

Agreement for
**Double Undergraduate Degree in Biology/
Bachelor of Science (BSc) Major in Cellular,
Molecular, and Microbial Biology**
And
**Double Undergraduate Degree in
Microbiology/ Bachelor of Science (BSc)
Major Cellular, Molecular, and Microbial
Biology**

Between

Thompson Rivers University
Represented by Alan Shaver, President

and

Universitat Autònoma de Barcelona (UAB)
Represented by Prof. Margarita Arboix Arzo, Rector

PREAMBLE

The **Thompson Rivers University (hereinafter TRU)** and the **Universitat Autònoma de Barcelona (hereinafter UAB)** guided by the desire to strengthen the already existing relationship and to establish new interactions among their respective institutions, and having therefore considered

- the advantage of joining forces in the creation, dissemination, and application of knowledge;
- the usefulness of sharing their experiences and strengths as innovative institutions;
- the chance of mutually enhancing the quality of teaching and research

intend to set up two new double study programs in the fields of *Biology and Microbiology*.

IT HAS BEEN AGREED WHAT FOLLOWS

1. General object

In the context of the growing demand of internationalisation of the higher education and research, the present agreement aims at offering two double Undergraduate Programmes (B. Sc.) in the fields of *Biology* and *Microbiology*.

2. Collaboration on a B. Sc. programme.

In particular, the partners agree to offer two study programs of high quality at the Undergraduate level in *Biology* and in *Microbiology*. The first exchange will come into force after in the second semester of the academic year 2017/18.

The programs are laid out in the annexes 2 and 3.

3. Degrees awarded:

- a. Both universities offer following local programs that lead to an Undergraduate Degree:
 - (i) in *Biology*:
 - Universitat Autònoma de Barcelona: Grau de Biologia (*Bachelor's Degree in Biology*)
 - Thompson Rivers University: Bachelor of Science (BSc) Major in Cellular, Molecular, and Microbial Biology

- (ii) in Microbiology:
- Universitat Autònoma de Barcelona: Grau de Microbiologia (*Bachelor's Degree in Microbiology*).
 - Thompson Rivers University: Bachelor of Science (BSc) Major in Cellular, Molecular, and Microbial Biology.

All degrees are fully recognized and accredited in the participating countries.

b. Each institution will award a degree to students successfully completing the program: UAB (in Biology or in Microbiology, depending on the track of their choice) and TRU (Bachelor of Science (BSc) Major in Cellular, Molecular, and Microbial Biology). A Diploma Supplement will be prepared by UAB for each student graduating from the program. TRU will provide all assistance possible to UAB in the preparation of the Diploma Supplements.

c. Both institutions recognise the subjects according to the curriculum structure attached on the annex 2 (Biology/ Bachelor of Science (BSc)) and annex 3 (Microbiology/ Bachelor of Science (BSc)), which are developed for the Undergraduate as well as examinations passed at the other institution of the consortium.

4. Consortium's organization.

a. Both partner institutions will keep record of students' transcripts with the information provided by the host institution and will issue and register the final local degree to all those students that fulfil the mobility requirements.

b. The consortium appoints a commission in charge of co-ordinating and supervising academic and administrative procedures. The commission will consist of at least one representing professor and one administrative staff of each degree per partner.

c. The commission will meet at least once a year, face to face, or *via* internet, to review the effectiveness of the teaching programmes, to examine the academic results achieved by the students and to propose further actions.

d. For each student, the hosting institution will nominate a tutor whom the student may consult for advice or assistance during his/her stays at the institution.

e. The members of the consortium engage themselves in helping students with incoming procedures such as visa, finding housing and ensure that students will have access to language courses, libraries and canteens as well as to the services of the respective International Offices.

5. Admission requirements and selection procedures

a. The following admission requirements have been commonly decided:

Students should indicate their interest to take the double degree option the academic year before the exchange.

The student should have the following academic requisites: .

- For TRU students:
 - a B1 but strong academic students could likely get by with a A2 Point Average in Spanish/Catalan
 - Grade Point Average (GPA):—2.3 (TRU grading scale)/ 7 or B (good) (UAB grading scale).

- For UAB students:
 - a B2/TOEFL Ibt 65-70+(with no section below 20) level of English
 - Grade Point Average (GPA): 2.3 (TRU grading scale)/ 7 or B (good) (UAB grading scale).

Language skills will not be a prerequisite for students to start their degree at their home institution. They should though gain these skills before they should move to the partner's location.

b. According to the admission requirements, each institution will select the students who can take part in the Double Undergraduate Program. Both universities will annually revise and publish the admission's requirements.

Each host institution will inform the other partner institution about the application procedure that the applicants need to follow to be formally accepted at the host institution, according to the common application procedure.

Each home institution will send a list of the selected students and will give the corresponding support in the acceptance formal procedures to be followed at the host institution.

Once nominated, students must apply online to the host institution by applicable deadlines (end of August/early September for January / February each intake).

Using <http://www.tru.ca/studyabroad/incoming.html> (students coming to TRU)

Or by direct email to intercanvis.biociencias@uab.cat (students coming to UAB)

6. Tuition fees and Mobility Plan:

The mobility periods are mandatory for every student taking part in the Double Undergraduate Program both in UAB and in TRU, based on the mobility scheme and curriculum structure detailed on Annex 2 for Biology and on Annex 3 for Microbiology and on an overall reciprocity basis.

The parties will accept up to 2 double degree students per academic year from each institution for each Double Degree program (4 in total) subject to availability of seats in the program at the time the student applies. The final reciprocity (balancing of the number of students received by each institution) between both partners must be accomplished in total across both double degree programs and not necessarily restricted at double degree program level. The number of students may be modified by mutual agreement and according to Article 7 (Quality Assurance and Review) of the present agreement.

Students pay the corresponding tuition fees at their home institution.

Host institutions will waive tuition fees to incoming students on a reciprocity basis, so that both partner institutions receive, in overall, the same number of students that are sent abroad, and for the same number of semesters.

Students participating in this Agreement are responsible for travel, accommodation, living, course and program specific costs, and any additional fees such as international activity fees, medical insurance, and public transportation passes at the host institution.

The Administrative and Financial Guidelines (Annex 4) indicate the number of selected students per institution, as well as the fees that are being waived by the host institutions and those fees that need to be paid directly by the student at the host institution.

Each Double Undergraduate student is responsible for obtaining a visa and other related documents required for study at the host institution. The host institution shall provide incoming exchange students with any university certifications required to obtain a student visa for the full period of the exchange.

Concerning social security, students enrolled in the programme will have to follow the rules in force at the hosting institution and subscribe to a personal insurance that covers health, hospitalisation and repatriation costs.

In the event that after execution of this agreement the reciprocity of students is not balanced, the university that has sent more students in the previous editions will not send any one until the figures are balanced.

7. Quality Assurance and Review

UAB and TRU agree to accept the accreditation standards and quality control procedures of the other institution as noted:

TRU: outlined at <http://www.tru.ca/about/accreditation.html> and according to the degree requirements and standards set out by the [Ministry of Advanced Education](#).

UAB: outlined at [the Teaching Quality Assurance Office](#), under the supervision of the Catalan University Quality Assurance Agency, AQU Catalunya ([AQU Catalunya](#)), and according to the Spanish Royal Decree 1393/2007 and its amendment (RD 861/2010 i RD 534/2013 [RD861/2010 i RD 534/2013](#)) that regulates the life-cycle of a degree.

Moreover, the Parties agree to conduct a biennial evaluation of each other's Programs to be coordinated by the representatives. Where possible, this evaluation will consist of the Parties examining and sharing such findings with each other, regarding:

- The number of qualified students admitted into each institution's Program during the prior year;
- The success rates of qualified students in each institution's Program following the completion of one year;
- Approved or proposed changes in either the TRU Program or the UAB Program;
- Admission procedures, program planning, time lines and special requirements; Placement tests, fees and certification for each institution's Program;
- Recommendation for types and times of promotion efforts.

8. Language policy.

At the TRU, courses will be taught in English.

At the UAB courses will be taught in Catalan (majority part), Spanish and English (minority part). Canadian students will be allowed to choose among different languages when available.

It is strongly recommended that TRU students take online courses of basic Catalan before their visit. There are 3 months modules of Catalan courses, free of charge, produced in English by the Regional Government [Generalitat de Catalunya](#).

http://www.parla.cat/pres_catalaenlinia/AppPHP/login/home.php?lang=en&on=curs

9. Program Structure:

In order to complete the Undergraduate's requirements:

- a TRU student will have to acquire a minimum of 60 ECTS at the UAB through the mobility program stated on Annex 2 for the Double Degree in Biology and on Annex 3 for the Double Degree in Microbiology.
- a UAB student will have to acquire a minimum of (30 credits at TRU through the mobility program stated on Annex 2 for the Double Degree in Biology and on Annex 3 for the Double Degree in Microbiology.

10. Means and Facilities.

Partners will find the means to accompany the Undergraduate program in particular by:

- helping students to find study places and housing facilities;
- enrolled in the Undergraduate course to complete their training in good conditions;
- advertising the Undergraduate course widely;

11. General provisions.

The present agreement will enter into effect the day after its signature by the legal representatives of both partners, and it will remain in effect for a period of five years. The first mobility will come to force in the spring of the academic year 2017/18

The parties agree that the provision of this agreement shall continue to subsist for so long as may be necessary to all such students as may be enrolled on the project to complete it (including provision for the retrieval of failure).

No party shall incur any liability to the other in the event that it is delayed in the performance of its obligations by force majeure (it shall mean any cause of delay beyond the control of the party liable to perform and shall include but not by way of limitation strikes, lockouts, riots, acts of war or piracy, action of any governmental or quasi-governmental body, destruction of essential equipment by fire, storm, flood, earthquake or delay caused by failure of supplies of essential services or transport facilities).

The possible modifications of the agreement will have to be incorporated following the same procedure as that which has been followed for the first signature.

Changes or amendments to this agreement proposed by one of the partners will be valid only if they are submitted in writing and signed by an authorised representative of a partner university and meet the approval of the other partner. The possible modification or final extinction of this Double degree programs shall be agreed by the commission and follow the process foreseen at each institution according to their national legal framework.



Universitat Autònoma de Barcelona



THOMPSON RIVERS
UNIVERSITY

Any change, amendment or final extinction of this Double Undergraduate program shall be notified to the respective institutions, one academic year in advance.

In witness hereof, the cooperating universities have signed this agreement in four originals by their hands on the place, day and year below.

Alan Shaver,
President
Thompson Rivers University

Margarita Arboix Arzo
Rector
Universitat Autònoma de Barcelona

Tom Dickinson
Dean of Science

Jaume Farrès
Dean of Bioscience

Baihua Chadwick
Associate Vice-President International
and Chief Executive Officer TRU
World Global Operations

Kamloops, BC, _____ 2016

Bellaterra, on _____, 2016

ANNEX 1

Equivalences of the both Double Undergraduate Degrees

The cooperation involves the Faculties of:

- UAB: Faculty of Biosciences
- TRU: Faculty of Science

SEMESTER EQUIVALENCES

Having taken into account following aspects of both institutions legal frameworks and institutional regulations:

- 1) The duration of Undergraduate studies at TRU is 4 years with a total of 120 credits
- 2) The duration of Undergraduate studies at UAB is 4 years with a total of 240 ECTS.
- 3) The workload of the TRU credits including a Undergraduate's thesis and internship, which correspond (on average) to 30 credits/year
- 4) The workload of 1 Undergraduate academic year at the UAB is (on average) 60 ECTS.

It has been agreed that:

- 1) TRU university students will fulfill the Double Undergraduate Degree in 4 academic years.
- 2) UAB students will fulfill the Double Undergraduate Degree in 4 academic years.
- 3) TRU University students applying for the Double Undergraduate degree will have to study a minimum of 60 ECTS (30 TRU credits) at the UAB, and 90-84 credits at TRU
UAB students applying for the Double Undergraduate degree will have to study a minimum of 178 ECTS at UAB and a minimum of 30- credits at TRU.
- 4) All students will prepare an Undergraduate thesis corresponding, at least, to 6 ECTS (UAB Final Degree Project).

GRADING SCALE UAB

ECTS Scale	UAB	TRU LETTER GRADE	TRU Numerical grade	TRU Grade Points	TRU Letter Grade Definitions
A (Highest 10%) EXCELLENT	8.9-10 Honors highest 5%	A+	90-100	4.33	Excellent. Superior performance showing comprehensive, in-depth. Demonstrates initiative and fluency of expression.
		A	85-89	4.00	
		A-	80-84	3.67	
B (Next 25%) VERY GOOD	8-8.8	B+	77-79	3.33	Very good. Clearly above average performance with knowledge of principles and facts generally complete and with no serious deficiencies.
		B	73-76	3.00	
		B-	70-72	2.67	
C (Next 30%) GOOD	6.9-7.9	C+	65-69	2.33	Satisfactory. Basic understanding with knowledge of principles at least adequate to communicate intelligently in the discipline.
		C	60-64	2.00	
D (Next 25%) SATISFACTORY	6-6.8	C-	55-59	1.67	Pass. Some understanding of principles and facts but with definite deficiencies.
E (Next 10%) SUFFICIENT	4.9-5.9	D	50-54	1.00	Minimal pass. A passing grade indicating marginal performance. Student not likely to succeed in subsequent courses in the subject.
FX (FAIL) F (FAIL : no credit)	0-4.8	F	0-49	0.00	Unsatisfactory. Fail. Knowledge principles and facts in fragmentary.
	DNC			0.00	Did not complete the course, less than 50% of the course work completed or mandatory course component (s) not completed. No official withdrawal.

ANNEX 2

Mobility Plan and Curriculum Structure
BIOLOGY/ Science (BSc) Major in Science in Cellular, Molecular, and Microbial

MOBILITY SCHEME:

In order to obtain the double Undergraduate degree, **TRU** university students will have to accomplish with the following mobility scheme

TRU STUDENTS MOBILITY SCHEME:

There is one scheme accepted:

Scheme /TRU –STUDENT

1 st year		2 nd year		3 rd year		4 th year	
1 st semestre	2 nd semestre	3 rd semestre	4 th semestre	5 th semestre	6 th semestre	7 th semestre	8 th semestre
at TRU	at TRU	at TRU	at TRU	At TRU	at UAB (*)	at UAB (*)	at TRU

* Part of these credits can be on internship on Enterprises or Institutions (Elective subject)

* UAB Final Degree Project (6 ECTS) is compulsory, during 7th semestre, TRU students coming to UAB will need to take the UAB Final Degree Project (6 ECTS).

* In addition to the 6 ECTS for the Final Degree Project, TRU students coming to UAB require 42 ECTS which will need to take at UAB, because they will not have it at TRU (see tables below).

60 ECTS = 1.500 hours, of which approximately 350 are course hours.

At TRU university, 30 credits=350 course hours

TRU students will have to register at **TRU** during the four years of the Double Program. **UAB** will wave all the tuition fees.

In order to obtain the double Undergraduate degree, **UAB students** will have to accomplish with of the following mobility scheme:

UAB STUDENTS MOBILITY SCHEME:

There is one schemes accepted:

Scheme /UAB STUDENT –

1 st year		2 nd year		3 rd year		4 th year	
1 st semester	2 nd semester	3 rd semester	4 th semester	5 th semester	6 th semester	7 th semester	8 th semester
at UAB	at UAB	at UAB	at UAB	at UAB	at TRU (*)	at TRU (*)	at UAB (**)

(*)The TRU faculty advisor will work with the student and the UAB faculty advisor on choosing appropriate courses from the selection offered in the semesters he/she will be in the TRU.

(**)UAB Final Degree Project (6 ECTS/3-CH) is compulsory, so that UAB students have to take this in UAB during their 8th semester.

UAB students will have to register at **UAB** during the four years of the Double Program. **TRU** will waive all the tuition fees.

60 ECTS = 1.500 hours, of which approximately 350 are course hours.

At TRU university, 30 credits= 350 course hours

Students’ mobility periods and academic schedule:

- Academic semesters are scheduled as follows:

- At the UAB:

First semester: from September until February

Second semester: from February until September (lectures finishing end of June) UAB exams held in January will be sent were applicable to TRU for invigilation.

- At TRU:

First semester: from 1st week of September till end of December

Second semester: from January till end of April

- All students will start the Double Undergraduate Course at their home institution.

- TRU University students will study the 1st -5th and 8th semester at TRU university. The mobility to UAB will take place in the 3rd and 4th academic years during 6th and 7th semesters.

- UAB University students will study the 1st -5th and 8th semester at UAB University. The mobility to TRU will take place in the 3rd and 4th academic years during 6th and 7th semesters.

- During mobility period, students will follow the academic calendar of the host institution, which will be updated on a yearly basis.

Applications and selection

Students will prepare applications during period December of the year previous to the exchange (3rd semester). Process of selection will be completed during first week of April, (4th semester) and will be communicated to receiving university.

CURRICULUM STRUCTURE:

UAB STUDENT

- Students from UAB doing their stays at TRU in the 6th and 7th semesters
Complete curriculum structure is presented to facilitate elaboration of learning plans.

	UAB			TRU			
	ECTS	Code	Course	Credits TRU	Code	Course	
SEMESTRE 1, 2, 3, 4, 5 (156 ECTS)	6	100745	Mathematics	5	MATH1150-1250	Calculus for Biological Sciences 1	
	6	100765	Chemistry	3	CHEM1520	Principles of Chemistry	
	6	100766	Biostatistics	3	BIOL 3000	Biostatistics	
	6	103980	Cell Biology	3	BIOL 2130	Cell Biology	
	6	100759	Biosignalling and Metabolism	3	BIOL 3130	Introduction of Biochemistry	
	6	100758	Structure and function of Biomolecules	3	BIOL 1110	Principles of Biology 1	
	6	100777	Genetics	3	BIOL 2340 (1)	Introduction to Genetics	
	6	100801	Plant Biology	3	BIOL 2280(1)	Evolution and Ecology of Land Plants	
	6	100810	Physics	3	PHYS 1100	Introduction to Physics	
	6	100782	Histology(*)	3	other or CMMB or Upper electives (**)		
	6	100786	Zoology(*)	3	Biol 2290	Evolution of Animal Body Plans	
	6	100776	Molecular Genetics	3	BIOL 3350	Molecular Genetics	
	6	100779	Advanced Cell Biology	3	BIOL 3520	Cell Physiology	
	6	100784	Advanced Histology (*)	3	other or CMMB or Upper electives (**)		
	6	100791	Advanced Zoology (*)	3	other or CMMB or Upper electives (**)		
	6	100751	Human Biology (*)	3	other or CMMB or Upper electives (**)		
	6	100771	Microbiology	3	BIOL 2160 (2)	Introduction to Microbiology	
	6	100774	Functional Diversity of Microorganisms				
	6	100796	Plant Nutrition and Metabolism	3	BIOL 3519	Plant Physiology	
	6	100804	Vegetation Analysis and Mapping	3	NRSC 2230	Geographic Information Systems	
	6	100806	Animal Physiology: Systems	3	BIOL 3540	Human Physiology	
	6	100769	Biosphere Science(*)	3	other or CMMB or Upper electives (**)		
	6	100747	Health and Environment(*)	3	other or CMMB or Upper electives (**)		
	6	100768	Ecology	3	BIOL 2170	Introduction to Ecology	
	6	100797	Physiology and Regulation of Plant Development	3	BIOL 3510	Plant physiology	
	6	100807	Animal Physiology: Neurophysiology and Endocrinology	3	Biol 3550	Human Physiology	
	Semester 6 and 7 that must be done at TRU	24-30 ECTS credits in courses offered by TRU. The TRU faculty advisor will work with the student and the UAB faculty advisor on choosing appropriate courses from the selection offered in the semesters he/she will be here			12 or 15	12-15 TRU credits in appropriate courses from the selection offered by TRU in the semesters he/she will be here For instance: Biol 4160 - Conservation Biology Biol 3100 - Animal Behaviour Biol 4270 - Vertebrates of B.C.	
		(12 or 6)***	Languages (transfer credits)		3 or 6	Non-science elective credits	
		12	100795	External Practicum	6	(&) Project/Directed studies (BIOL4480)	
	Semestre 8	9	100757	Immunology	3	BIOL 3200	Immunology
6		100769	Biosphere Science (*)	3	other or CMMB or Upper electives (**)		
9		100770	Evolution	3	Biol 4140	Evolution	
6		100780	Bioinformatics	3	BIOL 3010	Bioinformatics	
6		100785	Bachelor's Degree Final Project*	3	(&) Project/Directed studies (BIOL4480)		

(&) This subject is taken twice by students from UAB coming to TRU because of the difference of credits

(*) Contents indicated are not taught at TRU, therefore must be completed at UAB by students from UAB at a moment different from the exchange, and at UAB during the exchange for students from TRU

(**) Upper electives maximum 9 TRU credits, Others electives maximum 3 TRU credits, and CMMB maximum 6 ECTS

(***) The sum of ECTS in courses offered by TRU (24-30) plus ECTS in Languages (6-12) should be always 36.

Elective subjects at UAB are 6 ECTS each one

6	100092	Science Topics Today
6	100744	History of Biology
6	100746	Pharmacology
3	100748	Primatology
3	100749	Human Origins
6	100750	Human Genetics
6	100752	Molecular Anthropology
3	100753	Forensic Anthropology
3	100754	Immunopathology
6	100756	Immunology of Infectious Diseases
6	100760	Technology of Reproduction
6	100761	Cytogenetics
6	100762	Protein Chemistry and Engineering
6	100764	Biocatalysis
6	100767	Soil Science
6	100773	Microbial Ecology
6	100781	Microscopic Anatomy
6	100783	Development Biology
6	100787	Ichthyology
6	100788	Biology and Diversity in Terrestrial Vertebrates
6	100789	Biology and Diversity in Non-Arthropod Invertebrates
6	100790	Biology and Diversity in Arthropods
6	100792	Genomics, Proteomics and Interactomics
6	100794	Population Genetics
6	100798	Applied Plant Physiology
6	100799	Environmental Plant Physiology
6	100800	Applied Botany
6	100805	Behavioural Physiology
9	100808	Comparative and Environmental Animal Physiology
6	100809	Endocrinology
6	100839	Biology and Diversity in Cryptograms
6	100763	Molecular Biology and Biotechnology of Plants
6	100772	Microbial Physiology and Metabolism
6	100775	Molecular Biology of Prokaryotes
6	100803	Biology and Diversity in Phanerogams

TRU STUDENT

2. Students from TRU doing their stays at UAB in the 6th and 7th semesters

Complete curriculum structure is presented to facilitate elaboration of learning plans.

	TRU			UAB			
	Credits TRU	Code	Course	ECTS	Code	Course	
SEMESTRE 1,2,3,4,5 (76 TRU CREDITS) 15 TRU CREDITS BY EACH SEMESTRE	5	MATH1150-1250	Calculus for Biological Sciences 1	6	100745	Mathematics	
	3	CHEM1520	Principles of Chemistry	6	100765	Chemistry	
	3	BIOL 3000	Biostatistics	6	100766	Biostatistics	
	3	BIOL 2130	Cell Biology	6	103980	Cell Biology	
	3	BIOL 1113	Principles of Biology I	6	100759	Biosignalling and Metabolism	
	3	BIOL 3130	Introduction of Biochemistry	6	100758	Structure and function of Biomolecules	
	3	BIOL 2340	Genetics	6	100777	Genetics	
	3	BIOL 3520	Cell Physiology	6	100779	Advanced Cell Biology	
	3	BIOL 2280	Evolution and Ecology of Land Plants	6	100801	Plant Biology	
	3	Biol 4140	Evolution	9	100770	Evolution	
	3	PHYS 1100	Introduction to Physics	6	100810	Physics	
	3	BIOL 3350	Molecular Genetics	6	100776	Molecular Genetics	
	3	BIOL 3520	Cell Physiology	6	100779	Advanced Cell Biology	
	3	BIOL 2160	Introduction to Microbiology	6	100771	Microbiology	
	3	BIOL 3519	Plant Physiology	6	100796	Plant Nutrition and Metabolism	
	3	NRSC 2230	Geographic Information Systems	6	100804	Vegetation Analysis and Mapping	
	3	BIOL 3540	Human Physiology 1	6	100806	Animal Physiology: Systems	
	3	BIOL 2170	Introduction to Ecology	6	100768	Ecology	
	Semester 6 and 7 that must be done at UAB	3	BIOL 3510	Plant physiology	6	100797	Physiology and Regulation of Plant Development
		3	Biol 3550	Human Physiology 2	6	100807	Animal Physiology: Neurophysiology and Endocrinology
3		BIOL 3200	Immunology	9	100757	Immunology	
3		BIOL 3010	Bioinformatics	6	100780	Bioinformatics	
9			Non-science electivesn credits	12		Languages (transfer credits)	
3		Biol 2290	Evolution of Animal Body Plans	6	100786	Zoology(*)	
3		other or CMMB or Upper electives (**)		6	100751	Human Biology(*)	
3		other or CMMB or Upper electives (**)		6	100769	Biosphere Science(*)	
3		other or CMMB or Upper electives (**)		6	100782	Histology(*)	
3		other or CMMB or Upper electives (**)		6	100784	Advanced Histology(*)	
3	other or CMMB or Upper electives (**)		6	100791	Advanced Zoology(*)		
3	other or CMMB or Upper electives (**)		6	100747	Health and Environment(*)		
9		(&) Project/Directed studies in...	12	100795	External Practicum(*)		
			6	100785	Bachelor's Degree Final Project(*)		
Semestre 8	15	Tru Credits	24		UAB Electives Credits		

(&) This subject is taken twice by students from UAB coming to TRU because of the difference of credits

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UAB at a moment different from the exchange, and at UAB during the exchange for students from TRU

(**)Upper electives maximum 9 TRU credits, Others electives maximum 3 Tru credits, and CMMB maximum 6 ECTS

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6	100756	Immunology of Infectious Diseases
6	100760	Technology of Reproduction
6	100761	Cytogenetics
6	100762	Protein Chemistry and Engineering
6	100764	Biocatalysis
6	100767	Soil Science
6	100773	Microbial Ecology
6	100781	Microscopic Anatomy
6	100783	Development Biology
6	100787	Ichthyology
6	100788	Biology and Diversity in Terrestrial Vertebrates
6	100789	Biology and Diversity in Non-Arthropod Invertebrates
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6	100799	Environmental Plant Physiology
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ANNEX 3

**Mobility Plan and Curriculum Structure
MICROBIOLOGY/ Science (BSc) Major in Cellular, Molecular, and Microbial Biology**

MOBILITY SCHEME:

In order to obtain the double Undergraduate degree, **TRU** university students will have to accomplish with the following mobility scheme

TRU STUDENTS MOBILITY SCHEME:

There is one scheme accepted:

Scheme /TRU –STUDENT

1 st year		2 nd year		3 rd year		4 th year	
1 st semestre	2 nd semestre	3 rd semestre	4 th semestre	5 th semestre	6 th semestre	7 th semestre	8 th semestre
at TRU	at TRU	at TRU	at TRU	At TRU	at UAB (*)	at UAB (*)	at TRU

* Part of these credits can be on internship on Enterprises or Institutions (Elective subject)

*UAB Final Degree Project (6 ECTS) is compulsory. During the 7th semester TRU students coming to UAB will need to take the UAB Final Degree Project (6 ECTS).

*In addition to the 6 ECTS for the Final Degree Project, TRU students coming to UAB require 54 ECTS will need to take at UAB, because they will not have it at TRU (see tables below).

TRU students will have to register at **TRU** during the four years of the Double Program. **UAB** will wave all the tuition fees.

60 ECTS = 1.500 hours, of which approximately 350 are course hours.

At TRU university, 30 credits=350 course hours

In order to obtain the double Undergraduate degree, **UAB students** will have to accomplish with of the following mobility scheme:

UAB STUDENTS MOBILITY SCHEME:

There is one scheme accepted:

Scheme /UAB –STUDENT

1 st year		2 nd year		3 rd year		4 th year	
1 st semestre	2 nd semestre	3 rd semestre	4 th semestre	5 th semestre	6 th semestre	7 th semestre	8 th semestre
at UAB	at UAB	at UAB	at UAB	at UAB	at TRU (*)	at TRU (*)	at UAB (**)

(*)The TRU faculty advisor will work with the student and the UAB faculty advisor on choosing appropriate courses from the selection offered in the semesters he/she will be in the TRU.

(**)UAB Final Degree Project (6 ECTS) is compulsory, so that UAB students have to take this in UAB during their 8th semester

UAB students will have to register at **UAB** during the four years of the Double Program. **TRU** will waive all the tuition fees.

TRU students will have to register at **TRU** during the four years of the Double Program. **UAB** will wave all the tuition fees.

60 ECTS = 1.500 hours, of which approximately 350 are course hours.

At TRU university, 30 credits=350 course hours

Students’ mobility periods and academic schedule:

- Academic semesters are scheduled as follows:

- At the UAB:

First semester: from September until February

Second semester: from February until September (lectures finishing end of June)

- At TRU:

First semester: from 1st week of September till end of December

Second semester: from January till end of April

- All students will start the Double Undergraduate course at their home institution.

- TRU students will study the 1st-5th and 8th semester at TRU University. The mobility to UAB will take place in the 3rd and 4th academic years during 6th and 7th semesters.
- UAB students will study the 1st-5th and 8th semester at UAB University. The mobility to TRU will take place in the 3rd and 4th academic years during 6th and 7th semesters.

- During mobility period, students will follow the academic calendar of the host institution, which will be updated on a yearly basis.

Applications and selection

Students will prepare applications during period December of the year previous to the exchange (3rd semester). Process of selection will be completed during first week of April, (4th semester), and will be communicated to receiving university.

CURRICULUM STRUCTURE:

UAB STUDENT

1. Students from UAB doing their stays at TRU in the 6th and 7th semestres

Complete curriculum structure is presented to facilitate elaboration of learning plans.

	ECTS	UAB Code	Course	tru credits	TRU Code	Course
SEMESTRE 1,2,3,4,5 (150 ECTS) 30 ECTS BY EACH SEMESTRE	6	101023	Chemistry	3	CHEM1520	Principles of Chemistry
	6	100999	Biochemistry	3	BIOL3130	Introductory Biochemistry
	9	100990	Cell Biology and Animal Histology	3	BIOL1110	Principles of Biology 1
	6	100991	Animal Biology	3	BIOL2130	Cell Biology
	3	100980	Integrated Laboratory I	3	BIOL2290	Evolution of Animal Body Plans
				3	BIOL3520	Cell physiology
	6	101001	Mathematics	5	MATH1150	Calculus for Biological Sciences 1
	6	101025	Microbiology	3	BIOL2160	Introduction to Microbiology
	9	100989	Plant Biology	3	BIOL1210	Principles of Biology 2
	6	100984	Genetics	3	BIOL3510	Plant physiology
	3	100979	Integrated Laboratory II	3	BIOL2280	Evolution and Ecology of Land Plants
				3	BIOL2340	Introduction to Genetics
	6	100998	Instrumental Techniques	3	BIOL4150	Biochemical Techniques 1
	6	100986	Molecular Biology of Eukaryotes	3	BIOL3350	Molecular Genetics
	6	101019	Microbe Physiology and Metabolism	3	BIOL4210	Microbial Physiology
	6	101008	Immunology	3	BIOL3200	Immunology
	3	101024	Protistology*	1,5	other or CMMB or Upper electives (**)	
	6	101020	Microbe Ecology	3	BIOL3210	Microbial Ecology
	6	101002	Virology*	3	other or CMMB or Upper electives (**)	
	3	101027	Prokaryotic Diversity*	1,5	other or CMMB or Upper electives (**)	
	6	101000	Bioinformatics	3	BIOL3010	Bioinformatics
	6	100988	Ecology	3	BIOL2170	Introduction to Ecology
	3	100977	Integrated Laboratory IV	3	BIOL4480	(&) Project/Directed Study
	3	100978	Integrated Laboratory III	3	BIOL4110	Advanced Microbiology Laboratory
	3	100976	Integrated Laboratory V			
	6	101026	Mycology*	3	other or CMMB or Upper electives (**)	
	6	100985	Molecular Biology of Prokaryotes	3	BIOL4350	Regulation of gene expression
	6	101005	Food Microbiology*	3	other or CMMB or Upper electives (**)	
6	101006	Clinical Microbiology*	3	other or CMMB or Upper electives (**)		
3	101022	Bioreactors*	1,5	other or CMMB or Upper electives (**)		

Semester 6 and 7 (Courses that must be done at TRU)	30	30 ECTS credits in courses offered by TRU. The TRU faculty advisor will work with the student and the UAB faculty advisor on choosing appropriate courses from the selection offered in the semesters he/she will be here			15	15 TRU credits in appropriate courses from the selection offered by TRU in the semesters he/she will be here	
	6	100981	Genetic Engineering of Microorganisms	3	BIOL4250	Biochemical Techniques 2 (DNA recombinant)	
	12	Languages (transfer credits)			9	Non-science elective	
	12	100795	External Practicum	6	(&) Project/Directed studies (BIOL4480)		
Semestre 8	6	101015	Environmental Microbiology*	3	other or CMMB or Upper electives (**)		
	6	101014	Industrial Microbiology*	3	other or CMMB or Upper electives (**)		
	6	101021	Biosafety and Regulations*	3	other or CMMB or Upper electives (**)		
	3	101011	Epidemiology of Infectious Diseases*	3	other or CMMB or Upper electives (**)		
	3	100975	Integrated Laboratory VI				
	6	100987	Bachelor's Degree Final Project	3	(&) Project/Directed studies (BIOL4480)		

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(&) This subject is taken twice by students from UAB coming to TRU because of the difference of credits

(*)Contents indicated are not taught at TRU, therefore must be completed at UAB by students from

UAB at a moment different from the exchange, and at UAB during the exchange for students from TRU

(**)Upper electives maximum 9 TRU credits, Others electives maximum 3 Tru credits, and CMMB maximum 6 ECTS

TRU STUDENT

2. Students from TRU doing their stays at UAB in the 6th and 7th semestres

Complete curriculum structure is presented to facilitate elaboration of learning plans.

	TRU credits	TRU Code	Course	ECTS	UAB code	Course
SEMESTER 1, 2, 3, 4, 5 (83 TRU CREDITS) 16 TRU CREDITS BY EACH SEMESTER. Courses that must be performed at TRU to be recognized at UAB	3	BIOL1110	Principles of Biology 1	3	100980	Integrated Laboratory I
	3	BIOL2130	Cell Biology	6	100991	Animal Biology
	3	BIOL2290	Evolution of Animal Body Plans	9	100990	Celular Biology and animal histology
	3	BIOL3130	Introductory Biochemistry	6	100999	Biochemistry
	3	BIOL3520	Cell physiology			
	3	BIOL1210	Principles of Biology 2	6	100989	Plants Biology
	3	BIOL3510	Plant physiology	6	100994	Genetics
	3	BIOL2280	Evolution and Ecology of Land Plants	3	100979	Integrated Laboratory II
	3	BIOL2340	Introduction to Genetics			
	3	BIOL3350	Molecular Genetics	6	100986	Molecular Biology of eukaryotes
	3	BIOL4350	Regulation of gene expression	6	100985	Molecular Biology of Prokaryotes
	3	BIOL4250	Biochemical Techniques 2 (DNA recombinant)	6	100981	Genetic engineering of microorganisms
	3	BIOL4110	Advanced Microbiology Laboratory	6	100978	Integrated Laboratory III
	3	BIOL4150	Biochemical Techniques 1	6	100998	Instrumental Techniques
	3	BIOL2160	Introduction to Microbiology	6	101025	Microbiology
	3	BIOL2170	Introduction to Ecology	6	100988	Ecology
	3	BIOL3200	Immunology	6	101008	Immunology
	3	BIOL3210	Microbial Ecology	6	101020	Microbial Ecology
	3	BIOL4210	Microbial Physiology	6	101019	Microbial physiology and metabolism
	3	CHEM1520	Principles of Chemistry	6	101023	Chemistry
3	BIOL3010	Bioinformatics	6	101000	Bioinformatics	
5	MATH1150	Calculus for Biological Sciences 1	6	101001	Maths	
3	BIOL4480	(&) Project/Directed Study	3	100977	Integrated Laboratory IV	
3	BIOL4110	Advanced Microbiology Laboratory	3	100975	Integrated Laboratory VI	
			3	100976	Integrated Laboratory V	
	9	Non-science electivesn credits (9)		12	Languages (transfer credits)	
Semester 6 and 7 (Courses that must be done at UAB)	1,5	other or CMMB or Upper electives (**)		3	101027	Prokaryotes diversity (*)
	3	other or CMMB or Upper electives (**)		6	101002	Virology(*)
	3	other or CMMB or Upper electives (**)		6	101021	Biosafety and regulations(*)
	1,5	other or CMMB or Upper electives (**)		3	101011	Epidemiology of infection diseases(*)
	3	other or CMMB or Upper electives (**)		6	101015	Environmental Microbiology(*)
	3	other or CMMB or Upper electives (**)		6	101014	Industrial Microbiology(*)
	9	(&) Project/Directed studies		12	100974	Practicum(*)
				6	100987	Bachelor's Degree Final Project(*)
	1,5	other or CMMB or Upper electives (**)		3	101024	Protistology(*)
	1,5	other or CMMB or Upper electives (**)		3	101022	Bioreactors(*)
	3	other or CMMB or Upper electives (**)		6	101026	Mycology(*)
	3	other or CMMB or Upper electives (**)		6	101006	Clinical Microbiology(*)
	3	other or CMMB or Upper electives (**)		6	101005	Food Microbiology(*)
	3	other or CMMB or Upper electives (**)		6		Elective subjects at UAB
	Semester 8	15	Tru credits		30	UAB Electives Credits

(&) This subject is taken twice by students from UAB coming to TRU because of the difference of credits

(*) Contents indicated are not taught at TRU, therefore must be completed at UAB by students from

UAB at a moment different from the exchange, and at UAB during the exchange for students from TRU

(**) Upper electives maximum 9 TRU credits, Others electives maximum 3 Tru credits, and CMMB maximum 6 ECTS

Elective subjects at UAB are 6 ECTS each/Any of these would be suitable as CMMB electives for TRU students

6	100996	Biophysics
6	100994	Edaphology
6	101010	Pharmacology
6	100982	Genomics, Proteomics and Interactomics
6	101007	Immunology of Infectious Diseases
6	101016	Applied Mycology
6	101003	Vaccines and Drugs
6	100992	Applied Plant Physiology
6	100997	Biocatalysis
6	100995	Clinical Biochemistry
6	100993	Animal Physiology: Systems
6	100983	Microbial Genomics
6	101009	Food Hygiene
6	101017	Introduction to Food Technology
6	101004	Parasitology
6	101015	Environmental Microbiology
6	101014	Industrial Microbiology
3	101011	Epidemiology of Infectious Diseases
6	101012	Professional Perspectives of Microbiology
6	100092	Current Science Topics

ANNEX 4

Administrative and Financial Guidelines

- Students will be selected by the home institution according to the admission requirements and selection criteria established on Article 5 of the Consortium Agreement.
- The same number of students will be selected by each institution.
- Each institution will provide all needed pedagogical information to the partner university, such as courses description, dates, locations, academic calendar, and evaluation system, among others.
- The Faculty of Biosciences at the UAB and the Faculty of Science at the TRU will appoint a pedagogical coordinator and an administrative officer to follow the correct implementation of this program.
- Each university will register all students and keep transcript record of all students taking part in the Double Undergraduate Degree Programs.
- Those students registered at the Double Undergraduate Programs will follow the study plan agreed among both institutions.
- To obtain the double degree, successful students will have to recognise their study period according to both, home and host institutions' regulations.
- Each institution will academically recognise the period studied at the other partner institution.
- Each university will select 2 students per Undergraduate program and edition, which will pay the official fees only at the Home Institution. If the reciprocity is unbalanced, it can be compensated by students from the other Undergraduate program so that each institution, at the end, selects 4 students per edition.
- In the event that after execution of this agreement the reciprocity of students is not balanced, the university that has sent more students in the previous editions will not send any one until the figures are balanced.
- TRU students will pay fees at their home institution and UAB will waive tuition fees for the period of study.
- To obtain the UAB degree document, TRU students will pay the diploma fee, according to the official costs in Spain. The deliver cost of the diploma will be paid by TRU students.



Universitat Autònoma de Barcelona



THOMPSON RIVERS
UNIVERSITY

- UAB students will pay fees at their home institution and TRU University will waive tuition fees for the period of study.

- To obtain the TRU university degree document, UAB students will pay the diploma fee, according to the official costs in Canada. The deliver cost of the diploma will be paid by UAB students.