year to discuss themes in the field of education, research and valorisation. These meetings strengthen the faculty and the UU position.

#### 4. Work Programme Internationalisation 2018-2021

After evaluating the current situation and improvement discussions smart deliverables were formulated that met the following criteria:

- Defined outcome of the deliverable in relation to the goal of the Strategic plan;
- Consequence of the deliverable in relation to the overall process and the balance between ambition and workload;
- Influence of the deliverable on improvement of overall quality, personal skills and employability.

These deliverables per goal of the Strategic Plan are summarised in the following Work Programme Internationalisation 2018-2021.

Goal Strategic Plan	Internationalisation deliverables	Time schedule
<i>A diverse and international community</i>		
A. The faculty is composed of a diverse academic community in the broadest sense of the word	<p>1. Propose an ISD package used throughout the faculty for international staff recruitment. Also facilitate a flexible offer (including possibilities in internal and external grants, like strategic themes, focus areas, gravity-programme).</p> <p>2. Investigate the needs of international staff upon arrival in the Netherlands and in the first years of their stay. Pay attention to information for new staff and social inclusion.</p> <p>3. Write a proposal based on the investigation how to handle the needs of new international staff (depending on results e.g. intercultural competences; a buddy system etc.)</p> <p>4. More often open job offers for supporting staff to international employees.</p> <p>5 Continue/expand tailored international marketing &amp; recruitment of Master's/PhD students to strengthen a diverse student community</p>	<p>HR End 2018</p> <p>HR/OzVB/C&amp;M/ BO 1<sup>st</sup> sem. 2019</p> <p>HR/OzVB/C&amp;M/ BO Summer 2019</p> <p>Bedrijfsvoering/ HR advisor</p> <p>GSNS/GSLs</p>
B. All scientific staff has spent relevant research or teaching time at a university abroad	<p>1. Create an overview of number of staff that uses their sabbatical for international experience. And make a plan to inform researchers about the possibilities.</p> <p>2. Enhance service for outgoing staff together with ISD.</p> <p>3. International experience is part of WPflow. International experience is valued implicit in selection and recruitment. Discuss international experience as criteria in all advisory selection committees.</p> <p>4. Group leaders stay in touch with alumni PhD's who are post doc abroad to stimulate their return.</p>	<p>HR End 2018</p> <p>HR begin 2019</p> <p>HR/BO Ongoing</p> <p>WP Ongoing</p>

C. All services and facilities are available in Dutch and English	1.Information available in Dutch and English (ongoing policy).	Bedrijfsvoering Ongoing
D. The faculty is considered as an important (LERU) partner, visible by student exchange, joint degree programmes, joint research projects and shared interests	1.Natural Sciences deans of LERU-partners meet twice a year.  2. Make use of relevant strategic UU partners (e.g. English taught Life Science Bachelor programme -> UCL and Copenhagen; Research in Bachelor education -> Sydney; Physics: exchange with UCL).  3. Develop and foster links with partner institutions Programmes have preferred partners for student (and staff) mobility; increased exchange with preferred partners; high quality faculty exchange agreements (including relevant LERU partners);  4. Improved visibility and promotion	Dean Ongoing  OzvB/OBT Ongoing  Programme/ ScIO/C&M 2020  ScIO, C&M
E. The course selection meets the needs of the diverse student population.	1. Increase English taught Bachelor courses by 30% in 2021 (=course offer of 90 courses); Mathematical Sciences Premaster courses are English taught; English course information in Osiris is correct  2. Use of Course planner for incoming exchange  3. Flexible master's programmes GSLs: online courses GSNS: flexibility in programmes; explore opportunities for research abroad for certain Master's programmes; work on structured mobility SoPh: participation (certificates) in EU2P, a joined online international Master's programme.  4. English taught interdisciplinary undergraduate minors (also suited for incoming exchange students)  5. Students and staff are facilitated to enhance their intercultural competences e.g. course offering for students (Wim Dictus/Giselle v.d. Velden); ICUU project for teaching staff (coordinator Jan ten Thije, faculty of Science Aukje Mantel).	UGS/ScIO Ongoing  UGS/ScIO End 2018  Ongoing GSLs Ongoing GSNS  Ongoing SoPh  UU USO proposal/UGS  Schools 2020
F. Both students and lecturers are encouraged to attend exchange programmes to gain international experience and build an academic network.	1. Facilitate exchange without study delay; stimulate students to study abroad; integrate study abroad information in the study career route of bachelor programmes  2. Staff mobility is used to make use of each other's expertise and/or prepare a future cooperation	Programme/ ScIO Ongoing  Programme/ ScIO/C&M Ongoing
G. English taught Bachelor's programmes are offered in addition to the current curriculum.	1. English taught bachelor Biophysics & Life Sciences Marketing strategy, focus countries and target groups Explore cooperation with (LERU) universities  2.International Bachelor programme: Utrecht Bachelor for Clinical Sciences (UBCS). Lead = Veterinary Medicine	UGS Sept 2020  DGK

## Appendix 1 Education: Evaluation Work programme Internationalisation 2015-2017

*International student community, especially in graduate education; education in an international context, students are prepared for an international career*

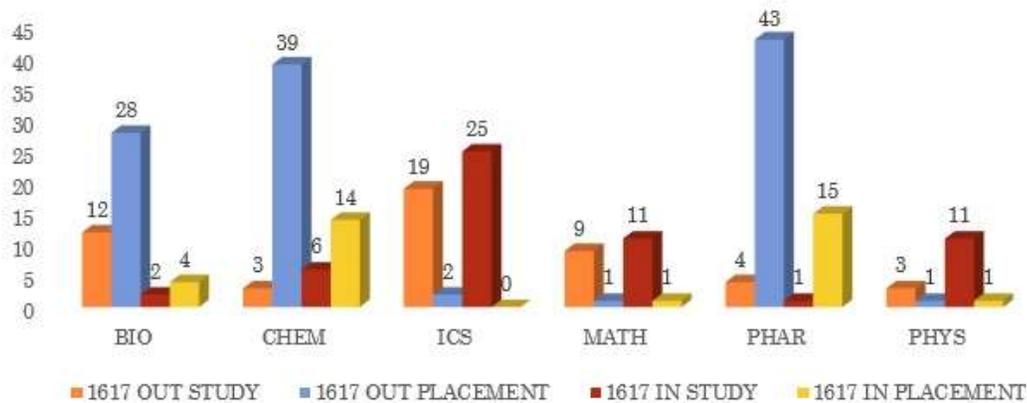
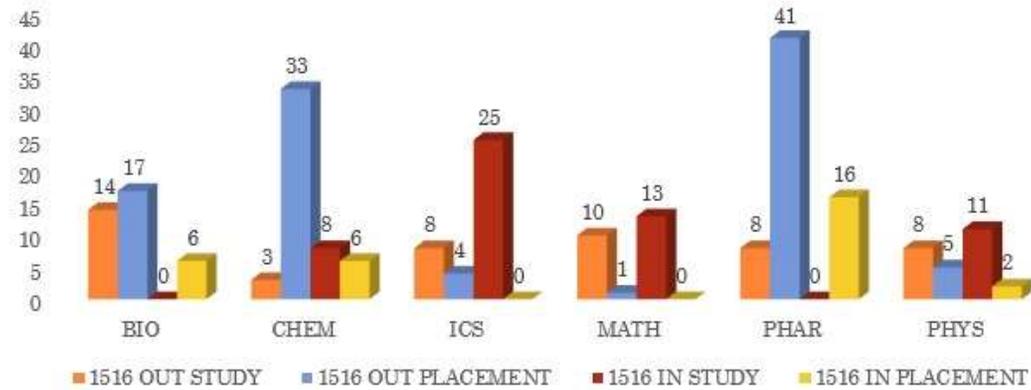
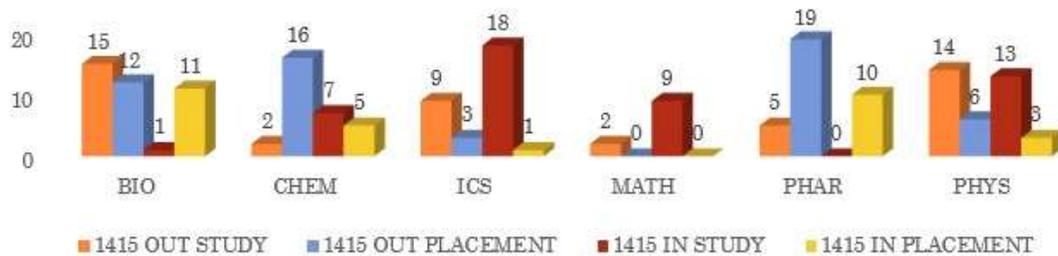
Action 2015-2017 <sup>1</sup>	Specification	Evaluation	Key figures <sup>2</sup>
Tailor international master marketing.  Use strategic partners for international marketing.	GSNS (with C&M) -> International Student Marketing and Recruitment plan: raise awareness, increase enquiries, implement lead nurturing system, structured mobility partners, capitalise on mobility programmes and scholarships	- Physics explores Utrecht University becoming a partner of the Imperial College <i>Physics MSc with a Year Abroad</i> programme. - Staff mobility to and from Hamburg University for student mobility without study delay in the field of Meteorology, Physical Oceanography and Climate science. - Mathematical Sciences explores mobility with Tsinghua University.	- Visit to ICL of UU Physics department on 19-20 April 2018. - Erasmus+ agreement in place for Climate Physics per September 2018 for exchange without study delay between Hamburg and Utrecht. - In Oct 2017 presentations by the C&M master marketer were delivered in Tsinghua to Math students and students from a variety of subjects. Staff mobility of the Math dpt. to Tsinghua is intended.
	GSLS: Visibility of Life Science research and education: online courses for specific master programmes	- Online Elevate courses for the strategic theme Life sciences and focus area Future food. - Interdisciplinary master Bio Inspired innovation started Sept. 2016.	- Online courses/Sept 2016 <a href="http://elevatehealth.eu/courses">http://elevatehealth.eu/courses</a> - BINN: 16/17 -> 25 students started of which 4 Non NL (= 16%). 17/18 -> 31 students started of which 10 non NL (= 32%).
	CPS: In 17/18 marketing to increase the ratio International versus Dutch students.	Activities: Fair roadshow; Ambassadors go back home; Google analytics; Pre departure meetings, International School visits	CPS based on file completed: overall CPS enrolment +30%; non Dutch: + 187%; Dutch: -23%
Use of preferred partners for student exchange.	Use bachelor study exchange to increase number of international students in the master.	Increase student mobility. Intensify communication and information for Science students. Increase online visibility for outgoing and incoming students.	Ongoing. The 55% increase of outgoing students in 16/17 compared to 14/15 is mainly caused by research projects abroad. The number of incoming students in 16/17 compared to 14/15 increased by 17% (from 78 in 14/15 to 91 in 16/17).
	Work together on a preferred partner network for study exchange. Staff mobility is used as a means.	Quality upgrade Erasmus+ agreements. Criteria are balanced exchange with good partners in multiple programmes. A preferred partner process is started to increase structured exchange per 2020. Midterm evaluation on exchange per programme and per partner agreement is used as input for the preferred partner choice.	In 2013 Science has 194 Erasmus+ agreements with 118 partners in 27 countries. In 2017 Science has 94 agreements with 56 partners in 21 countries. The quality of partners and the number of programmes per partner has increased. A Midterm evaluation of exchange is executed. Start of selection process of preferred partners Sept. 2018 with a credit mobility workshop for UGS programme coordinators, programme leaders and study counsellors.
An international community especially in master education.	GSNS and GSLS have set a target of 20% international students	GSNS target of 20% international first year master's students is met  GSLS target of 20% international first year master's students is met	- GSNS programmes: 14/15=16%; 15/16=23%; 16/17=22%; 17/18=23 %. Increase of 53 students (17/18 compared to 14/15) is mainly due to 38 non NL students. - GSLS Science programmes: 14/15= 20%; 15/16=21%; 16/17=24%; 17/18=23%.
	Use each other's best practices	- C&M Student Ambassador network: 1 NL and 1 non NL ambassador per programme - Buddy programmes - Master meeting rooms - Labour market orientation (Career Services and Study associations)	- GSNS/CM: Student Ambassador network: 15 ambassadors in 17/18 (53% non NL). - GSLS buddy programme supported by Life Science Representatives. <a href="http://studyguidelifesciences.nl/gsls-buddy-programme">http://studyguidelifesciences.nl/gsls-buddy-programme</a> - Per 2017 GSNS master meeting room in place. - Career orientation includes international students.
Use of the English language in Education.	English taught courses	- Master's programmes (except those tailored for the Dutch labour market) are in English. - Two interdisciplinary English taught bachelor minors are available.	- Completed. - Minor Complex systems is available in February 2018, minor The brain, the mind and consciousness in September 2019. A follow up as UU USO project is proposed.
	Improve information in Osiris in the English language	- Research the possibility of an inter disciplinary English taught Life Science bachelor. A curriculum and a CROHO cie. started in 2018. - English taught bachelor courses and correct information in Osiris in the English language - Improve internal communication in English.	- Interdisciplinary bachelor programme Biophysics & Life Sciences is under construction and is planned to start in September 2020. - 27 courses in 14/15 -> 58 courses in 17/18. Ongoing action to improve course information and the number of courses in the English language. - Internal communication is in English or bilingual.
	Improve communication		
	Improve English language skills for supporting staff	English language courses offered and followed by supporting staff starting with front offices, coordinators and policy advisors.	In 2017 front officers of the student desk, career services and student counsellors followed English language training.
Stimulate staff mobility	Diminish staff mobility obstacles for teaching staff	GSLS working group on staff mobility (ViSta). Conclusion: Staff exchange is mostly for research -> take action to include education in this mobility. Work on monitoring of staff exchange.	- Student's leaflet was made to distribute at the receiving organisations. - Information on staff exchange and Erasmus grant on the website. - HR made a start with monitoring staff mobility.

<sup>1</sup> *Werkprogramma Internationalisering faculteit Bètawetenschappen 2013-2017 (informatie voor het Bilateraal overleg nov 2015)*

<sup>2</sup> Sources: for international students is BiOPT (= non NL); for exchange students is registration by Science International Office; for student ambassadors is registration by C&M.

## Appendix 2 Education: Midterm evaluation of student exchange<sup>3</sup>

### OUT-IN 14/15 – 16/15 – 16/17



OUT STUDY = UU student doing courses abroad  
 OUT PLACEMENT = UU student doing research abroad  
 IN STUDY = Incoming exchange student doing courses  
 IN PLACEMENT = Incoming exchange student doing research

For STUDY an interinstitutional agreement must be in place.  
 For PLACEMENT no interinstitutional agreement is needed. An individual agreement is made between student, home university and placement provider.

<sup>3</sup> Source: Registration by Science International Office

**Appendix 3 Nationalities with >10 employees per 1 February 2018**

<b>Nationality</b>	<b>No.</b>	<b>%</b>	<b>Academics</b>	<b>% of all academics</b>	<b>Supporting staff</b>	<b>% of all supporting staff</b>	<b>Of which student assistant</b>
German	62	15,35%	58	15,43%	4	14,29%	2
Italian	41	10,15%	40	10,64%	1	3,57%	1
Spain	38	9,41%	32	8,51%	6	21,43%	6
Indian	23	5,69%	23	6,12%		0,00%	
Chinese	21	5,20%	19	5,05%	2	7,14%	
U.K.	18	4,46%	16	4,26%	2	7,14%	
Belgian	17	4,21%	15	3,99%	2	7,14%	1
French	17	4,21%	16	4,26%	1	3,57%	
Greek	15	3,71%	12	3,19%	3	10,71%	2
Iranian	14	3,47%	14	3,72%		0,00%	